

J:\Users\jbrn\OneDrive\Projects\2025\33 AMH HomeKeyEmpire\Arch\CAD\Current E Empire Residence\East Empire.dgn

ABBREVIATIONS				GENERAL NOTES		PROJECT TEAM		PROJECT DATA		SHEET INDEX	
AB ABV AC ACCOUST AD ADDL AFF AL ALT ALUM ANOD APPD APPROX ARCH AUTO AVG	ANCHOR BOLT ABOVE AIR CONDITIONING ACCESS DOOR, AREA DRAIN ADDITIONAL ABOVE FINISHED FLOOR ALUMINUM ALTERNATE ALUMINUM ANODIZED APPROVED APPROXIMATE ARCHITECT AUTOMATIC AVERAGE	J-BOX JT LAM LOC LTWT MAINT MAS MAT MATL MAX MECH MET MFG MISC MO	JUNCTIONBOX JOINT LAMINATE LOCATE LIGHTWEIGHT MAINTENANCE MASONRY MATERIAL MATERIAL MAXIMUM MECHANICAL METAL MANUFACTURER MISCELLANEOUS MASONRY OPENING	1. THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE PREMISES AND SHALL BASE HIS BID ON THE EXISTING CONDITIONS. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE ACTUAL FIELD CONDITIONS. THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND FIELD CONDITIONS.		PROPERTY OWNER: NEVADA COUNTY 950 MAIDU AVENUE NEVADA CITY CA 95959 T (530) 265-1218		SITE DATA ADDRESS 135 EAST EMPIRE STREET GRASS VALLEY, CA 95945 029-250-015-000 A.P.N.: WIND EXPOSURE: C CLIMATE ZONE: 11 ZONING: NG-2 GVCITY SITE AREA: 0.27 ACRES (11,761 SF) MAX. HEIGHT: 35'-0"		TITLE T1.0 TITLE SHEET	
BDRM BE BTWN BLDG BLK BLKG	BEDROOM BELOW BETWEEN BUILDING BLOCK BLOCKING	NAT (N) NOM OC OD OF	NATURAL NEW NOMINAL ON CENTER OUTSIDE DIAMETER OUTSIDE FACE	2. THE WORK INCLUDED UNDER THIS CONTRACT SHALL INCLUDE ALL LABOR, MATERIALS, TRANSPORTATION, TOOLS AND EQUIPMENT NECESSARY FOR THE CONSTRUCTION OF THE PROJECT, LEAVING ALL WORK READY FOR USE.		PROJECT OWNER: AMI HOUSING, INC. CONTACT: JENNIFER PRICE 3123 PROFESSIONAL DRIVE, SUITE 210 AUBURN, CA 95603 T (530) 878-5088		C 11		GENERAL NOTES G1.0 GENERAL NOTES	
CB CCW CEM CER CFT CIP CJ CL CLG CLR CMU CONC CONT CPT	CATCH BASIN COUNTER CLOCKWISE CEMENT CERAMIC CUBIC FOOT CAST-IN-PLACE CONTROL JOINT CENTERLINE CEILING CLEAR CONCRETE MASONRY UNIT CONCRETE CONTINUOUS CARPET	PLAM PTTN PERP PLMBG PLTF PLWD PNT PREFAB QTY	PLASTICLAMINATE PARTITION PERPENDICULAR PLUMBING PLATFORM PLYWOOD PAINT PREFABRICATED QUANTITY	3. PRIOR TO CONSTRUCTION, DISCREPANCIES BETWEEN THE ARCHITECTURAL AND ENGINEERING DRAWINGS SHALL BE REPORTED TO THE ARCHITECT.		ARCHITECT RUSSELL DAVIDSON ARCHITECTURE + DESIGN CONTACT: RUSSELL DAVIDSON 644 ZION STREET, SUITE A NEVADA CITY, CA 95959 T (530) 264-5559		NG-2 GVCITY 0.27 ACRES (11,761 SF) 35'-0"		CGBSC G2.0 CGBSC G2.1 CGBSC	
DBL DEG DEM DEMO DEPT DET DIAG DIA DIM DN DTL DWG DS	DOUBLE DEGREE DEMOLISH DEMOLITION DEPARTMENT DETAIL DIAGONAL DIAMETER DIMENSION DOWN DETAIL DRAWING DOWNSPOUT	RA RAD REBAR REF REQD REV RO RWD	RETURN AIR RADIUS REINFORCING BAR REFERENCE REQUIRED REVISION ROUGH OPENING REDWOOD	4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL MATERIALS AND WORKMANSHIP IN ACCORDANCE WITH THE APPLICABLE UNIFORM BUILDING CODE, HANDICAP ACCESS CODE AND ALL APPLICABLE ORDINANCES, INCLUDING STATE AND LOCAL BUILDING CODES AND REQUIREMENTS.		CIVIL ENGINEER MILLENIUM ENGINEERING CONTACT: MICHELLE LAYSHOT 159 SOUTH AUBURN STREET GRASS VALLEY, CA 95945 T (530) 446-6765		R-3 V-B NO		TYPICAL ACCESSIBILITY DETAILS G3.0 TYPICAL ACCESSIBILITY DETAILS G3.1 TYPICAL ACCESSIBILITY DETAILS	
EA EJ ELECT ENGR EQ EQUIP (E)	EACH EXPANSION JOINT ELECTRICAL ENGINEER EQUAL EQUIPMENT EXISTING	SHT SIM SPECs SQ SSTL STD STL STRUCT	SHEET SIMILAR SPECIFICATIONS SQUARE STAINLESS STEEL STANDARD STEEL STRUCTURAL	5. THESE PLANS INDICATE THE GENERAL EXTENT OF DEMOLITION AND NEW CONSTRUCTION NECESSARY FOR THE WORK, BUT ARE NOT INTENDED TO BE ALL INCLUSIVE. ALL DEMOLITION AND ALL NEW WORK NECESSARY TO ALLOW FOR A FINISHED JOB IN ACCORDANCE WITH THE INTENTION OF THESE DOCUMENTS SHALL BE INCLUDED REGARDLESS OF WHETHER SHOWN ON THE DRAWINGS OR IN THE NOTES. DO NOT DEMOLISH ANY ITEMS THAT APPEAR STRUCTURAL, UNLESS SPECIFICALLY INDICATED TO BE DEMOLISHED IN THE CONSTRUCTION DOCUMENT, WITHOUT PRIOR REVIEW AND WRITTEN APPROVAL BY THE ARCHITECT.		STRUCTURAL ENGINEER ASHLEY & VANCE ENGINEERING CONTACT: MIKE SIMMONS 1504 EUREKA ROAD, SUITE 370 ROSEVILLE, CA 95661 T (916) 790-3181		1,866 SF 592 SF 1,016 SF		CIVIL C1.0 COVER SHEET C2.0 NOTES C3.0 GENERAL DETAILS C4.0 EXISTING TOPOGRAPHY & DEMOLITION PLAN C5.0 SITE, GRADING, DRAINAGE & UTILITY PLAN	
FDTN FE FEC FF FHC FLR FOS FP FT FTG	FOUNDATION FIRE EXTINGUISHER FIRE EXTINGUISHER CABINET FINISHED FLOOR FIRE HOSE CABINET FLOOR FACE OF STUDS FIREPROOF FEET FOOTING	T&B T&G T&D TD TRD TSLAB TS TW (TYP)	TOP AND BOTTOM TONGUE & GROOVE TO BE DETERMINED TRENCH DRAIN TREAD TOP OF SLAB TOP OF STEEL TOP OF WALL TYPICAL	6. ANY ERRORS, OMISSIONS, AND CONFLICTS FOUND IN THESE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND OWNER FOR CLARIFICATION BEFORE PROCEEDING WITH WORK.		MECHANICAL, ELECTRICAL & PLUMBING ENGINEER OPTIMIZED ENERGY AND FACILITIES CONSULTING CONTACT: ETHAN FELLERSON 5734 LONE TREE BLVD ROCKLIN, CA 95765 T (916) 626-5518				FLOOR PLANS A1.0 DEMOLITION FLOOR PLAN A1.1 NEW FLOOR PLAN A1.2 NEW REFLECTED CEILING PLAN A1.3 NEW ROOF PLAN A1.4 NEW FINISH FLOOR PLAN	
GA GALV GB GC GL GRND GWB	GAUGE GALVANIZED GYPSUM BOARD GENERAL CONTRACTOR GLASS GROUND GYPSUM WALL BOARD	UL UNO UON VERT VIF	UNDERWRITERS LAB UNLESS NOTED OTHERWISE UNLESS OTHERWISE NOTED VERTICAL VERIFY IN FIELD	7. ALL DIMENSIONS ARE TO FACE OF FINISH UNLESS NOTED OTHERWISE. ALL DIMENSIONS SHALL BE VERIFIED.						EXTERIOR ELEVATIONS A2.0 BUILDING ELEVATIONS A2.1 BUILDING ELEVATIONS	
H HORIZ HR	HIGH HORIZONTAL HOUR	W/ W/O WC WD WWM WP	WITH WITHOUT WATER CLOSET WOOD WELDED WIRE MESH WATERPROOF	8. THE CONTRACTOR SHALL CONFIRM IN WRITING APPROXIMATE ON-SITE DELIVERY DATES FOR ALL CONSTRUCTION ITEMS AS REQUIRED BY THE CONSTRUCTION DOCUMENTS, AND SHALL NOTIFY THE ARCHITECT IN WRITING OF ANY POSSIBLE DELAYS AFFECTING OCCUPANCY.						BUILDING SECTIONS A3.0 BUILDING SECTIONS	
ID IN INFO	INSIDE DIAMETER INCH INFORMATION			9. THE CONTRACTOR SHALL PROVIDE A SCHEDULE FOR CONSTRUCTION AS REQUIRED TO MEET THE OWNER'S PHASING REQUIREMENTS AND ULTIMATE COMPLETION DATE.						ENLARGED PLANS, INT ELEVATIONS, WALL SECTIONS A4.0 ENLARGED PLAN & INTERIOR ELEVATIONS	
				10. THE CONTRACTOR SHALL VERIFY THAT NO CONFLICTS EXIST IN THE LOCATION OF ANY AND ALL MECHANICAL, ELECTRICAL, TELEPHONE, LIGHTING, PLUMBING AND FIRE SPRINKLER WORK (INCLUDING PIPING, DUCTWORK AND CONDUIT), AND THAT ALL CLEARANCES FOR INSTALLATION AND MAINTENANCE ARE PROVIDED.						DETAILS A5.0 DETAILS	
				11. NO WORK DEFECTIVE IN CONSTRUCTION OR QUALITY OR DEFICIENT IN ANY REQUIREMENT OF THE CONTRACT DOCUMENTS WILL BE ACCEPTABLE IN CONSEQUENCE OF THE OWNER'S OR ARCHITECT'S FAILURE TO DISCOVER OR POINT OUT DEFICIENCIES OR DEFECTS DURING CONSTRUCTION. DEFECTIVE WORK REVEALED WITHIN THE TIME REQUIRED BY GUARANTEES SHALL BE REPLACED BY WORK CONFORMING TO THE INTENT OF THE CONTRACT. NO PAYMENT, EITHER PARTIAL OR FINAL, SHALL BE CONSTRUED AS ACCEPTANCE OF DEFECTIVE WORK OR IMPROPER MATERIALS.						SCHEDULES & DIAGRAMS A6.0 DOOR & WINDOW SCHEDULES	
				12. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE EXISTING CONSTRUCTION AND SHALL BE RESPONSIBLE FOR REPAIRING ALL DAMAGES CAUSED BY CONTRACTOR AND SUB-CONTRACTORS.						STRUCTURAL S-1.1 STRUCTURAL TITLE SHEET S-1.2 STRUCTURAL SPECIFICATIONS & SPECIAL INSPECTIONS S-2.1 FOUNDATION PLAN S-2.2 ROOF FRAMING PLAN S-3.1 STRUCTURAL DETAILS S-3.2 STRUCTURAL DETAILS	
				13. THE CONTRACTOR SHALL REVIEW, APPROVE, STAMP AND SUBMIT WITH REASONABLE PROMPTNESS AND IN SUCH SEQUENCE AS TO CAUSE NO DELAY IN THE WORK, PRODUCT DATA, SHOP DRAWINGS AND SAMPLES FOR THE PROJECT.						PLUMBING P0 PLUMBING GENERAL NOTES, CALCS, DETAILS & GAS ISOMETRIC P1 PLUMBING PLAN-WATER P2 PLUMBING PLAN-SEWER & VENT	
				14. BY APPROVING, STAMPING AND SUBMITTING SHOP DRAWINGS, PRODUCT DATA AND SAMPLES, THE CONTRACTOR REPRESENTS THAT HE HAS DETERMINED AND VERIFIED MATERIALS, FIELD MEASUREMENTS, AND FIELD CONSTRUCTION CRITERIA RELATED THERETO AND THAT HE HAS CHECKED AND COORDINATED THE INFORMATION WITHIN SUCH SUBMITTALS WITH THE REQUIREMENTS OF THE WORK AND CONTRACT DOCUMENTS.						MECHANICAL M0 MECHANICAL GENERAL NOTES, SCHEDULES & DETAILS M1 MECHANICAL PLAN	
				15. THE CONTRACTOR SHALL NOT BE RELIEVED OF RESPONSIBILITY FOR ANY DEVIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE ARCHITECT'S REVIEW OF THE SHOP DRAWINGS, PRODUCT DATA OR SAMPLES. UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE ARCHITECT IN WRITING OF SUCH DEVIATION AT THE TIME OF SUBMISSION AND THE ARCHITECT HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.		APPLICABLE CODES ALL CODES REFERENCED ARE TO BE USED AS AMENDED BY THE STATE OF CALIFORNIA AND LOCAL JURISDICTION. 2025 CALIFORNIA RESIDENTIAL BUILDING CODE 2025 CALIFORNIA MECHANICAL CODE 2025 CALIFORNIA ELECTRICAL CODE 2025 CALIFORNIA PLUMBING CODE 2025 CALIFORNIA GREEN BUILDING CODE 2025 CALIFORNIA FIRE CODE 2025 CALIFORNIA ENERGY CODE		SCOPE OF WORK PROJECT CONSISTS OF THE FOLLOWING WORK: RENOVATE EXISTING GARAGE AND CONSTRUCT ADDITION TO CREATE A THREE SINGLE OCCUPANCY BEDROOM ADA ACCESSIBLE ACCESSORY DWELLING UNIT (ADU) TO EXISTING RESIDENCE REPLACE EXISTING WATER HEATER AND HVAC UNIT AT EXISTING MAIN DWELLING. INSTALL NEW SEWER LIFT STATION AND ALTER EXISTING MAIN DWELLING DWV SYSTEM.		ENERGY CALCULATIONS EN0 TITLE 24 ENERGY EN1 TITLE 24 ENERGY	
				16. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT THREE (3) PRINTS, TYPICALLY, OF EACH SHOP DRAWING SUBMITTAL PLUS THREE (3) COPIES OF EITHER PRODUCT DATA OR SAMPLES.						ELECTRICAL E0 ELECTRICAL GENERAL NOTES, CALCS & SCHEDULES E1 ELECTRICAL PLAN	
				17. THE ARCHITECT ASSUMES NO RESPONSIBILITY FOR DIMENSIONS OR QUANTITIES ON REVIEWED SUBMITTALS.							
				18. SUBSTITUTIONS, REVISIONS AND/OR CHANGES MUST HAVE PRIOR WRITTEN APPROVAL BY THE ARCHITECT.							
				19. THE CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DOCUMENTS ON THE JOB SITE DURING ALL PHASES OF CONSTRUCTION FOR USE BY ALL TRADES AND SHALL PROVIDE ALL SUBCONTRACTORS WITH CURRENT CONSTRUCTION DOCUMENTS AS REQUIRED.							
				20. THE CONTRACTOR SHALL PROVIDE COMPLETE PRODUCT DATA AND RELATED INFORMATION APPROPRIATE FOR THE OWNER'S MAINTENANCE AND OPERATION OF PRODUCTS FURNISHED UNDER THE CONTRACT.							
				21. WORK UNDER THIS CONTRACT SHALL BE WARRANTED BY THE CONTRACTOR AGAINST ALL DEFECTS FOR ONE (1) YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION OF THE WORK OR DESIGNATED PORTIONS THEREOF OR FOR ONE (1) YEAR AFTER ACCEPTANCE BY THE OWNER OF DESIGNATED EQUIPMENT. IN THE CASE OF ITEMS REMAINING UNCOMPLETED AFTER THE DATE OF SUBSTANTIAL COMPLETION, THE ONE-YEAR WARRANTY PERIOD SHALL BE FROM DATE OF ACCEPTANCE OF SUCH ITEMS.							
				22. EACH TRADE SHALL EXAMINE THE PREMISES TO INSURE THAT CONDITIONS ARE APPROPRIATE FOR HIS WORK TO COMMENCE, PRIOR TO COMMENCING HIS WORK. AREAS NOT APPROPRIATE SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. COMMENCING WORK IMPLIES ACCEPTANCE OF EXISTING CONDITIONS.							
				23. THE GENERAL CONTRACTOR SHALL ASSIST IN THE COORDINATION AND BE RESPONSIBLE FOR THE INSTALLATION OF N.I.C. ITEMS, INCLUDING BUT NOT LIMITED TO FURNITURE, EQUIPMENT, APPLIANCES, PLUMBING FIXTURES, DISHWASHERS, VOICE/ DATA CABLING, TELEPHONE WORK, ETC.							
				24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE INSTALLATION AS REQUIRED FOR ACCESSORY ITEMS INCLUDING SINK, DISHWASHER, REFRIGERATOR, LAUNDRY EQUIPMENT, ETC.							
				25. ALL DRAWINGS AND NOTES ARE CONSIDERED COMPLEMENTARY, AND WHAT IS CALLED FOR BY EITHER WILL BE AS BINDING AS IF CALLED FOR BY ALL. ANY WORK SHOWN OR REFERRED TO ON ANY ONE SET OF DRAWINGS SHALL BE PROVIDED AS THOUGH SHOWN ON ALL RELATED DRAWINGS.							
				26. VERIFY ALL ARCHITECTURAL DETAILS AND COORDINATE DRAWINGS WITH STRUCTURAL AND MEP DRAWINGS BEFORE INITIATION OF ANY RELATED WORK.							
				27. ALL INSTALLATIONS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS, INDUSTRY AND BUILDING STANDARDS, AND CODE REQUIREMENTS. SEALANT, WEATHERSTRIPPING, AND FLASHING LOCATIONS IN DRAWINGS ARE NOT INTENDED TO BE INCLUSIVE.							
				28. LARGER SCALE DETAILED DRAWINGS SUPERCEDES SMALLER SCALED ELEVATION AND PLAN DRAWINGS.							

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AGING-IN-PLACE DESIGN AND FALL PROTECTION

At least one bathroom on the entry level shall be provided with grab bar reinforcement. Reinforcement shall be nominal 2x8 lumber and shall be located between 32 inches and 39.5 inches above the finished floor. Water closet reinforcement shall be installed on both side walls of the fixture, or on the side wall and the back wall. Shower reinforcement shall be continuous where wall framing is provided. Bathtub and combination bathtub/shower reinforcement shall be continuous on each end of the bathtub and the back wall. Back wall reinforcement for a lower grab bar shall be provided with the bottom edge located no more than 6 inches above the bathtub rim. Information identifying the location of the reinforcement shall be placed in the operations and maintenance manual. (CRC R328.1.1)

Electrical receptacles outlets, switches and controls shall be located not 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 finished floor. (CRC R328.1.2)

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 open at a 90-degree angle. (CRC R328.1.3)

Doorbell buttons shall be installed not more than 48" above the finished floor measured to the top of the button. (CRC R328.1.4)

GENERAL

Provide each bedroom, basement, and habitable attics with a minimum of one exterior window with a 44" maximum clear opening height, 5.7 sq. ft. minimum clear openable area (minimum 5.0 sq. ft. at grade floor openings), 24" minimum clear openable height and 20" minimum clear width, or an operable exterior exit door. Window wells, ladders, and steps shall comply with minimum code requirements. Screens, grilles, covers, and shades shall be releasable or removable from the interior without the use of a key, tool, special knowledge, or force greater than 15lbs to operate the emergency escape and rescue openings. Photovoltaic panels & modules shall not be below an emergency escape and rescue opening within 36". (R319)

Each bathroom containing a bathtub, shower or tub/shower combination shall be mechanically ventilated with Energy Star approved equipment (minimum 50cfm) with an integral humidistat installed. (CRC R325.2.1)

Provide attic cross ventilation: 1/150 of attic area or 1/300 with at least 40% but not more than 50% of vents are a maximum 3 ft. below the ridge or highest space in the attic and the balance is provided in the lower third of the attic space (not limited to eaves or cornice vents). As an alternative in Climate Zone 16 (Truckee region), the net area may be reduced to 1/300 when a Class I or II vapor barrier is installed on the warm-in-winter side of the ceiling. Baffles are required at vents for insulation. Provide minimum of 1" inch of air space between insulation and roof sheathing. (CRC R806)

Enclosed rafter spaces shall have a 1-inch clear cross ventilation. (Properly sized rafters for insulation) (CRC R806.3)

Under floor cross ventilation: minimum 1.0 sq. ft. for each 150 sq. ft. of under floor area. When a class 1 vapor retarder is installed on the ground surface the minimum area of ventilation may be limited to 1sq.ft for each 1,500 square feet of under-floor space. One ventilation opening shall be within three (3) feet of each corner of the building (CRC R408.1). Unvented crawl spaces shall comply with CRC R408.2. Unvented crawl space added option for dehumidification of 70 pints moisture per day per 1,000 sf to requirement for exemption. (R408.3)

Exterior balconies and elevated walking surfaces exposed to water, where structural framing is protected by an impervious moisture barrier require construction documents with manufacturer's installation instructions. (R106.1.5) Must be inspected and approved before concealing barrier. (R109.1.5.3)

Enclosed framing in exterior balconies and elevated walking surfaces exposed to rain, snow or drainage from irrigation shall be provided with cross-ventilation area of at least 1/150. (R304.1.3)

Provide landings and a porch light at all exterior doors. Landings are to be minimum 3 ft deep x width of door. Landings at required egress doors may step down a maximum of 7.75 inches when the door does not swing over the landing and 1.5 inches when door swings onto the landing. Other than required exterior exit doors are required have a threshold of 7.75 inches maximum; a landing is not required if a stair with two or fewer risers is located on the exterior side and the door does not swing over the stairway. (CRC R318.3)

At least one egress door shall be provided for each dwelling unit, the egress door shall be side hinged with a minimum openable width of 32 inches; the minimum clear openable height shall be 78 inches minimum (other doors shall not be required to comply with these dimensions). Egress doors shall be readily openable from the inside without the use of a key, special knowledge, or effort. (CRC R318.2)

Operable windows more than 72" above finish grade with a clear opening height less than 24" shall have openings not more than 4" apart or needs a compliant guard. (CRC R321.2.1)

FOUNDATIONS & CONCRETE SLABS

Soile drainage 6" within the first 10ft. from the foundation wall. If physical obstructions or lot lines prohibit the 10ft distance, a 2.5 percent slope shall be provided to an approved alternative method of diverting the water away from the foundation. Impervious surfaces shall also be sloped a minimum of 2 percent for 10ft away from structures to an approved drainage way. (CRC R401.3)

Footings shall extend at least 12 inches into the undisturbed ground surface. (CRC R403.1.4) Unless erected on solid rock, to protect against frost and freezing, the minimum foundation depth is 18 inches below grade if between 4,000-7,000 foot elevation and 24 inches below grade for 7,000-14,000 foot elevation and above. Exception: Interior footings shall be a minimum of 12 inches below grade. (Nevada County Code Section 14.03.190)

Stepped footings shall be used when slope of footing bottom is greater than 1 in 10 (V: H). Step footing detail shall be shown on building elevations and foundation plan. (CRC R403.1.5)

Concrete slabs: 3 1/2" minimum (CRC R506.1). Slabs under living areas and garages shall be reinforced with wire 6" x 6", 10 gauge x 10 gauge welded mesh or equivalent steel reinforcement and 4" thickness of 3/8 minimum gravel under the concrete slab. Separate from soil with a 6 mil polyethylene vapor retarder with joints lapped not less than 6 inches in living areas. A 4" rock capillary break shall be installed when a vapor retarder is required.

A minimum 18" x 24" under-floor access, unobstructed by pipes or ducts and within 5' of each under-floor plumbing cleanout and not located under a door to the residence, is required. Provide a solid cover or screen. (CRC R408.4 & CPC 707.9)

Minimum sill bolting: 1/2" anchor bolts or approved anchors at 6 ft. o.c. maximum for one-story, (CRC R403.1.6) Use anchor bolts at 4 ft. o.c. maximum for three story construction. Embed bolts 7" minimum. The anchor bolts shall be placed in the middle third of the width of the plate. Load end bolts not less than 7 bolt diameters, nor more than 12" from ends of sill members. In SDC DO and above: Provide 3"x3"x0.229 plate washers on each bolt at braced or shear wall locations, standard washers shall be permitted for anchor bolts not located in braced/shear wall locations. The hole in the plate washer is permitted to be diagonally slotted with a width of up to 3/16" larger than the bolt diameter; the slot length shall not exceed 1 1/4", provided a standard cut washer is placed between the plate washer and the nut. (CRC R403.1.6.1 & R602.11.1)

WOOD FRAMING

Columns shall be restrained to prevent lateral displacement at the bottom end. Wood columns

shall be 4x material minimum and steel columns shall be schedule 40, 3" in diameter minimum. (CRC R407.3) Toenailing of posts to pier blocks no longer allowed in underfloor areas.

CLEARANCES AND TREATMENT FOR WOOD FRAMING

All joists, girders, ledgers, structural blocking and support posts/column shall be wood of natural resistance to decay or pressure-treated lumber when exposed to the weather. (CRC R304)

Columns in basements when in contact with basement slabs or metal pedestals shall be pressure treated or natural resistance to decay unless the pier/pedestals project 1" above concrete or 8" above earth. (CRC R304)

Columns in enclosed crawl spaces or unencavated areas located within the periphery of the building shall be pressure treated or natural resistance to decay unless the column is supported by a concrete pier or metal pedestal of a height 8" or more. (CRC R304)

FLOORS

Under-floor areas with storage, fuel-fired equipment or electric-powered equipment with less than 2x10 solid joists or composite lumber of equal or greater cross-sectional area shall be protected on the underside by half-inch sheetrock or a sprinkler system. (R302.13)

Balconies and decks must be designed for a minimum live load of 60lbs per square foot. (CRC T-R301.5)

WALLS

Specify post to beam connections. Positive connection shall be provided to ensure against uplift and lateral displacement. (CRC R502.9 & CRC 2304.10.7)

All fasteners used for attachment of siding & into pressure treated lumber shall be of a corrosion resistant type. (CRC 304.3)

Provide approved building paper under the building siding and approved flashing at exterior openings. (CRC R703.2) Specify a minimum of 2 layers of Grade D paper under stucco and 2 layers of 15lb felt (or equivalent) under stone veneer.

Stucco shall have a minimum clearance to earth of 4 inches and 2 inches to paved surfaces with an approved weep screed. (CRC R703.7.2.1) Masonry stone veneer shall be flashed beneath the first course of masonry and provided with weep holes immediately above the flashing. (CRC R703.8.5 and R703.8.6)

ROOF

Show minimum 22" x 30" access opening to attic (CRC R807); may be required to be 30"x30" to remove the largest piece of mechanical equipment per the California Mechanical Code. Ceiling at attic access must be 30" measured from bottom of roof rafters to top of ceiling joists.

Provide adequate roof slope (minimum 1/4 inch per 12 inches) for roof drainage. Roof drains/gutters required to be installed per the California Plumbing Code with leaf/debris protection also installed.

Asphalt shingles with sloped roofs 2/12 to <4/12 shall have two layers of underlayment applied per CRC R905.2.

GARAGE AND CARPORT

Garage shall be separated from the dwelling unit & attic area by 1/2 inch gypsum board applied to the garage side. Garage beneath habitable rooms shall be separated by not less than 5/8" type X gypsum board. Structure supporting floor/ceiling assemblies used for required separations shall have 1/2" gypsum board installed minimum. Door openings from the garage to the dwelling shall be solid wood/steel doors or honeycomb steel doors not less than 1 3/8" thick or a 20-minute rated fire door. Doors shall be self-closing & self-latching. No openings directly into a sleeping room from the garage. When the dwelling and garage have fire sprinklers installed per R317.6 and R309, doors into the dwelling unit from the garage only need to be self-closing and self-latching. (CRC R302.5.1 & T-R302.6)

Ducts penetrating the garage to dwelling separation shall be a minimum of 26 gauge with no openings into the garage. (CRC R302.5.2)

Penetrations through the garage to dwelling separation wall (other than ducts as listed above) shall be fire-blocked per CRC section R302.11, Item #4.

Garage and carport floor surfaces shall be non-combustible material and slope to drain towards the garage door opening. (CRC R317.1)

Appliances and receptacles installed in garage generating a glow, spark or flame shall be located 18" above floor unless it is listed as flammable vapor ignition resistant. (CMC 305.1) Provide protective post or other impact barrier from vehicles. (CMC 305.1.1)

Appliances in private garages and carports shall be installed with a minimum clearance of 6ft above the floor unless they are protected from vehicular impact. (CBC 406.2.9.3)

STAIRWAYS & RAMPS

Stair landings required every 127" of vertical rise. (CRC R318.7.3)

Exterior stair stringers must be naturally resistant to decay or pressure treated. (CRC R304.1)

Rise shall be maximum 7.75"; Run shall be 10" minimum; headroom 6'-8" minimum; width 36" minimum, 31.5" between a handrail on one side and 27" with handrails on two sides. Variation between riser heights 3/8" maximum. A nosing not less than .75 inches but not more than 1.25 inches shall be provided on stairways with solid risers where the tread depth is less than 11 inches. The leading edge of treads shall project not more than 1.25 inches beyond the tread below. Open risers are permitted, provided the opening between the treads does not permit the passage of a 4" sphere. (Openings are not limited when the stair has a rise of 30" or less). (CRC R318.7)

Stairways with 4 or more risers shall have a handrail on one side 34" to 38" above the tread nosing. Circular handrails shall have an outside diameter of 1.25"-2"; if not circular, it shall have a perimeter dimension of 4"-6.25" with a maximum cross-sectional dimension of 2.25". A minimum clearance of 1.5" shall be maintained from the wall or other surface. Handrails shall be returned and terminate in newel posts, or safety terminals. (CRC R320)

Guards shall be 42" minimum height (unless acting as a handrail/guard for a stairway; the guard height may be 34"-38" in height), with openings less than 4" inches clear (guards on the open sides of stairs may have 4 3/8" openings). (CRC R321)

Provide landings at the top/bottom of the stairway the width of the stairway. The depth of the landing shall be 36" minimum. (CRC R318.7.6)

Usable spaces underneath enclosed/unenclosed stairways shall be protected by a minimum of 1/2" gypsum board. (CRC R302.7)

Ramps serving the egress door shall have a slope of not more than 1 unit vertical in 12 units horizontal (8.3-percent slope). All other ramps shall have a maximum slope of 1 unit vertical in 8 units horizontal (12.5-percent slope). Exception: Where it is technically infeasible to comply because of site constraints, ramps shall have a slope of not more than 1 unit vertical in 8 units horizontal (12.5-percent slope) (CRC R318.8.1). Provide 3'x3" landings at the top and bottom of ramps, where doors open onto ramps, and where ramps change directions. (CRC R318.8.2)

DECKS

Guards are required if deck or floor is over 30" above grade, minimum 42" high, with openings less than 4". (CRC R312) Guardrails shall be designed and detailed for lateral forces according to CRC Table 301.5.

Flashing must extend vertically 2" above the ledger and 4" horizontal beyond the ledger face. (CRC R507.9.1.3)

Provide deck lateral load connections at each end of the deck and at deck intersections per CRC R507.9.2. Specify connectors with a minimum allowable stress design capacity of 1,500lbs and install with 24" of the end of the deck. 750lb rated devices are allowed (DTT12 as example) if located at 4 points along the deck.

Posts/columns shall be retrained at the bottom end to prevent lateral displacement; clearly show approved post bases, straps, etc to achieve this per CRC R407.3

Joists, girders, structural blocking and support posts shall be wood of natural resistance to decay or pressure-treated lumber when exposed to the weather. (CRC R304.1(8))

Hardware and fasteners to be hot-dipped galvanized, stainless steel, silicon bronzed or copper. (CRC R304.3)

ELECTRICAL

Never install electrical panels in closets or bathrooms. Maintain a clearance of 36" inches in front of panels, 30" wide or width of equipment and 6'-6" high for headroom. (CEC 110.126)

All services supplying dwelling units shall be provided a surge protection device. The SPD shall be an integral part of the service equipment or shall be located immediately adjacent thereto. (CRC R703.2) Specify a minimum of 2 layers of Grade D paper under stucco and 2 layers of 15lb felt (or equivalent) under stone veneer.

Provide a minimum 3 lug intersystem bonding busbar at the main electrical service. (CEC 250.94)

Provide a four-wire feed (two ungrounded conductors, one grounded conductor and an equipment grounding conductor) to all detached structures.

Provide electrical service load calculations for dwellings over 3,000 sq. ft. services 400 amperes or greater or as determined by the Plans Examiner.

All automatic garage door openers that are installed in a residence shall have a battery backup function that is designed to operate when activated because of an electrical outage. (CRC 406.2.1)

A concrete-encased electrode (ufer) consisting of 20" of rebar or #4 copper wire placed in the bottom of a footing is required for all new construction. (CEC 250.52(A)(3)) Bond all metal gas and water pipes to ground. All ground clamps shall be accessible and of an approved type. (CEC 250.104)

All 15/20 ampere receptacles installed per CEC 210.52 including attached and detached garages and accessory buildings shall be listed tamper-resistant receptacles. (CEC 406.12)

All branch circuits supplying 15/20 ampere outlets in family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, kitchens, laundry room or similar rooms/areas shall be protected by a listed combination type arc-fault circuit interrupter. (CEC 210.12)

Provide a minimum of one 20A circuit to be used for the laundry receptacle. (CEC 210.11(C)(2))

Provide a minimum of one 20A circuit for bathroom receptacle outlets. (CEC 210.11(C)(3))

GFCIs for Specific Appliances – 210.8(D) This change expands the requirement for GFCI-protected branch circuits or outlets to include those serving electric ranges, wall-mounted ovens, counter-mounted cooking units, clothes dryers and microwave ovens, no matter where they are located.

Provide at least 1 outlet in basements, garages, laundry rooms, decks, balconies, porches and within 3' of the outside of each bathroom basin. (CEC 210.52 (D), (F) & (G))

Furnaces installed in attics and crawl spaces shall have an access platform (catwalk in attics), light switch and receptacle in the space. Provide a service receptacle for the furnace. (CEC 210.63)

All dwellings must have one exterior outlet at the front and the back of the dwelling. (CEC 210.52(E))

Provide a minimum of one 20A circuit for attached and detached garage outlets. The circuit shall supply no other receptacle outlet. Exception: Garage circuit may serve readily accessible outdoor receptacle outlets. ((CEC 210.11 (C)(4))

A minimum of 1 receptacle shall be provided for each car space. (210.52(G)(1))

At least one wall switched lighting outlet or fixture shall be installed in every habitable room, bathroom, hallways, stairways, attached garages and detached garages with electrical power, equipment spaces (attics, basements, etc). (CEC 210.70).

Kitchens, dining rooms, pantries, breakfast nooks, and similar areas must have a minimum of two 20A circuits. Kitchen, pantry, breakfast nooks, dining rooms, work surfaces and similar areas counter outlets must be installed in every counter space 12" inches or wider, not greater than 4' o.c., within 24" inches of the end of any counter space and not higher than 20" above counter. (CEC 210.52 (C)) 1 receptacle is required for peninsular counter spaces. Receptacles shall be located behind kitchen sinks if the counter area depth behind the sink is more than 12" for straight counters and 18" for corner installations. (CEC Figure 210.52(C)(1))

Receptacles on Kitchen Islands and Peninsulas – 210.52(C)(2) This change removes the requirement for providing receptacles to serve countertops and work surfaces on kitchen islands and peninsulas but requires undefined provisions for a future receptacle if none are provided. This section previously required one or more receptacles to serve islands and peninsulas based on their countertop area.

Receptacles shall be installed at 12' o.c. maximum in walls starting at 6' maximum from the wall end. Walls longer than two feet shall have a receptacle. Halfway walls longer than 10 ft shall

have a receptacle in hallways. (CEC 210.52(A))

Receptacles installed Around Tub or Shower Spaces – 406.9(C) This change clarifies that the zone restricting the location of receptacles around a tub or shower space does not include those spaces separated by a floor, wall, ceiling, room door, window, or fixed barrier. The 2020 NEC extended the zone 3 feet beyond the bathtub rim or shower stall threshold.

Stairways with 6 or more risers shall have wall switch at each floor level at the stair landings. (CEC 210.70(A)(2))

Receptacles shall not be installed within or directly over a bathtub or shower stall. (CEC 406.9 (C)) Light pendants, ceiling fans, lighting tracks, etc shall not be located within 3ft horizontally and 8ft vertically above a shower and/or bathtub threshold. (CEC 410.10(D))

All lighting/fan fixtures located in wet or damp locations shall be rated for the application. (CEC 410.10)

GFCI outlets are required: for all kitchen receptacles that are designed to serve countertop surfaces, dishwashers, bathrooms, in under-floor spaces or below grade level, in unfinished basements, crawl space lighting outlets, in exterior outlets, within 6' of a laundry/utility/wet bar sinks, indoor damp locations, mud rooms, finished basements, laundry areas, and in all garage outlets including outlets dedicated to a single device or garage door opener. (CEC 210.8)

Carbon-monoxide alarms shall be installed in dwelling units with fuel-burning appliances or with attached garages (CRC R311):

Outside of each separate sleeping area in the immediate vicinity of bedrooms

On every level of a dwelling unit including basements

Where a fuel-burning appliance is located within a bedroom, a carbon monoxide detector shall be installed in the bedroom.

Alterations, repairs, or additions exceeding 1,000 dollars (May be battery operated)

Smoke alarms shall be installed (CRC R310):

In each room used for sleeping purposes.

Outside of each separate sleeping area in the immediate vicinity of bedrooms.

In each story, including basements.

At the top of stairways between habitable floors where an intervening door or obstruction prevents smoke from reaching the smoke detector.

Shall not be installed within 20ft horizontally of cooking appliances and no closer than 3ft to mechanical registers, ceiling fans and bathroom doors with a bathtub or shower unless this would prevent placement of a smoke detector (R314.3(A)).

Within a room to which a sleeping loft is open, in the immediate vicinity of the sleeping loft.

Alterations, repairs, or additions exceeding 1,000 dollars. (May be battery operated.)

All smoke and carbon-monoxide alarms shall be hardwired with a battery backup (smoke alarms shall have a 10-year sealed battery). (CRC R314.4 & R315.1.2)

Smoke detectors within 10 feet to 20 feet of the stove shall be ionization type with alarm silencing switch. (CRC R314.3.3)

All 15/20 ampere receptacles in wet locations shall have in-use (bubble) covers installed. All receptacles in wet locations shall also be listed weather-resistant type. (CEC 406.9(B)(1))

ENERGY STORAGE SYSTEMS

Energy storage systems shall be installed per minimum code standards. (CRC R330) See the ESS handbook for more details.

PLUMBING

Underfloor cleanouts shall not be more than 5' from an underfloor access, access door or trap door. (CPC 707.9)

Kitchen sinks require a cleanout above the floor level of the lowest floor of the building.

ABS piping shall not be exposed to direct sunlight unless protected by water based synthetic latex paints. (CPC 906.1)

PVC piping shall not be exposed to direct sunlight unless protected by water based synthetic latex paint. .04" thick wrap or otherwise protected from UV degradation. (CPC 906.1)

Underground water supply lines shall have a 14 awg blue tracer wire. (CPC 604.10.1)

The entire floor space in a room containing a shower without thresholds shall be considered a "wet location" when using the CRC, CBC, and the CEC. (CRC 408.5)

Shower compartments, regardless of shape, shall have a minimum finished interior of 1024 square inches (32" by 32") and shall also be capable of encompassing a 30" circle. The required area and dimensions shall be measured at a height equal to the top of the threshold and shall be maintained to a point of not less than 70" above the shower drain outlet. (CPC 408.7) Provide curtain rod or door a minimum of 22" in width (CPC 408.5). Showers and tubs with showers require a non-absorbent surface up to 6" above the floor. (CRC R307.2) Minimum shower receptor slope is 1/8" per foot. (CPC 408.5)

Curbless showers require a 2" temporary barrier for testing. (CPC 408.8.5)

Water heaters using gas or propane shall designate a space 2.5 feet by 2.5 feet and 7 feet tall suitable for future installation of a heat pump water heater. Additional features are required. (California Energy Code 150.0(n))

Domestic hot water lines shall be insulated. Insulation shall be the thickness of the pipe diameter up to 2" in size and minimum 2" thickness for pipes larger than 2" in diameter. (CPC 609.12)

A 3-inch gravity propane drain shall be provided at the low point of the space, installed which provides 1/4-inch per foot grade and terminate at an exterior point of the building protected from blockage. The opening shall be screened with a corrosion-resistant wire mesh with mesh openings of 1/4-inch in dimension. Lengths of the gravity drains over 10 feet in length shall be first approved by the Building Official. (Nevada County Code Section 14.08.090)

Water heaters located in attics, ceiling assemblies and raised floor assemblies shall show a water-tight corrosion resistant minimum 1 1/2" deep pan under the water heater with a minimum 1/4 inch drain to the exterior of the building. (CPC 507.5)

Rain gutters and downspouts to be installed for projects below 4,000ft elevation. Clearly show/note that approved leaf/debris guards will be installed on all gutters.

Water closets shall be located in a space not less than 30" in width (15" on each side) and 24" minimum clearance in front. (CPC 402.5)

Indicate on the plans that the maximum hot water temperature discharging from a bathtub or whirlpool bathtub filler shall not exceed 120 degrees F. (CPC 408.4.2)

Provide anti-siphon valves on all hose bibs. (CPC 603.5.7)

Floor drains shall be provided with a trap primer. (CPC 1007)

Added new trap arm maximum lengths. (CPC Table 1002.2)

Gas piping on roofs shall be elevated minimum 3-1/2" above roof surface. (CPC 1210.3.5.3)

MECHANICAL

Wood burning appliances shall not be installed in a new or existing project that is not one of the following:

A pellet-fueled wood burning heater.

A U.S. EPA Phase II Certified wood burning heater.

An appliance or fireplace determined to meet the U.S. EPA particulate matter emission standard of less than 7.5 grams per hour for a non-catalytic wood fired appliance or 4.1 grams per hour for a catalytic wood fired appliance and is approved in writing by the APCO.

All newly installed gas fireplaces shall be direct vent and sealed-combustion type. (CMC 912.3)

Any installed wood stove or pellet stove shall meet the U.S. EPA New Source Performance Standard emission limits and shall have a permanent label certifying emission limits.

Pre-fab fireplaces require manufacturer specifications, model and UL Laboratories certification. Top chimney must extend a minimum of 2 ft. above any part of the building within 10 ft. (CMC 802.5.4)

Fireplaces shall have closable metal or glass doors, have combustion air intake drawn from the outside and have a readily accessible flue damper control. Continuous burning pilot lights are prohibited. (California Energy Code 150.0(e))

Provide combustion air for all gas fired appliances per CMC Chapter 7.

Masonry chimneys and fireplaces shall be constructed per CRC Chapter 10. Provide details and notes on the plans for the construction, foundation, seismic reinforcement, seismic anchorage, firebox dimensions, etc.

Gas water heater and furnace are not allowed in areas opening into bathrooms, closets or bedrooms unless installed with a closet equipped with a listed gasketed door assembly and a listed self-closing device with all combustion air obtained from the outdoors. (CPC 504)

Roof top equipment on roofs with over 4/12 slope shall have a level 30"x30" working platform. (CMC 304.2)

Exhaust openings terminating to the outdoors shall be covered with a corrosion resistant screen 1/2" x 1/2" in opening size (not required for clothes dryers). (CMC 502.1)

Vent dryer to outside of building (not to under-floor area). Vent length shall be 14 ft. maximum. Shall terminate a minimum of 3' from the property line and any opening into the building. (CMC 504.2.2)

Environmental Air Ducts shall not terminate less than 3' to a property line, 10' to a forced air inlet, 3' to openings into the building and shall not discharge on to a public way. (CMC 502.2.1)

Provide minimum 100 square inches make-up air for clothes dryers installed in closets. (CMC 504.4.1(1))



RUSSELL DAVIDSON
ARCHITECTURE + DESIGN

A circular professional seal for Russell Davidson, a Licensed Architect in the State of California. The seal features the text "LICENSED ARCHITECT" at the top and "STATE OF CALIFORNIA" at the bottom. In the center, the name "RUSSELL DAVIDSON" is written above the license number "No. C36895" and the expiration date "Ren. 11-30-27". A handwritten signature "Russell Davidson" is written across the seal, and two stars are positioned on either side of the signature.

702 QUALIFICATIONS

1. State certified apprenticeship programs.
2. Public utility training programs.
3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations
4. Programs sponsored by manufacturing organizations.
5. Other programs acceptable to the enforcing agency.

702.2 SPECIAL INSPECTION [HCD]. When required by the enforcing agency, the owner or the responsible entity acting as the owner's agent shall employ one or more special inspectors to provide inspection or other duties necessary to substantiate compliance with this code. Special inspectors shall demonstrate competence to the satisfaction of the enforcing agency for the particular type of inspection or task to be performed. In addition to other certifications or qualifications acceptable to the enforcing agency, the following certifications or education may be considered by the enforcing agency when evaluating the qualifications of a special inspector:

1. Certification by a national or regional green building program or standard publisher.
2. Certification by a statewide energy consulting or verification organization, such as HERS raters, building performance contractors, and home energy auditors.
3. Successful completion of a third party apprentice training program in the appropriate trade.
4. Other programs acceptable to the enforcing agency.

1. Special inspectors shall be independent entities with no financial interest in the materials or the project they are inspecting for compliance with this code.
2. HERS raters are special inspectors certified by the California Energy Commission (CEC) to rate homes in California according to the Home Energy Rating System (HERS).

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

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

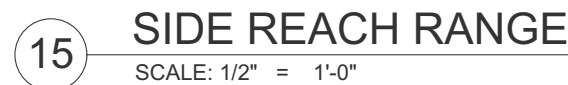
EAST EMPIRE RESIDENCE

135 EAST EMPIRE STREET
GRASS VALLEY, CA 95945
APN: 029-250-015-000

ID	NAME	DATE
2	REV 2	7/21/26
SUBMITTED:		7/20/2026
SCALE		AS NOTED
DRAWN BY:		GTB
CHECKED BY:		RPD
JOB:		2025.33

CGBSC

G2.1



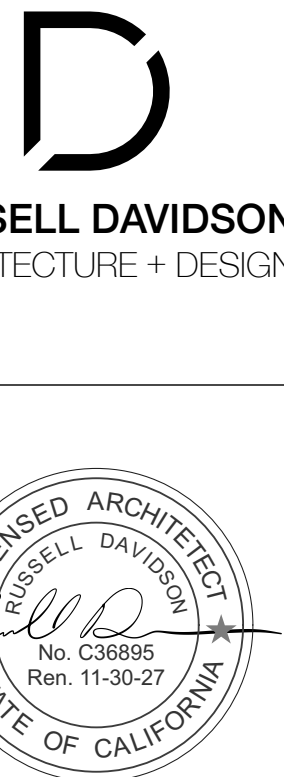
- ## EAST EMPIRE RESIDENCE

135 EAST EMPIRE STREET
GRASS VALLEY, CA 95945
APN: 029-250-015-000

GRASS VALLEY, CA 95939
APN: 029-250-015-000

APN: 029-250-015-000

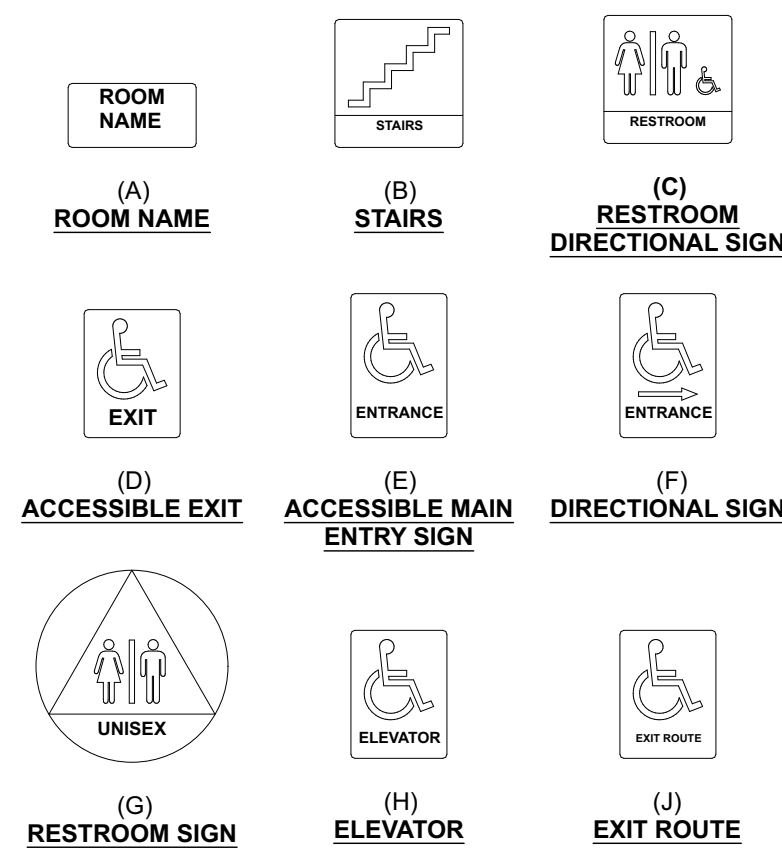
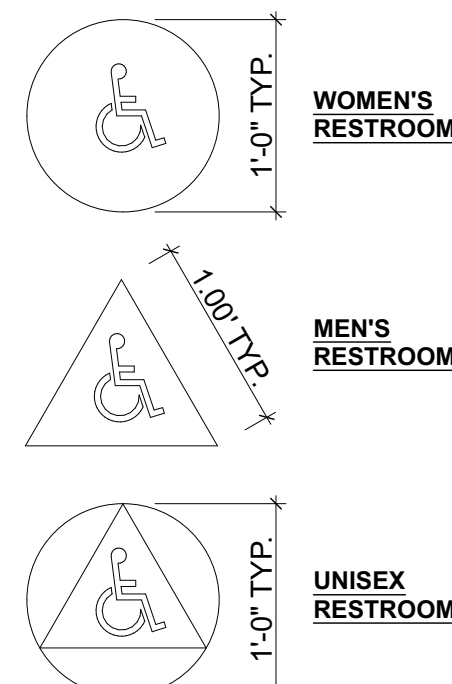
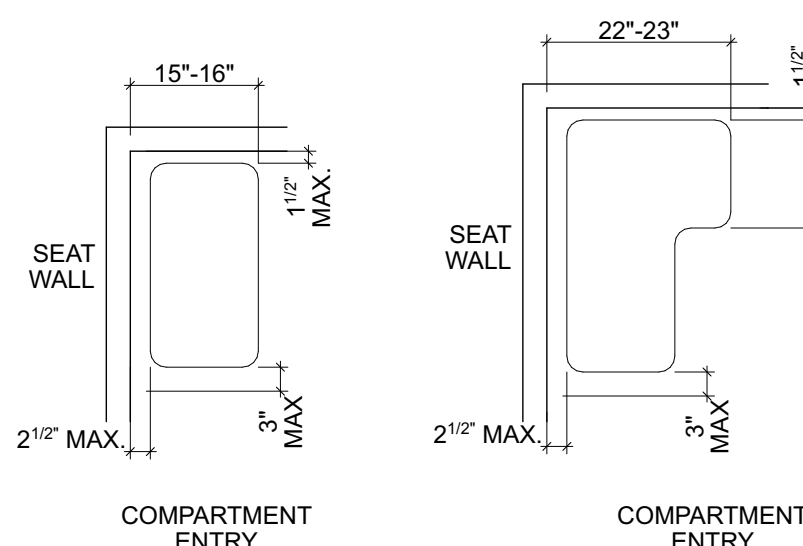
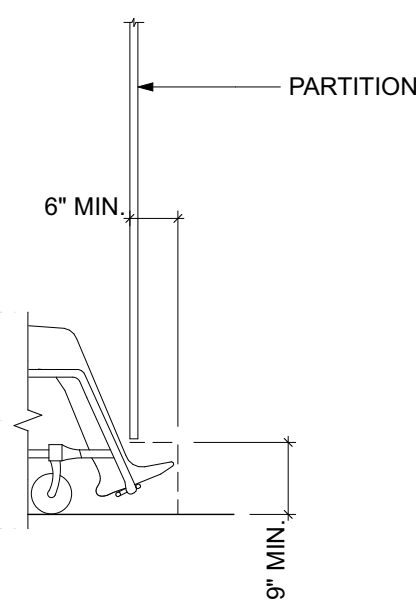
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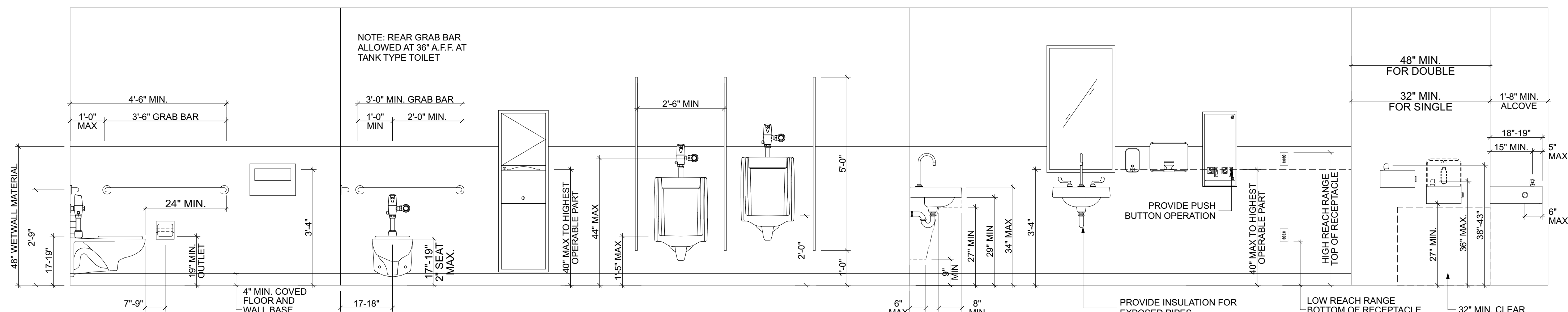
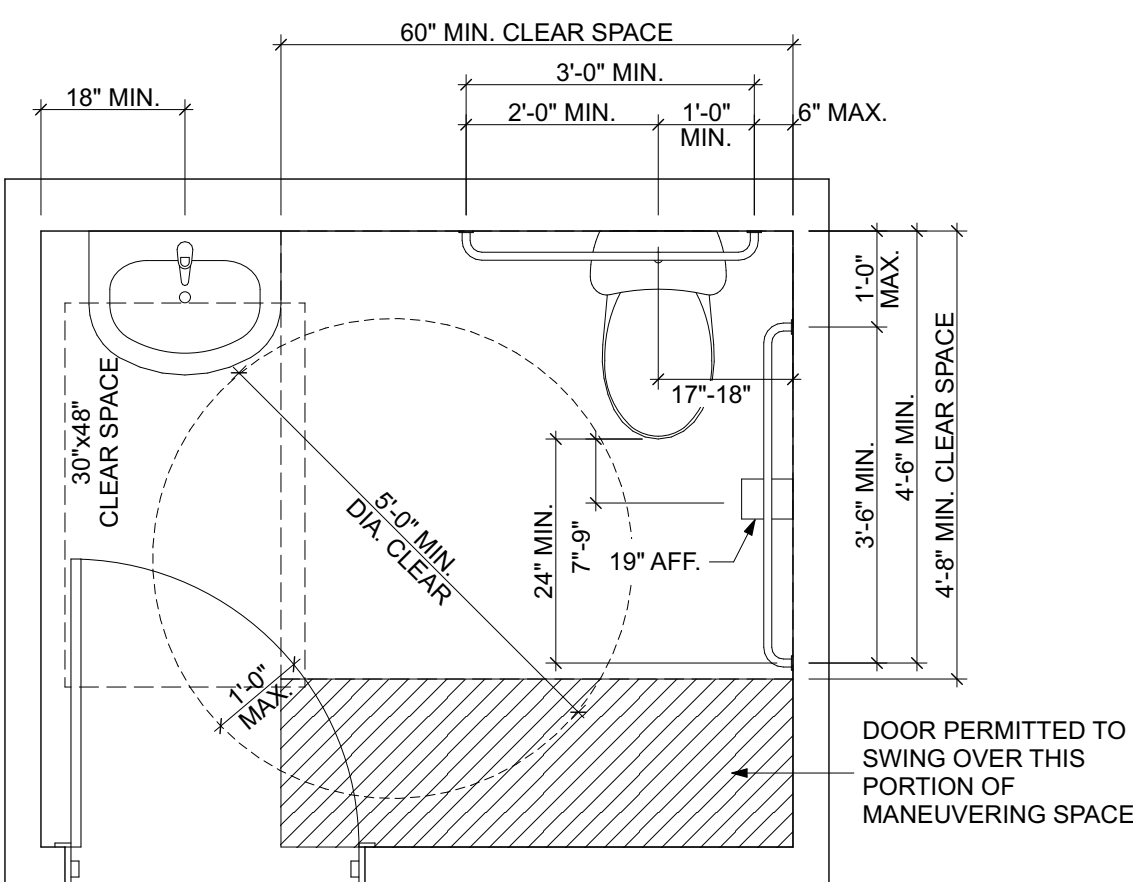
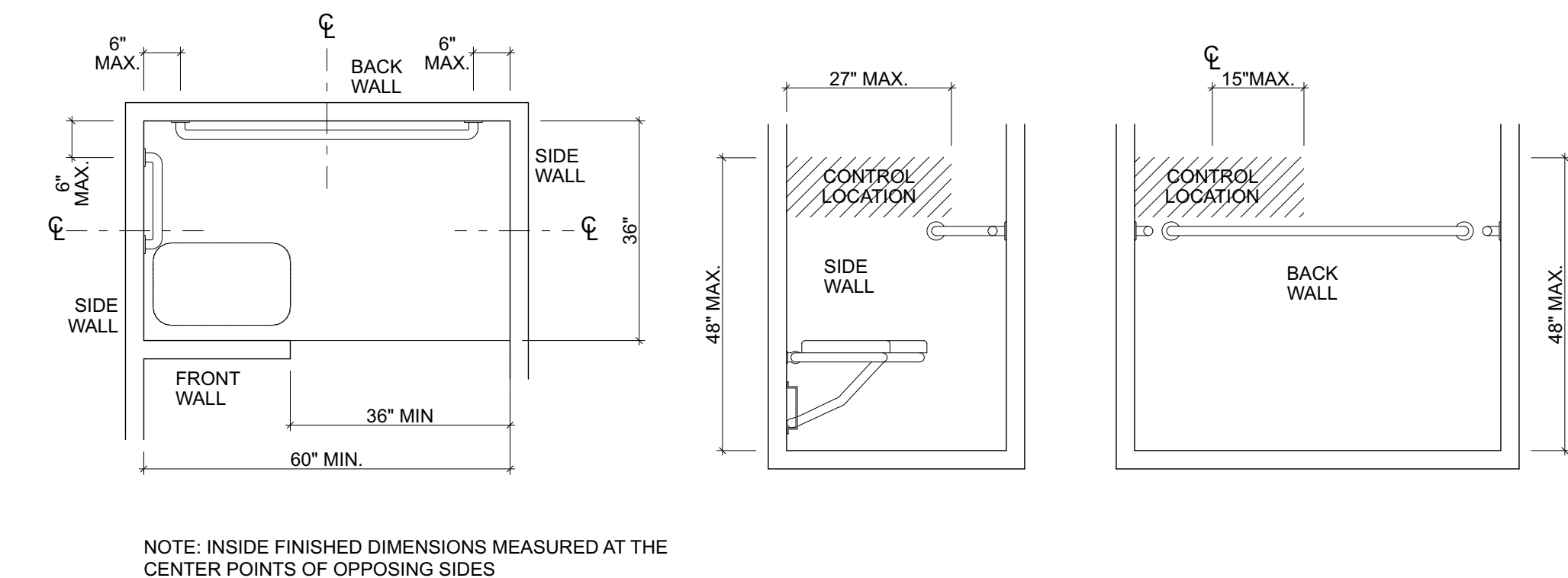
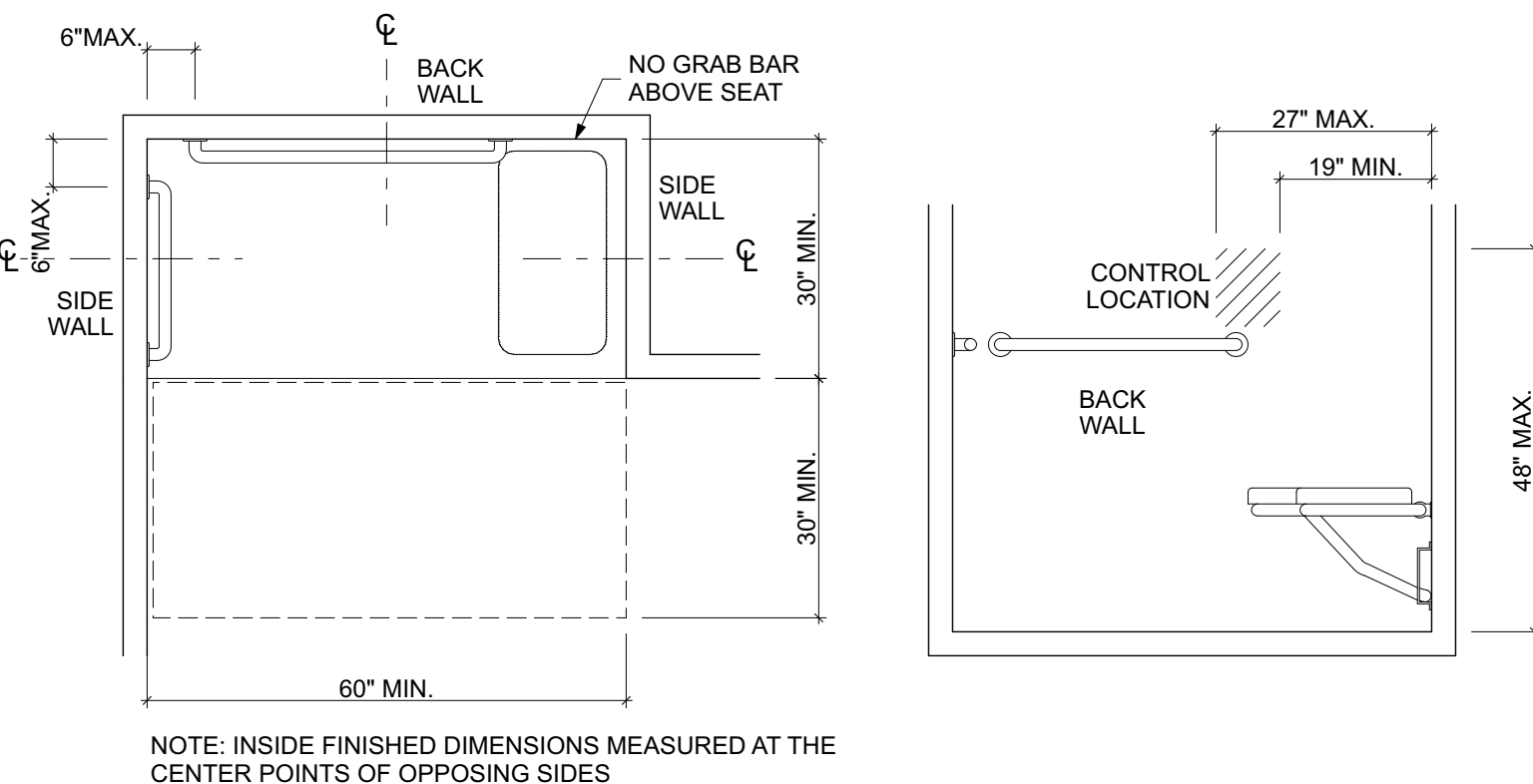
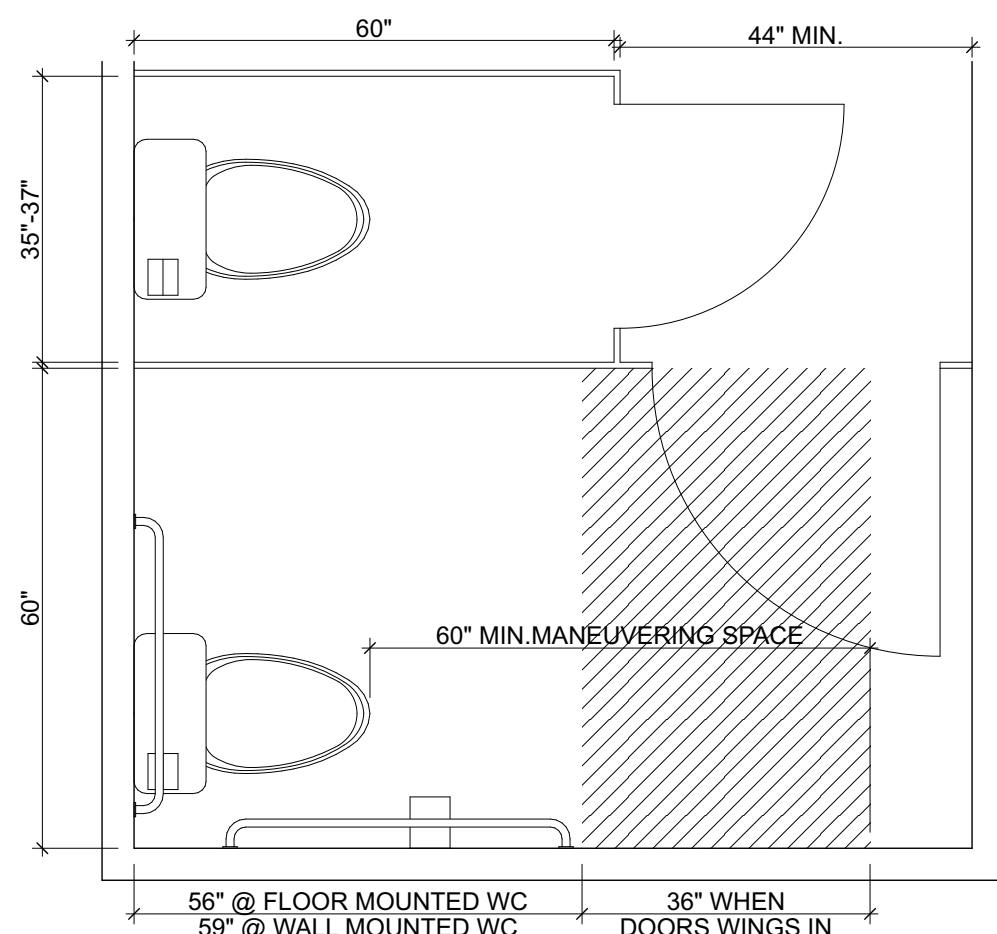
TYPICAL ACCESSIBILITY DETAILS

G3.0



ACCESSIBILITY NOTES:

1. ALL DRINKING FOUNTAINS SHALL EITHER BE LOCATED COMPLETELY WITHIN ALCOVES, POSITIONED COMPLETELY BETWEEN WING WALLS, OR OTHERWISE POSITIONED SO AS NOT TO ENCRoACH INTO PEDESTRIAN ways. THE PROTECTED AREA WITHIN WHICH A DRINKING FOUNTAIN SHALL BE LOCATED SHALL BE 32 INCHES HIGH MINIMUM AND 18 INCHES DEEP MINIMUM, AND SHALL COMPLY WITH SECTION 11B-605.9 WHEN LAID OUT. WING WALLS OR BARRIERS SHALL PROJECT HORIZONTALLY AT LEAST AS FAR AS THE DRINKING FOUNTAIN AND TO WITHIN 6 INCHES VERTICALLY FROM THE FLOOR OR GROUND SURFACE. (11B-602.9)
2. MAINTAINED CLEARANCE AROUND THE WATER CLOSET SHALL BE PERMITTED TO OVERLAP THE WATER CLOSET, ASSOCIATED GRAB BARS, DISPENSERS, SANITARY NAPKIN DISPOSAL UNITS, COAT HOOKS, SHELVES, ACCESSIBLE ROUTES, CLEAR FLOOR SPACE AND CLEARANCES REQUIRED AT OTHER FIXTURES, AND THE TURNING SPACE. NO OTHER FIXTURES OR OBSTRUCTIONS SHALL BE LOCATED WITHIN THE REQUIRED WATER CLOSET CLEARANCE. (11B-609.4)
3. FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC, HAND OPERATED FLUSH CONTROLS SHALL COMPLY WITH SECTION 11B-309 EXCEPT THEY SHALL BE LOCATED 44 INCHES MAXIMUM ABOVE THE FLOOR. FLUSH CONTROLS SHALL BE LOCATED ON THE EXTERIOR SIDE OF THE WATER CLOSET. FLUSH CONTROLS SHALL BE ACCESSIBLE TO COMPARTMENTS COMPLYING WITH SECTION 11B-604.2. (11B-604.4)
4. TOILET PAPER DISPENSERS SHALL COMPLY WITH SECTION 11B-309.4 AND SHALL BE 7 INCHES MINIMUM AND 9 INCHES MAXIMUM IN FRONT OF THE WATER CLOSET MEASURED TO THE CENTER OF THE DISPENSER. DISPENSERS SHALL BE 18 INCHES MINIMUM AND BELOW THE GRAB BAR, 19 INCHES MINIMUM ABOVE THE FINISH FLOOR AND SHALL NOT BE LOCATED BEHIND GRAB BARS. DISPENSERS SHALL NOT BE OF A TYPE THAT CONTROLS DELIVERY OF THAT DOES NOT ALLOW CONTINUOUS PAPER FLOW. (11B-604.7)
5. TOILET COMPARTMENT DOORS, INCLUDING DOOR HANDRAILS, SHALL COMPLY WITH SECTION 11B-404.6. THAT IF THE DOOR IS HINGED FROM THE REAR OF THE COMPARTMENT DOOR, CLEARANCE BETWEEN THE DOOR SIDE OF THE COMPARTMENT AND ANY OBSTRUCTION SHALL BE 48 INCHES MINIMUM MEASURED PERPENDICULAR TO THE COMPARTMENT DOOR IN ITS CLOSED POSITION. DOORS SHALL BE LOCATED IN THE REAR PARTITION. IF THE DOOR IS HINGED FROM THE FRONT PARTITION, THE DOOR CLOSURE, WHERE LOCATED IN THE FRONT PARTITION, THE DOOR OPENING SHALL BE 4 INCHES MAXIMUM FROM THE SIDE WALL OR PARTITION FARTHEST FROM THE WATER CLOSET, WHERE LOCATED IN THE FRONT OR PARTITION, THE DOOR OPENING SHALL BE 4 INCHES MAXIMUM FROM THE FRONT PARTITION. THE DOOR SHALL BE SELF-CLOSING. IF A DOOR IS LOCATED COMPLYING WITH SECTION 11B-309.4, THE DOOR SHALL BE ON BOTH SIDES OF THE DOOR NEAR THE LATCH. DOORS SHALL NOT SWING INTO THE CLEAR FLOOR SPACE OR CLEARANCE REQUIRED FOR ANY FIXTURE. DOORS MAY SWING INTO THAT PORTION OF MANEUVERING SPACE WHICH DOES NOT OVERLAP THE CLEARANCE REQUIRED AT A WATER CLOSET. (11B-604.8.1.2)
6. A SHOWER SPRAY UNIT WITH A HOSE 59 INCHES LONG MINIMUM THAT CAN BE USED BOTH AS A FIXED-POSITION SHOWER HEAD AND AS A HANDHELD SHOWER SHALL BE PROVIDED. THE SHOWER SPRAY UNIT SHALL HAVE AN ON/OFF CONTROL WITH A NON-LOCKING SHUT-OFF. A SHOWER HEAD-HEIGHT SHOWER SPRAY UNIT WITH A HANDHELD BAR IS USED, THE BAR SHALL BE INSTALLED SUCH THAT IT DOES NOT OBSTRUCT THE USE OF GRAB BARS. SHOWER SPRAY UNITS SHALL DELIVER WATER THAT IS 120 F (49°C) MAXIMUM. (11B-605.6)
7. THRESHOLDS IN ROLL-IN TYPE SHOWER COMPARTMENTS SHALL BE 1/2 INCH HIGH MAXIMUM IN ACCORDANCE WITH SECTION 11B-303. (11B-605.7)
8. THE FLOOR OR GROUND SURFACE OF THE SHOWER COMPARTMENT AND SURFACES OF SHOWERS SHALL COMPLY WITH SECTION 11B-302.1 AND SHALL BE SLOPED 1/48 MAXIMUM IN ANY DIRECTION, WHERE DRAINS ARE PROVIDED, GRATE OPENINGS SHALL BE 1/4 INCH MAXIMUM AND FLUSH WITH THE FLOOR SURFACE. (11B-605.9)
9. IF A SEAT IN A SHOWER COMPARTMENT SHALL BE A FOLDING TYPE, IT SHALL BE INSTALLED ON THE SIDE WALL ADJACENT TO THE CONTROLS, AND SHALL EXTEND FROM THE BACK WALL TO A POINT WITHIN 3 INCHES OF THE COMPARTMENT ENTRY. A SEAT IN AN ALTERNATE ROLL-IN TYPE SHOWER COMPARTMENT SHALL BE A FOLDING TYPE, SHALL BE INSTALLED ON THE FRONT WALL OPPOSITE THE BACK WALL, AND SHALL EXTEND FROM THE SIDE WALL ADJACENT TO THE CONTROLS TO THE COMPARTMENT ENTRY. THE TOP OF THE SEAT SHALL BE 17 INCHES MINIMUM AND 19 INCHES MAXIMUM ABOVE THE BATHROOM FINISH FLOOR. WHEN FOLDED, THE SEAT SHALL EXTEND 6 INCHES MAXIMUM FROM THE MOUNTING WALL. SEATS SHALL COMPLY WITH SECTION 11B-303.1. (11B-605.10)
10. ALL DIMENSIONS ARE TO FINISHED INTERIOR OR EXTERIOR WALL FINISH. VERIFY IN FIELD.



EASI EMPIRE RESIDENCE

GRASS VALLEY, CA 95945
APN: 029-250-015-000

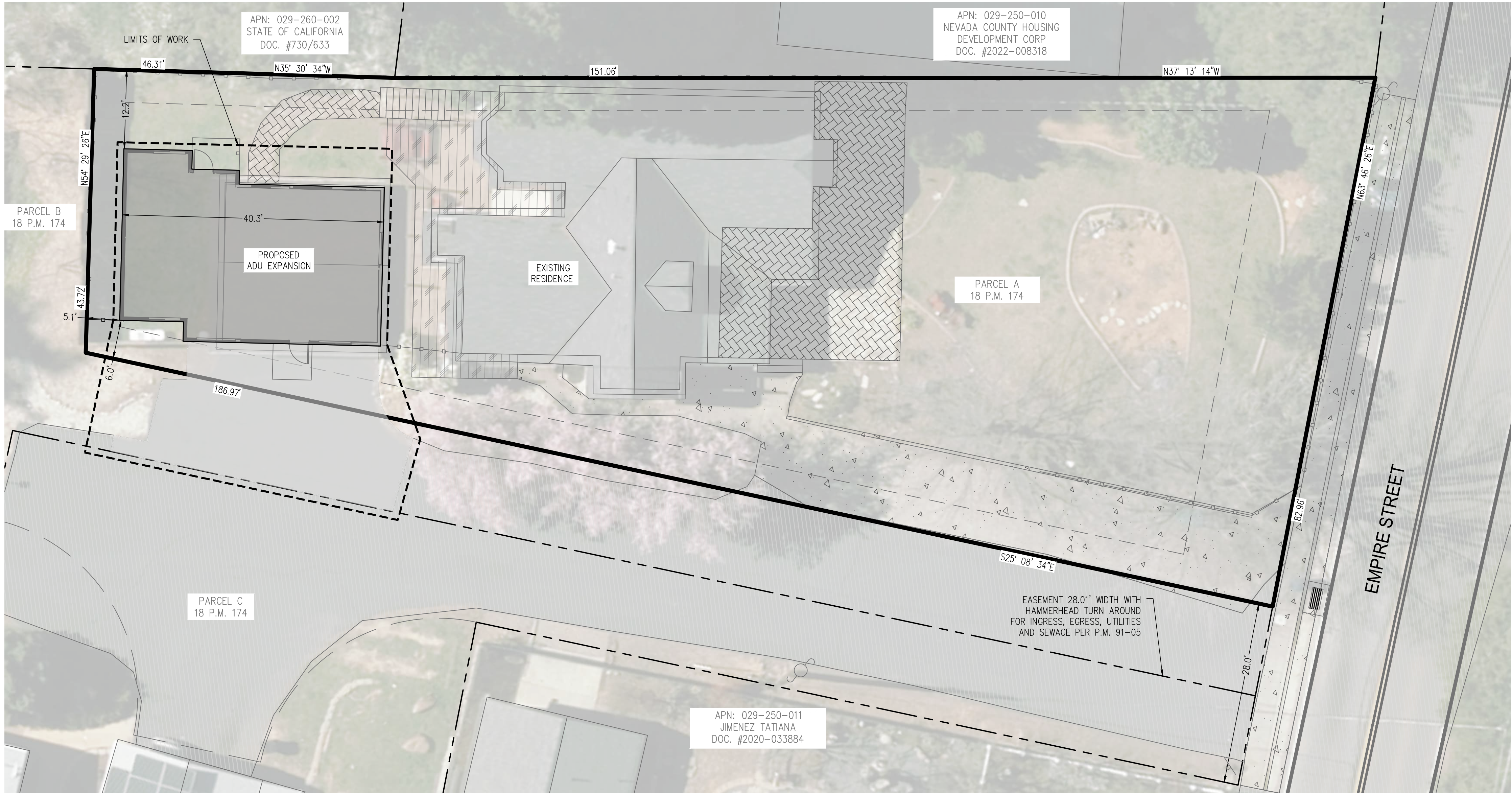
ID	NAME	DATE

SUBMITTED:	7/20/2026
SCALE	AS NOTED
DRAWN BY:	GTB
CHECKED BY:	RPD
JOB:	2025.33

TYPICAL ACCESSIBILITY DETAILS

G3.1

IMPROVEMENT PLANS FOR:
135 E. EMPIRE STREET IMPROVEMENTS AND ADU EXPANSION
GRASS VALLEY, CALIFORNIA
APRIL, 2026



ABBREVIATIONS

AC	ASPHALT CONCRETE	I.E.	INVERT ELEVATION
AB	AGGREGATE BASE	INV	INVERT
B.S.L.	BUILDING SETBACK LINE	IRR	IRRIGATION
C	CONCRETE	HDPE	HIGH DENSITY POLYETHYLENE
CATV	CABLE TV	LF	LINEAR FEET
C.A.V.	CLEAN AIR VEHICLE	MAX	MAXIMUM
CMP	CORRUGATED METAL PIPE	MIN	MINIMUM
COMM.	COMMUNICATION BOX	MH	MAN HOLE
CF	CUBIC FEET	P	PAVEMENT
DET.	DETAIL	P.E.	POLYETHYLENE
DI	DRAIN INLET	P.U.E.	PUBLIC UTILITY EASEMENT
D.I.P.	DUCTILE IRON PIPE	SD	STORM DRAIN
EG	EXISTING GROUND	SDMH	STORM DRAIN MANHOLE
ELEC.	ELECTRICAL	SS	SANITARY SEWER
E.V.	ELECTRIC VEHICLE	SSMH	SANITARY SEWER MANHOLE
EX., (E)	EXISTING	STND.	STANDARD
FF	FINISH FLOOR	TC	TOP OF CURB
FG	FINISH GRADE	TYP.	TYPICAL
FH	FIRE HYDRANT	W	WATER
FL	FLOW LINE	WW	WATER VALVE

DECLARATION OF ENGINEER OF WORK

I HEREBY DECLARE THAT THE DESIGN OF THE IMPROVEMENTS AS SHOWN ON THESE PLANS COMPLIES WITH PROFESSIONAL ENGINEERING STANDARDS AND PRACTICES. AS THE ENGINEER IN RESPONSIBLE CHARGE OF THE DESIGN OF THESE IMPROVEMENTS, I ASSUME FULL RESPONSIBLE CHARGE OF SUCH DESIGN. I UNDERSTAND AND ACKNOWLEDGE THAT THE PLAN CHECK OF THESE PLANS BY THE CITY OF GRASS VALLEY IS A REVIEW FOR THE LIMITED PURPOSE OF ENSURING THE PLANS COMPLY WITH CITY PROCEDURES AND OTHER APPLICABLE POLICIES AND ORDINANCES. THE PLAN CHECK IS NOT A DETERMINATION OF THE TECHNICAL ADEQUACY OF THE DESIGN OF THE IMPROVEMENTS. SUCH PLAN CHECK DOES NOT RELIEVE ME OF MY RESPONSIBILITY FOR THE DESIGN OF THESE IMPROVEMENTS.

AS ENGINEER OF WORK, I AGREE TO INDEMNIFY AND SAVE THE CITY OF GRASS VALLEY, ITS OFFICERS, AGENTS, AND EMPLOYEES HARMLESS FROM ANY AND ALL LIABILITY, CLAIMS, DAMAGES OR INJURIES TO ANY PERSON OR PROPERTY WHICH MIGHT ARISE FROM THE NEGLIGENT ACTS, ERRORS OR OMISSIONS OF THE ENGINEER OF WORK, MY EMPLOYEES, AGENTS, OR CONSULTANTS.

MICHELLE C. LAYSHOT, P.E. C79918
MILLENNIUM PLANNING & ENGINEERING
LICENSE EXPIRES: 9-30-2026

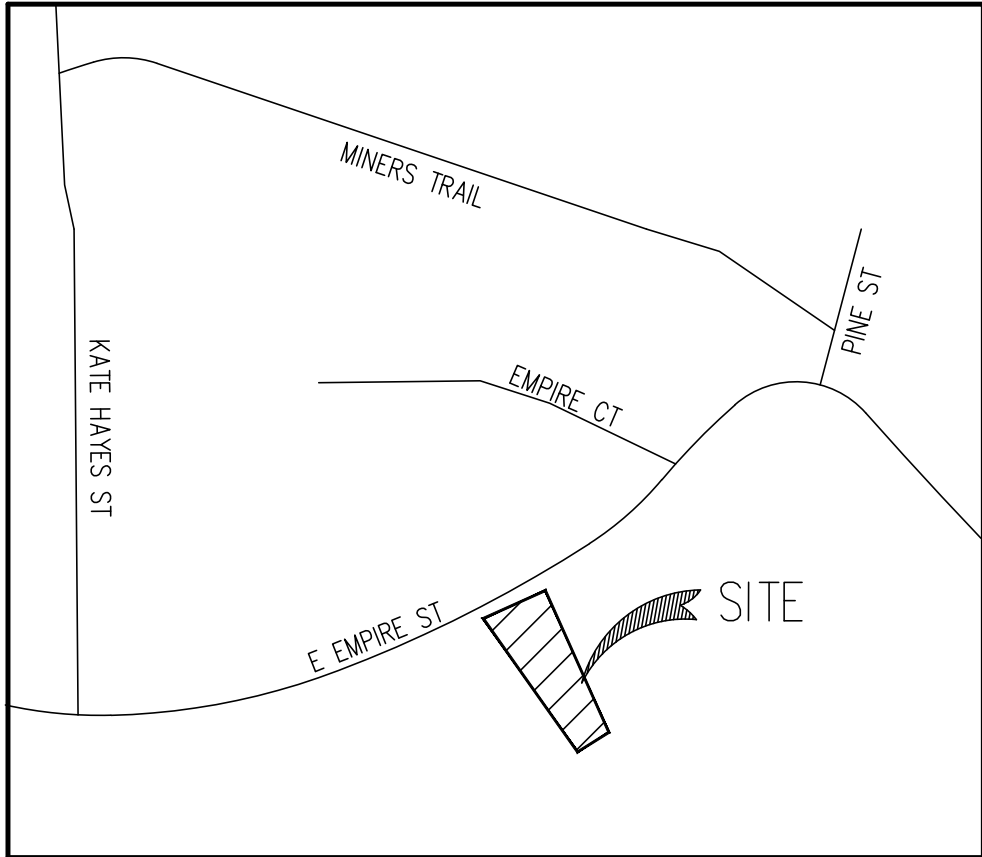
PREPARED UNDER THE SUPERVISION OF:

MICHELLE C. LAYSHOT, P.E. C79918
MILLENNIUM PLANNING & ENGINEERING
LICENSE EXPIRES: 9-30-2026

CERTIFICATE OF COMPLIANCE

I HEREBY CERTIFY THAT THE GRADES SHOWN ON THESE PLANS AND ACCEPTED BY THE ENGINEERING DIVISION, HAVE BEEN CONSTRUCTED TO WITHIN 1/10TH OF ONE (1) FOOT OF THEIR INDICATED ELEVATION FOR ALL IMPROVEMENTS SHOWN.

PROJECT ENGINEER PE NUMBER DATE



VICINITY MAP
NTS

PROJECT INFORMATION

APPLICANT/OWNER

RUSSELL DAVIDSON
NEVADA COUNTY - HOUSING AND COMMUNITY SERVICES
950 MAIDU AVE.
NEVADA CITY, CA 95959
(530) 265-1625
CONTACT: ERIC ZIBBEL

CIVIL ENGINEERING

MILLENNIUM PLANNING & ENGINEERING
159 S. AUBURN STREET
GRASS VALLEY, CALIFORNIA 95945
(530) 446-6765
CONTACT: MICHELLE LAYSHOT, P.E.

SITE ADDRESS

135 EAST EMPIRE STREET
GRASS VALLEY, CA 95945

APN

029-250-015

FIRE

CITY OF GRASS VALLEY FIRE
DEPARTMENT
125 E. MAIN STREET
GRASS VALLEY, CALIFORNIA 95945
CONTACT: MARK BUTTRON
(530) 274-4381

SEWER

CITY OF GRASS VALLEY PUBLIC
WORKS
125 E. MAIN STREET
GRASS VALLEY, CALIFORNIA 95945
CONTACT: MARK KANGAS
(530) 274-4360

SITE AREA

0.27 ACRES / 11,761 SF

ZONING

NG-2

WATER

CITY OF GRASS VALLEY PUBLIC WORKS
125 E. MAIN STREET
GRASS VALLEY, CALIFORNIA 95945
CONTACT: MARK KANGAS
(530) 274-4360

ELECTRICAL

PACIFIC GAS AND ELECTRIC
COMPANY
12840 BILL CLARK WAY
AUBURN, CA 95602
CONTACT: LEE WELLS
(925) 519-6212

BASIS OF BEARINGS

THE MERIDIAN OF THIS SURVEY IS BASED ON NAD 83 CALIFORNIA STATE PLANE COORDINATE SYSTEM ZONE 2. DISTANCES SHOWN HEREON ARE GROUND DISTANCES IN U.S. SURVEY FEET AND DECIMALS THEREOF.

BENCHMARK

THE VERTICAL DATUM IS BASED ON NAVD 88 DETERMINED BY A MINIMUM 2 HOUR STATIC GPS OBSERVATION POST PROCESSED USING OPUS.

SHEET INDEX

C1.0	COVER SHEET
C2.0	NOTES
C3.0	GENERAL DETAILS
C4.0	DEMOLITION PLAN
C5.0	SITE, GRADING, DRAINAGE AND EROSION CONTROL PLAN
C6.0	UTILITY PLAN

ENGINEERING DIVISION
CITY OF GRASS VALLEY

GRADING AND IMPROVEMENT PLANS FOR

COUNTY OF NEVADA

135 E. EMPIRE STREET

PROJECT ENGINEER: MICHELLE LAYSHOT

ACCEPTED BY:

CITY ENGINEER DATE RCE NUMBER

PROJECT NUMBER -

SHEET 1 OF 5

DRAWING NUMBER:

135 E. EMPIRE RESIDENCE

135 E EMPIRE ST
GRASS VALLEY, CA 95945

COVER SHEET



DATE SIGNED: 04-29-2026

DESIGNED BY: MCL

DRAWN BY: BES

PROJECT NO: 25-0908

DATE: APRIL 2026

SHEET NUMBER:

C1.0

811
Know what's below.
Call before you dig.

CONTRACTOR SHALL CONTACT
811 FOR LOCATION OF ALL UTILITIES,
AT LEAST 72 HOURS PRIOR TO
BEGINNING CONSTRUCTION

CITY OF GRASS VALLEY:

- GENERAL:**
1. ALL WORK SHALL CONFORM TO THE LATEST EDITIONS OF THE CITY OF GRASS VALLEY CONSTRUCTION STANDARDS, DESIGN STANDARDS, CALTRANS STANDARD SPECIFICATIONS AND PLANS AND THE CALIFORNIA MUTCD. ALL GRADING SHALL CONFORM TO THE GRASS VALLEY DEVELOPMENT CODE, IMPROVEMENT STANDARDS AND THE CURRENT CITY-ADOPTED EDITION OF THE CALIFORNIA BUILDING CODE.
 2. THE CONTRACTOR AGREES THAT, IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXEMPTING LIABILITY ARISING FROM THE NEGLIGENCE OF ENGINEER.
 3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN PERMITS, LICENSES AND CERTIFICATES FROM THE APPROPRIATE AGENCIES NECESSARY TO PERFORM THE WORK SHOWN ON THESE PLANS.
 4. THE CONTRACTOR SHALL NOT BEGIN ANY WORK SHOWN ON THESE PLANS UNTIL THE CITY ENGINEER'S SIGNATURE OF APPROVAL IS AFFIXED HEREON. THERE SHALL BE AN APPROVED SET OF PLANS ON THE JOB DURING ANY CONSTRUCTION.
 5. THE CONTRACTOR SHALL CONTACT THE CITY OF GRASS VALLEY ENGINEERING DIVISION TO SCHEDULE A PRE-CONSTRUCTION MEETING ONE-WEEK PRIOR TO STARTING WORK. THE ENGINEERING DIVISION SHALL NOTIFY THE APPROPRIATE CITY DEPARTMENTS OF THE MEETING. ALL OTHER APPROPRIATE UTILITY REPRESENTATIVES AND SUBCONTRACTORS SHALL BE NOTIFIED BY THE CONTRACTOR AS TO THE DATE AND LOCATION OF THE MEETING.
 6. CERTIFICATION FROM THE REGISTERED CIVIL ENGINEER, IF ENGINEERED GRADING, OR CALIFORNIA LICENSED CONTRACTOR, IF NOT ENGINEERED GRADING, STATING THAT THE GRADING HAS BEEN COMPLETED PER THE APPROVED PLAN, AND A COMPACTION REPORT FROM THE SOIL ENGINEER FOR FILL AREAS ARE REQUIRED PRIOR TO BUILDING PERMITS BEING ISSUED.

- UTILITY LOCATION:**
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL EXISTING UNDERGROUND UTILITIES, WHETHER OR NOT THEY ARE SHOWN ON THESE PLANS. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL UNDERGROUND FACILITIES. HOWEVER, THE DESIGN ENGINEER ASSUMES NO LIABILITY FOR THE ACCURACY OR COMPLETENESS OF THE EXISTING FACILITIES SHOWN HEREON OR FOR THE EXISTENCE OF OTHER UNDERGROUND UTILITIES NOT SHOWN ON THESE PLANS.
 2. THE CONTRACTOR SHALL CONTACT U.S.A. AND HAVE UTILITIES MARKED AT LEAST 72 HOURS BEFORE BEGINNING WORK. THE CONTRACTOR IS SOLELY RESPONSIBLE TO PROVIDE ALL LABOR AND EQUIPMENT NECESSARY TO LOCATE EXISTING UNDERGROUND FACILITIES BEYOND THE INFORMATION PROVIDED BY U.S.A. MARKING. WHERE MARKINGS ARE NEAR PROPOSED FOUNDATIONS THE CONTRACTOR SHALL LOCATE UNDERGROUND UTILITIES BY POT HOUNDING PRIOR TO EXCAVATING.
 3. THE CONTRACTOR/DEVELOPER IS RESPONSIBLE FOR ENSURING THAT RETAINING WALLS DO NOT INTERFERE WITH PROVISION OF UTILITIES.

- TRAFFIC CONTROL PLANS:**
1. TRAFFIC CONTROL SHALL BE PER THE CALIFORNIA MUTCD. AT LEAST ONE LANE IN EACH DIRECTION SHALL REMAIN OPEN TO TRAFFIC UNLESS OTHERWISE SHOWN ON THE PLANS. TRAFFIC CONTROL HOURS ARE SUBJECT TO LIMITATION BY THE TRAFFIC CONTROL WITH LANE CLOSURES THAT AFFECT TRAFFIC FLOW MAY REQUIRE NIGHT WORK. IF, AS A PART OF TRAFFIC CONTROL MEASURES, A ROADWAY CLOSURE HAS BEEN APPROVED, THE CONTRACTOR SHALL NOTIFY THE ENGINEERING DIVISION 72 HOURS IN ADVANCE OF SETTING UP THIS CLOSURE.
 2. THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT A WRITTEN TRAFFIC CONTROL PLAN FOR ANY PROPOSED LANE CLOSURES OR DISTURBANCES TO TRAFFIC WITHIN THE CITY RIGHT OF WAY. THE PLAN SHALL INCLUDE THE DATE AND TIME, DESCRIPTION OF WORK, CONTACT PERSON AND ESTIMATED DATE OF COMPLETION. THE CONTRACTOR SHALL NOTIFY THE ENGINEERING DIVISION 72 HOURS IN ADVANCE OF SETTING UP THE TRAFFIC CONTROL.
 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING ALL CONSTRUCTION SIGNING AS REQUIRED BY THE CALIFORNIA MUTCD TO DELINEATE CONSTRUCTION HAZARDS AT HIS OWN EXPENSE. THE CONTRACTOR SHALL PROVIDE ALL LIGHTS, CONES, SIGNS, BARRICADES, FLAGGERS OR OTHER DEVICES NECESSARY TO PROVIDE SAFETY.

- RESTORATION:**
1. ALL EXISTING UTILITIES, LANDSCAPING, IRRIGATION SYSTEMS AND IMPROVEMENTS THAT ARE DAMAGED BY THE CONTRACTOR, WHICH ARE NOT DESIGNATED BY THE PLANS OR SPECIFICATIONS TO BE DISTURBED, SHALL BE RESTORED OR REPAIRED TO THE SATISFACTION OF THE CITY ENGINEER AT THE CONTRACTOR'S EXPENSE.
 2. THE CONTRACTOR SHALL TAKE EXTREME CARE TO PROTECT EXISTING SITE AND ADJACENT IMPROVEMENTS FROM DAMAGE. THE CONTRACTOR SHALL BE RESPONSIBLE TO REPAIR OR REPLACE ALL CRACKED AND OTHERWISE PRE-EXISTING DAMAGED PUBLIC IMPROVEMENTS ALONG THE FRONTAGE OF THE PROJECT SITE AND ANY DAMAGE RESULTING FROM CONSTRUCTION TO CURRENT CITY STANDARDS AND AT THEIR OWN EXPENSE. THE EXTENT OF THE REPAIRS SHALL BE DETERMINED BY THE PUBLIC WORKS INSPECTOR AND SHALL BE COMPLETED PRIOR TO THE CITY ACCEPTANCE OF THE IMPROVEMENTS.

- EROSION AND DUST CONTROL:**
1. EXCAVATIONS SHALL BE ADEQUATELY SHORED, BRACED AND SHEETED SO THAT THE EARTH WILL NOT SLIDE OR SETTLE AND SO THAT ALL EXISTING IMPROVEMENTS WILL BE FULLY PROTECTED FROM DAMAGE.
 2. CONSTRUCTION ACTIVITIES OCCURRING BETWEEN OCTOBER 15 AND APRIL 15 SHALL HAVE EROSION AND SEDIMENT CONTROL MEASURES IN PLACE. THE CONTRACTOR SHALL ENSURE THAT THE CONSTRUCTION SITE IS PREPARED PRIOR TO THE ONSET OF ANY WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN WINTERIZATION FACILITIES AT ALL TIMES OR UNTIL THE IMPROVEMENTS ARE FINAL.
 3. EROSION CONTROL SEEDING SHALL BE APPLIED TO ALL GRADED AND DISTURBED SOILS WITHIN THE WORK AREA PRIOR TO OCTOBER 15 OF ANY GIVEN YEAR WHETHER THE PROJECT IS COMPLETE OR NOT (CONTRACTOR IS TO NOTIFY THE ENGINEERING DIVISION IMMEDIATELY AFTER APPLICATIONS FOR INSPECTION PURPOSES).
 4. ADJACENT STREET FRONTAGES SHALL BE SWEEPED DAILY OR AS NEEDED TO REMOVE SILT WHICH IS EVIDENT FROM CONSTRUCTION ACTIVITIES.
 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TIMELY DUST CONTROL OF DISTURBED AREAS AT ALL TIMES, TO THE SATISFACTION OF THE CITY ENGINEER. ALL MATERIAL EXCAVATED, STOCKPILED, GRADED, OR TRANSPORTED OFF-SITE SHALL BE SUFFICIENTLY WATERED, TREATED OR COVERED TO PREVENT DUST FROM CAUSING A PUBLIC NUISANCE OR A VIOLATION OF AN AMBIENT AIR STANDARD.
 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING CONSTRUCTION VEHICLES LEAVING THE SITE TO PREVENT DUST, SILT AND DIRT FROM BEING RELEASED OR TRACKED OFFSITE.
 7. ALL AREAS WITH VEHICLE TRAFFIC SHALL BE WATERED OR HAVE A DUST PALLIATIVE APPLIED AS NECESSARY FOR REGULAR STABILIZATION OF DUST EMISSIONS.
 8. ALL LAND CLEARING, GRADING EARTH MOVING OR EXCAVATION ACTIVITIES SHALL BE SUSPENDED AS NECESSARY TO PREVENT WINDBLOWN DUST WHEN WINDS ARE EXPECTED TO EXCEED 20 MPH.
 9. THE CITY SHALL HAVE THE AUTHORITY TO STOP ALL GRADING OPERATIONS, IF, IN OPINION OF THE CITY ENGINEER, INADEQUATE DUST CONTROL MEASURES ARE BEING PRACTICED OR EXCESSIVE WIND CONDITIONS CONTRIBUTE TO FUGITIVE DUST EMISSIONS.
 10. NO BURNING OF WASTE MATERIAL OR VEGETATION SHALL TAKE PLACE ON SITE.
 11. THE CONTRACTOR SHALL MEET AND FOLLOW ALL NPDES REQUIREMENTS IN EFFECT AT THE TIME OF CONSTRUCTION.
 12. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED AS SPECIFIED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR THIS PROJECT (IF APPLICABLE) OR AS DETERMINED BY THE CITY INSPECTOR. THE SWPPP IS CONSIDERED A DYNAMIC DOCUMENT AND WILL CHANGE AS CONDITIONS WARRANT. PERMANENT EROSION AND SEDIMENT CONTROL MEASURES WILL BE CONSTRUCTED AS SHOWN ON THE SWPPP PLAN.

- EARTHWORK:**
1. THE CONTRACTOR SHALL RETAIN THE SERVICES OF A QUALIFIED GEOTECHNICAL ENGINEER TO EVALUATE GEOLOGIC AND SOILS CONDITIONS ON THE SITE, PROVIDE CONSTRUCTION AND COMPACTION RECOMMENDATIONS SUBJECT TO CITY APPROVAL, INSPECT THE CONTRACTOR'S GRADING OPERATION AND CERTIFY THE CONTRACTOR'S COMPLIANCE WITH THE APPROVED RECOMMENDATIONS.
 2. ALL UNDERGROUND UTILITIES WITHIN EXISTING OR PROPOSED CITY OF GRASS VALLEY EASEMENTS SHALL COMPLY WITH THE CITY STANDARD DETAIL TRENCH BACKFILL SHALL BE SLURRY CEMENT OR AGGREGATE BASE PROCESSED TO 90% RELATIVE COMPACTION WITH CERTIFIED TESTING IN ACCORDANCE WITH CITY STANDARDS.
 3. PRIOR TO EXCAVATION OF TRENCHES 5 FEET OR DEEPER, THE CONTRACTOR SHALL SUBMIT TO THE PUBLIC WORKS INSPECTOR A COPY OF THE COMPANY'S CALOSHA PERMIT AND A COPY OF THE COMPANY'S LETTER INFORMING CALOSHA OF THE TIME THE TRENCHING IS COMMENCING AND THE LOCATION OF THE WORK.
 4. IF GRADING OR OTHER CONSTRUCTION OPERATIONS UNEARTH ARCHEOLOGICAL OR HISTORICAL ARTIFACTS OR RESOURCES, CONSTRUCTION ACTIVITIES SHALL CEASE. THE PLANNING DIVISION SHALL BE NOTIFIED OF THE EXTENT AND LOCATION OF DISCOVERED MATERIALS SO THAT THEY MAY BE RECORDED BY A QUALIFIED ARCHEOLOGIST. DISPOSITION OF ARTIFACTS SHALL COMPLY WITH STATE AND FEDERAL LAWS. A NOTE OF THIS REQUIREMENT SHALL BE CLEARLY DELINEATED ON THE GRADING AND BUILDING PLANS OF THE PROJECT.
 5. IF ANY HAZARDOUS WASTE IS ENCOUNTERED DURING THE CONSTRUCTION OF THIS PROJECT, ALL WORK SHALL BE IMMEDIATELY STOPPED AND THE NEVADA COUNTY ENVIRONMENTAL HEALTH DEPARTMENT, THE FIRE DEPARTMENT, AND THE CITY INSPECTOR SHALL BE NOTIFIED IMMEDIATELY. WORK SHALL NOT PROCEED UNTIL CLEARANCE HAS BEEN ISSUED BY ALL OF THESE AGENCIES.
 6. EARTHWORK QUANTITIES ARE SHOWN FOR GRADING PERMIT PURPOSES ONLY, AND THE CITY OF GRASS VALLEY IS NOT RESPONSIBLE FOR THEIR ACCURACY.
 7. NO TRUCKS MAY TRANSPORT EXCAVATED MATERIAL OFF-SITE UNLESS THE LOADS ARE ADEQUATELY WETTED AND EITHER COVERED WITH TARPS OR LOADED SUCH THAT THE MATERIAL DOES NOT TOUCH THE FRONT, BACK, OR SIDES OF THE CARGO COMPARTMENT AT ANY POINT LESS THAN SIX INCHES TO THE TOP OF THE CARGO COMPARTMENT. ALSO, ALL EXCAVATED MATERIAL MUST BE PROPERLY DISPOSED OF IN ACCORDANCE WITH THE CITY'S STANDARD SPECIFICATIONS.

8. WHERE SOIL OR GEOLOGIC CONDITIONS ENCOUNTERED IN GRADING OPERATIONS ARE DIFFERENT FROM THAT ANTICIPATED IN THE SOIL AND/OR GEOLOGIC INVESTIGATION REPORT, OR WHERE SUCH CONDITIONS WARRANT CHANGES TO THE RECOMMENDATIONS CONTAINED IN THE ORIGINAL SOIL INVESTIGATION, A REVISED SOIL OR GEOLOGIC REPORT SHALL BE SUBMITTED BY THE APPLICANT, FOR APPROVAL BY THE CITY ENGINEER. IT SHALL BE ACCOMPANIED BY AN ENGINEERING AND GEOLOGICAL OPINION AS TO THE SAFETY OF THE SITE FROM HAZARDS OF LAND SLIPPAGE, EROSION, SETTLEMENT, AND SEISMIC ACTIVITY.
9. IT IS THE GRADING CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ADEQUATE COMPACTION HAS BEEN ATTAINED ON THE ENTIRE GRADING SITE, INCLUDING FILL AREAS OUTSIDE THE BUILDING PADS AND ON ALL FILL SLOPES.
10. EARTHWORK QUANTITIES ARE SHOWN FOR GRADING PERMIT PURPOSES ONLY, AND THE CITY OF GRASS VALLEY IS NOT RESPONSIBLE FOR THEIR ACCURACY.

- TREE PRESERVATION:**
1. THE GRADING PLAN FOR THE PROJECT HAS BEEN DESIGNED FOR NO GRADING TO OCCUR WITHIN THE DRIPLINE OF ANY TREE TO BE PRESERVED UNLESS SPECIFICALLY APPROVED BY THE PLANNING DEPARTMENT AND SHOWN ON THESE PLANS. NO GRADES SHALL BE MODIFIED WITHOUT THE APPROVAL OF THE CIVIL ENGINEER AND THE CITY OF GRASS VALLEY.
 2. EACH TREE OR GROUP OF TREES TO BE SAVED SHALL BE FENCED IN ACCORDANCE WITH THE "TREE PROTECTION" DETAIL PRIOR TO ANY GRADING OR MOVEMENT OF HEAVY EQUIPMENT.
 3. NO TRENCHING SHALL OCCUR BENEATH THE DRIPLINE OF ANY TREE TO BE SAVED UNLESS STATED ON THESE PLANS "TRENCHING UNDER THIS TREE IS APPROVED". NO MECHANICAL TRENCHING WHATSOEVER SHALL BE ALLOWED WITHIN THE DRIPLINE OF TREES TO BE PRESERVED.
 4. THE CONTRACTOR SHALL NOT ALLOW STACKING OF CONSTRUCTION MATERIALS, PARKING OF CONSTRUCTION EQUIPMENT AND VEHICLES, GRADING, TRENCHING, CUTTING OR FILLING WITHIN A TREE DRIPLINE UNLESS OTHERWISE SHOWN ON THESE PLANS.

- MISCELLANEOUS:**
1. SHOULD IT APPEAR THAT THE WORK TO BE DONE OR ANY MATTER RELATIVE THERETO IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL REQUEST IN WRITING FROM THE ENGINEER SUCH FURTHER EXPLANATION AS MAY BE NECESSARY.
 2. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING MONUMENTS AND OTHER SURVEY MARKERS DURING CONSTRUCTION. ALL SUCH MONUMENTS OR MARKERS DESTROYED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
 3. THE CITY REQUIRES A COMPLETE SET OF AS-BUILT PLANS. THE CONTRACTOR SHALL PROVIDE ANY AS-BUILT CHANGES TO THE DESIGN ENGINEER, ON A CLEAN SET OF PLANS AT JOB COMPLETION.

GENERAL CONSTRUCTION:

1. THE LOCATIONS OF ALL UNDERGROUND FACILITIES SHOWN ON THIS PLAN ARE APPROXIMATE. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL UNDERGROUND FACILITIES. HOWEVER, THE DESIGN ENGINEER ASSUMES NO LIABILITY FOR THE ACCURACY OF COMPLETENESS OF THE EXISTING FACILITIES SHOWN HEREON OR FOR THE EXISTENCE OF OTHER UNDERGROUND UTILITIES NOT SHOWN ON THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING FACILITIES AND IMMEDIATELY NOTIFY THE DESIGN ENGINEER IF ANY SUCH FACILITIES INTERFERE WITH THE CONSTRUCTION OF IMPROVEMENTS. IF SO DIRECTED BY THE DESIGN ENGINEER, THE CONTRACTOR SHALL STOP WORK IMMEDIATELY UNTIL REMEDIAL ACTION CAN BE TAKEN. ANY COST RESULTING FROM THE CONTRACTORS FAILURE TO STOP WORK AS DIRECTED, WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE CONTRACTOR SHALL MAKE EXPLORATORY EXCAVATIONS AND LOCATE EXISTING FACILITIES SUFFICIENT AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS IF REVISIONS ARE NECESSARY BECAUSE OF THE LOCATION OF EXISTING UTILITIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF EXISTING PUBLIC AND PRIVATE IMPROVEMENTS. ANY DAMAGED IMPROVEMENTS SHALL BE REPLACED BY THE CONTRACTOR TO EQUAL OR BETTER THAN PRE-PROJECT CONDITIONS INCLUDING BUT NOT LIMITED TO ROADWAYS, DRAINAGE STRUCTURES, SIDEWALKS, AND UTILITIES.
4. THE DEVELOPER SHALL KEEP ADJOINING PUBLIC STREETS FREE AND CLEAN OF PROJECT DIRT, MUD, MATERIALS, AND DEBRIS DURING THE CONSTRUCTION PERIOD.
5. PRIOR TO FINAL PREPARATION OF THE SUBGRADE AND PLACEMENT OF PAVEMENT BASE MATERIALS, ALL UNDERGROUND UTILITIES SHALL BE INSTALLED AND SERVICE CONNECTIONS STUBBED OUT BEHIND THE HARDSCAPE IMPROVEMENT, PUBLIC UTILITIES, CABLE TV, SANITARY SEWERS AND WATER LINES, SHALL BE INSTALLED IN A MANNER WHICH WILL NOT DISTURB THE STREET PAVEMENT, CURB, GUTTER AND SIDEWALK, WHEN FUTURE SERVICE CONNECTIONS OR EXTENSIONS ARE MADE.
6. THE CONTRACTOR SHALL COMPLY WITH ALL OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH ALL CURRENTLY APPLICABLE SAFETY LAWS AND REGULATIONS OF ANY JURISDICTIONAL BODY. FOR INFORMATION CONTACT THE STATE INDUSTRIAL SAFETY DEPT.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL SURVEY MONUMENTS AND MARKERS DURING CONSTRUCTION. ALL SUCH MONUMENTS DESTROYED BY THE CONTRACTOR SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
9. PRIOR TO ANY CORRECTIVE ACTION BY THE CONTRACTOR WHICH IS NECESSARY DUE TO STAKING ERRORS, THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER FOR VERIFICATION AND RESTAKING.
10. WHEN THE CONTRACTOR'S OPERATIONS TEMPORARILY INTERFERE WITH THE EXISTING FLOW OF SEWAGE, WATER, GAS, ELECTRICITY, TELEPHONE COMMUNICATION, OR THE OPERATION OF ANY OTHER FACILITY, THE CONTRACTOR SHALL CONTACT THE APPROPRIATE AGENCY/UTILITY AT LEAST THREE (3) DAYS PRIOR TO THE INTERFERENCE, AND PROVIDE, OR MAKE ARRANGEMENTS FOR SATISFACTORY BYPASS FACILITIES.
11. THE CONTRACTOR SHALL REQUEST PERMISSION TO INTERFERE WITH SAID UTILITIES BY APPLYING TO THE RELATED UTILITY AND SHALL COMPLY WITH THEIR RECOMMENDATIONS AND ORDINANCES IN EACH CASE. SAID BYPASS FACILITIES SHALL BE SO CONSTRUCTED AS TO PROVIDE A NON-INTERRUPTIVE SERVICE OF SAID UTILITY.
12. IF BYPASS FACILITIES ARE NOT FEASIBLE OR REASONABLE, AS DETERMINED BY THE ENGINEER, THE RESIDENTS AND/OR OWNERS OF ALL PROPERTIES AFFECTED BY A TEMPORARY INTERRUPTION (LESS THAN 8 HOURS) MUST BE NOTIFIED AT LEAST 48 HOURS PRIOR TO THE INTERRUPTION BY THE CONTRACTOR.
13. ALL INSTALLATIONS SHALL FOLLOW MANUFACTURERS RECOMMENDATIONS AND GUIDELINES UNLESS OTHERWISE NOTED ON THE PLANS. MANUFACTURERS INSTALLATION GUIDELINES SHALL BE ON CONSTRUCTION SITE AT ALL TIMES.
14. DURING THE PROGRESS OF THE WORK, THE CONTRACTOR SHALL KEEP THE ENTIRE JOB SITE IN A CLEAN AND ORDERLY CONDITION. EXCESS UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE JOB SITE. SPILLAGE RESULTING FROM CONTRACTOR'S ACTIVITY SHALL BE REMOVED BY THE CONTRACTOR. ALL GUTTERS AND ROADSIDE DITCHES SHALL BE KEPT FREE AND CLEAR FROM OBSTRUCTIONS. ANY DEVIATION FROM THE ABOVE PRACTICE SHALL HAVE PRIOR WRITTEN APPROVAL FROM THE ENGINEER.
15. WHEN TRANSPORTING ANY MATERIAL DURING CONSTRUCTION, CARE SHOULD BE TAKEN TO PREVENT MATERIAL FROM BLOWING OR SPILLING ONTO STREETS AND HIGHWAYS. EARTHEN MATERIAL, IF TRANSPORTED, SHALL BE ADEQUATELY SPRAYED WITH WATER PRIOR TO TRANSPORT ONTO PUBLIC ROADS. VEGETATIVE MATERIAL SHALL BE COVERED OR TARPED PRIOR TO TRANSPORT.
16. WERT WASTE SUCH AS CONCRETE SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE LEGALLY DISPOSED OF AT THE CONTRACTOR'S EXPENSE.
17. TOXIC WASTE (PETROLEUM AND OTHER CHEMICAL PRODUCTS), IF ENCOUNTERED, SHALL BE IDENTIFIED, SEPARATED AND DELIVERED TO THE PROPER LANDFILL AREA.
18. SHOP DRAWINGS – THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS AS MAY BE NECESSARY FOR THE PROSECUTION OF THE WORK, AS REQUIRED BY THESE NOTES. THE ENGINEER SHALL PROMPTLY REVIEW ALL SHOP DRAWINGS. THE ENGINEER'S REVIEW OF ANY SHOP DRAWING SHALL NOT RELEASE THE CONTRACTOR FROM RESPONSIBILITY FOR DEVIATIONS FROM THE CONTRACT DOCUMENTS.
19. MATERIALS, SERVICES AND FACILITIES – MATERIALS AND EQUIPMENT SHALL BE SO STORED AS TO INSURE THE PRESERVATION OF THEIR QUALITY AND FITNESS FOR THE WORK. STORED MATERIALS AND EQUIPMENT TO BE INCORPORATED IN THE WORK SHALL BE LOCATED SO AS TO FACILITATE PROMPT INSPECTION.
20. ALL MATERIAL SHALL BE UNLOADED, STORED, LOWERED INTO THE TRENCH AND JOINED, USING SUITABLE TOOLS AND EQUIPMENT AND IN A MANNER THAT WILL PREVENT DAMAGE TO THE MATERIAL, JOINTS, COATING, OR LINING. STORAGE AND HANDLING SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
21. DAMAGED MATERIAL WILL BE REJECTED. THE CONTRACTOR SHALL CLEARLY MARK THE REJECTED MATERIAL AND REMOVE IT FROM THE IMMEDIATE CONSTRUCTION AREA. WHEN APPROVED BY THE ENGINEER, DAMAGED MATERIAL MAY BE REPAIRED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION AND USED IN THE CONSTRUCTION. REPLACEMENT OR REPAIR OF REJECTED MATERIAL SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND AT NO EXPENSE TO THE OWNER.
22. INSPECTION AND TESTING – ALL MATERIALS MAY BE INSPECTED, SAMPLED AND TESTED BY THE CITY (OWNER). THE CONTRACTOR SHALL GIVE SUFFICIENT ADVANCE NOTICE OF PLACING OF ORDER TO PERMIT TESTS TO BE COMPLETED BEFORE THE MATERIALS ARE INCORPORATED IN THE WORK AND HE SHALL AFFORD SUCH FACILITIES AS THE OWNER MAY REQUIRE FOR COLLECTING AND MAKING INSPECTIONS. ALL SAMPLES SHALL BE FURNISHED BY THE CONTRACTOR WITHOUT COST TO THE OWNER. THE OWNER MAY WAVE SAMPLING AND TESTING IF ADEQUATE INFORMATION, PROPERLY CERTIFIED, IS AVAILABLE TO INDICATE THAT MATERIALS COMPLY WITH TERMS OF THE SPECIFICATIONS.
23. THE CONTRACTOR SHALL FURNISH THE OWNER WITH EVERY REASONABLE FACILITY FOR ASCERTAINING WHETHER OR NOT THE WORK AS PERFORMED IS IN ACCORDANCE WITH THE REQUIREMENTS AND INTENT OF THE CONTRACT. IF THE OWNER REQUESTS IT, THE CONTRACTOR AT ANY TIME BEFORE ACCEPTANCE OF THE WORK SHALL REMOVE OR UNCOVER SUCH PORTIONS OF THE FINISHED WORK AS MAY BE DIRECTED. AFTER EXAMINATION, THE CONTRACTOR SHALL RESTORE SAID PORTIONS OF THE WORK TO THE STANDARDS REQUIRED BY THE CONTRACT DOCUMENTS AND SPECIFICATIONS.
24. WATER AND POLLUTION – THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR COMPLIANCE WITH ALL LOCAL, COUNTY, STATE, AND FEDERAL REGULATIONS PERTAINING TO WATER POLLUTION AND SOIL EROSION INCLUDING THE PAYMENT OF ANY FINES OR PENALTIES IMPOSED BY ANY GOVERNMENT AGENCY AS A RESULT OF WORK PERFORMED BY THE CONTRACTOR.
25. THE CONTRACTOR SHALL COMPLY WITH ALL AIR POLLUTION CONTROL RULES, REGULATIONS, ORDINANCES AND STATUTES WHICH APPLY TO THE WORK AREA. NORTHERN SIERRA AIR QUALITY MANAGEMENT DISTRICT CAN BE CONTACTED AT TELEPHONE 530-274-9360.
26. CONSTRUCTION SAFETY – THE CONTRACTOR SHALL FOLLOW CONSTRUCTION PROCEDURES NECESSARY TO PROVIDE A SAFE WORKING CONDITION THROUGH ALL PHASES OF THE PROJECT. SAID PROCEDURES SHALL CONFORM TO THE SAFETY ORDERS, DIVISION OF INDUSTRIAL SAFETY, TITLE 8, CALIFORNIA ADMINISTRATIVE CODE AND ALL OTHER PROVISIONS REQUIRED BY FEDERAL, STATE AND COUNTY LAW OR ORDINANCE.
27. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR OUTLINING THE SAFETY PROCEDURES TO BE FOLLOWED BY ITS WORKMEN, ALL SUBCONTRACTORS, AND RELATED TRADES WORKING ON ITS JOBS AND EFFECTIVELY ASSURING COMPLIANCE WITH SUCH PROCEDURES. IT SHALL ALWAYS PROVIDE FOR THE SAFETY OF THE PUBLIC BOTH DAY AND NIGHT WHERE THEY ARE EXPOSED TO ITS CONSTRUCTION OPERATION.
28. TOUCHUP AND REPAIR – THE CONTRACTOR SHALL TOUCHUP OR REPAIR ALL FINISHED SURFACES ON STRUCTURES, EQUIPMENT, FIXTURES, OR WHATEVER, THAT HAVE BEEN DAMAGED PRIOR TO FINAL ACCEPTANCE. SURFACE ON WHICH SUCH TOUCHUP OR REPAIR CANNOT BE SUCCESSFULLY ACCOMPLISHED SHALL BE COMPLETELY REFINISHED OR IN THE CASE OF HARDWARE AND SIMILAR SMALL ITEMS, THE ITEMS SHALL BE REPLACED.
29. CEMENT MATERIALS – PORTLAND CEMENT SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR TYPE "II" PORTLAND CEMENT OF THE AMERICAN SOCIETY FOR TESTING MATERIALS. ALL CEMENT SHALL BE OF THE SAME BRAND.
30. UNLESS OTHERWISE SPECIFIED HEREIN, CEMENT GROUT OR MORTAR SHALL BE COMPOSED OF ONE PART CEMENT TO TWO PARTS FINE AGGREGATE MIXED WITH WATER IN A MECHANICAL BATCH MIXER TO PRODUCE A PLASTIC WORKABLE MIXTURE.
31. STEEL REINFORCEMENT – THE CONTRACTOR SHALL FURNISH AND PLACE ALL STEEL REINFORCEMENT OF THE SIZES AND SHAPES AS SHOWN ON THE PLANS OR SPECIFIED HEREIN. MATERIAL AND PLACEMENT SHALL CONFORM TO REQUIREMENTS OF SECTION 52 OF STANDARD SPECIFICATIONS. STEEL SHALL BE A.S.T.M. A615, GRADE 40 UNLESS CALLED OUT OTHERWISE ON THE DRAWINGS.
32. FORM AND FORMWORK – THE FORMS SHALL BE SMOOTH, MORTARTIGHT, TRUE TO THE REQUIRED LINES AND GRADES, AND OF SUFFICIENT STRENGTH TO SUPPORT THE WEIGHT OF THE FRESH CONCRETE WITHOUT SPRINGING OUT OF SHAPE OR APPRECIABLE DEFLECTION DURING THE PLACING OF THE CONCRETE. ALL EXPOSED SHARP EDGES SHALL BE CHAMFERED WITH TRIANGULAR FILLETS NOT LESS THAN 0.75" BY 0.75", UNLESS OTHERWISE SHOWN ON THE PLANS. FORMS PREVIOUSLY USED SHALL BE THOROUGHLY CLEANED OF ALL DIRT, MORTAR AND FOREIGN MATTER BEFORE BEING REUSED.
33. INSERTS – THE CONTRACTOR SHALL, BEFORE PLACING CONCRETE, MAKE PROVISION FOR ALL CORED HOLES, HANGERS, ANCHOR AND OTHER BOLTS, CONDUITS, PIPES, WATER SEALS AND OTHER INSERTS TO BE PLACED IN THE CONCRETE. HE SHALL VERIFY THE LOCATIONS AND DETAILS OF ALL SUCH WORK AND SHALL PREVENT THE DISTURBANCE OF SUCH INSERTS DURING THE PLACING OF THE CONCRETE.
34. IF ANY EXISTING FACILITIES ARE DAMAGED DURING CONSTRUCTION, THE CONTRACTOR/DEVELOPER SHALL BE RESPONSIBLE FOR REPAIR AT NO COST TO THE OWNER.
35. ANY IMPROVEMENTS CONSTRUCTED IN THE PUBLIC RIGHT-OF-WAY WILL REQUIRE A SEPARATE CONSTRUCTION PERMIT AND INSPECTION FROM THE PUBLIC WORKS DEPARTMENT.
36. ALTERNATIVES TO DIESEL GENERATOR SETS (SUCH AS GRID POWER) SHALL BE USED FOR ON-SITE ELECTRICAL NEEDS DURING CONSTRUCTION, UNLESS DEEMED INFEASIBLE BY THE AIR POLLUTION CONTROL OFFICER AND STATED IN WRITING.
37. PRIOR TO FINAL PREPARATION OF THE SUBGRADE AND PLACEMENT OF PAVEMENT BASE MATERIALS, ALL UNDERGROUND UTILITIES SHALL BE INSTALLED AND SERVICE CONNECTIONS STUBBED OUT BEHIND THE HARDSCAPE IMPROVEMENT, PUBLIC UTILITIES, CABLE TV, SANITARY SEWERS, AND WATER LINES, SHALL BE INSTALLED IN A MANNER WHICH WILL NOT DISTURB THE STREET PAVEMENT, CURB, GUTTER AND SIDEWALK, WHEN FUTURE SERVICE CONNECTIONS OR EXTENSIONS ARE MADE.
38. IF GRADING IS TO TAKE PLACE BETWEEN OCTOBER 15 AND APRIL 15, BOTH TEMPORARY AND PERMANENT EROSION CONTROL PLANS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL ALONG WITH THE GRADING PLAN. PERMANENT EROSION CONTROL MEASURES SHALL INCLUDE TREATMENT ALL GRADED SLOPES WITHIN 60 DAYS OF COMPLETION OF GRADING. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO OCTOBER 15.
39. SHOULD IT APPEAR THAT THE WORK TO BE DONE OR ANY MATTER RELATIVE THERETO IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL REQUEST IN WRITING FROM THE ENGINEER SUCH FURTHER EXPLANATION AS MAY BE NECESSARY.
40. FOR ANY PUBLIC WORK, THE CONTRACTOR SHALL COMPLY WITH ALL DEPARTMENT OF INDUSTRIAL RELATIONS (DIR) REQUIREMENTS INCLUDING COMPLYING WITH PREVAILING WAGE REQUIREMENTS.

AIR QUALITY NOTES:

- THE APPLICANT SHALL BE RESPONSIBLE FOR ENSURING THAT ALL ADEQUATE DUST CONTROL MEASURES ARE IMPLEMENTED IN A TIMELY MANNER DURING ALL PHASES OF PROJECT DEVELOPMENT AND CONSTRUCTION.
1. PROVISIONS OF THIS ASBESTOS DUST MITIGATION PLAN SHALL APPLY THROUGHOUT GRADING AND CONSTRUCTION ACTIVITIES EXCEPT AS SPECIFIED OTHERWISE.
 2. ALL VISIBLE TRACK-OUT MATERIAL (FROM VEHICLES LEAVING THE WORK SITE) MUST BE REMOVED FROM ALL PUBLIC ROADS AT LEAST ONCE PER DAY USING MET SWEEPING OR A HEPA FILTER EQUIPPED VACUUM DEVICE. REFERENCE: (E)(4)(A)1 OF THE ATCM.
 3. A GRAVEL PAD DESIGNED AND MAINTAINED TO EFFECTIVELY CLEAN TIRES OF EXITING VEHICLES, A WHEEL WASH SYSTEM, OR A MINIMUM OF FIFTY (50) FEET OF PAVEMENT MUST BE PLACED BETWEEN THE CONSTRUCTION AREA AND ANY PUBLIC ROAD, AND MUST BE UTILIZED BY ALL EXITING VEHICLES (INCLUDING PERSONAL VEHICLES AND DELIVERY TRUCKS) THROUGHOUT THE DURATION OF THE PROJECT. REFERENCE: (E)(4)(A)2 OF THE ATCM.
 4. ALL ACTIVE STORAGE PILES SHALL BE ADEQUATELY WETTED OR COVERED WITH PLASTIC TO ENSURE THAT NO VISIBLE DUST CROSSES THE PROPERTY BOUNDARY. REFERENCE: (E)(4)(B) OF THE ATCM.
 5. POTENTIAL DUST EMISSIONS FROM DISTURBED SURFACE AREAS AND STORAGE PILES THAT WILL REMAIN INACTIVE FOR MORE THAN SEVEN (7) DAYS SHALL BE CONTROLLED TO COMPLETELY PREVENT VISIBLE DUST FROM CROSSING THE PROPERTY BOUNDARY BY AT LEAST ONE OF THE FOLLOWING METHODS (PER (E)(4)(C) OF THE ATCM):
 - A. KEEPING THE SURFACE ADEQUATELY WETTED;
 - B. APPLYING CHEMICAL DUST SUPPRESSANTS OR CHEMICAL STABILIZERS ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS AND ALL APPLICABLE REGULATIONS;
 - C. COVERING WITH TARP(S) OR VEGETATIVE COVER;
 - D. INSTALLING WIND BARRIERS OF FIFTY (50) PERCENT POROSITY AROUND THREE (3) SIDES OF ALL STORAGE PILES;
 - E. INSTALLING WIND BARRIERS ACROSS OPEN AREAS AND BETWEEN THE PROJECT AND ANY ADJACENT OCCUPIED RESIDENTIAL OR BUSINESS PROPERTY.
 6. THE MAXIMUM VEHICLE SPEED ON ALL UNPAVED PARTS OF THE PROJECT AREA MUST BE CLEARLY POSTED AND MUST NOT EXCEED FIFTEEN (15) MILES PER HOUR REFERENCE: (E)(4)(D)1 OF THE ATCM.
 7. ALL AREAS WHERE VEHICLES DRIVE ON THE SITE SHALL BE WATERED EVERY TWO HOURS OR KEPT ADEQUATELY WETTED TO PREVENT VISIBLE DUST EMISSIONS FROM LEAVING THE PROPERTY BOUNDARY, EXCEPT WHERE A GRAVEL COVER HAS BEEN ESTABLISHED THAT HAS A SILT CONTENT OF LESS THAN 5% AND AN ASBESTOS CONTENT OF LESS THAN 0.25% AND IS AT LEAST 3 INCHES THICK. REFERENCE: (E)(4)(D)2 OF THE ATCM.
 8. FOR ALL EARTHMOVING ACTIVITIES, AT LEAST ONE OF THE FOLLOWING METHODS OF DUST CONTROL SHALL BE IMPLEMENTED, PER(E)(4)(E) OF THE ATCM:
 - A. PRE-WETTING THE GROUND TO THE DEPTH OF ANTICIPATED CUTS;
 - B. SUSPENDING GRADING OPERATIONS WHEN VISIBLE DUST EMISSIONS FROM ANY ASPECT OF THE GRADING (INCLUDING TIRES, FANS AND EXHAUST) CROSS THE PROPERTY LINE.
 9. TRUCKS USED FOR HAULING MATERIAL OFF-SITE SHALL BE MAINTAINED SUCH THAT NO SPILLAGE CAN OCCUR FROM HOLES OR OTHER OPENINGS. REFERENCE: (E)(4)(F)1 OF THE ATCM.
 10. ALL LOADS TO BE HAULED OFF-SITE SHALL BE ADEQUATELY WETTED TO PREVENT VISIBLE DUST FROM ESCAPING DURING TRANSPORTATION, PER (E)(4)(F)2 OF THE ATCM, AND SHALL EITHER:
 - A. BE COMPLETELY COVERED WITH TARPS; OR
 - B. HAVE AT LEAST SIX (6) INCHES OF FREEBOARD ON THE SIDES OF THE BED OF THE VEHICLE, WITH NO EXCAVATED MATERIAL EXTENDING ABOVE THE EDGES OF THE VEHICLE BED AT ANY POINT.
 11. UPON COMPLETION OF THE PROJECT, DISTURBED SURFACE AREAS SHALL BE STABILIZED, PER (E)(4)(G) OF THE ATCM, USING ONE OR MORE OF THE FOLLOWING METHODS:
 - A. ESTABLISHMENT OF A VEGETATIVE COVER;
 - B. PLACEMENT OF AT LEAST THREE (3) INCHES OF MATERIAL HAVING AN ASBESTOS CONTENT OF 0.25% ASBESTOS OR LESS AS MEASURED USING AN APPROVED ASBESTOS BULK TEST METHOD [NOTE THAT A GREATER FILL DEPTH IS APPROPRIATE FOR GRADED PORTIONS OF RESIDENTIAL PARCELS]; OR
 - C. PAVING.
 12. THE DISTRICT'S APCO MAY REQUIRE BULK SAMPLING AT ANY TIME. IF BULK SAMPLING IS REQUIRED, IT SHALL BE PERFORMED IN ACCORDANCE WITH ARB TEST METHOD 435, WHERE THE METHOD SPECIFIES "SERPENTINE," THIS SHALL APPLY TO GRAVEL, DECOMPOSED ULTRAMAFIC ROCK OR ANY OTHER MATERIAL AS SPECIFIED BY THE APCO.
 13. NO BURNING OF WASTE MATERIAL OR VEGETATION SHALL TAKE PLACE ON-SITE. ALTERNATIVES TO BURNING INCLUDE CHIPPING, MULCHING OR CONVERTING TO BIOMASS.
 14. THE PROJECT SHALL BE REQUIRED TO USE LOW VOC PAINTINGS AND COATINGS.

EARTHWORK :

1. THE TOPOGRAPHY WAS OBTAINED FROM A FIELD TOPOGRAPHIC SURVEY, RESULTING IN A 1' CONTOUR INTERVAL MAP THAT WAS PROVIDED BY DDGEO ON SEPTEMBER, 2024.
2. THE IMPORTATION OF SOIL MATERIAL FROM OFF-SITE SHALL ONLY BE HAULED TO THE PROJECT SITE DURING HOURS SPECIFIED BY THE CITY OF GRASS VALLEY MONDAY THROUGH FRIDAY. THE IMPORTATION OF ACTIVITIES SHALL MEET ALL IDENTIFIED NOISE THRESHOLDS AND DUST CONTROL MEASURES SHALL IMPLEMENTED AT THE PROJECT SITE.
3. A MINIMUM OF FORTY-EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF GRADING ACTIVITIES, THE CONTRACTOR SHALL NOTIFY THE ENGINEERING DIVISION OF THE INTENT TO BEGIN GRADING OPERATIONS. PRIOR TO NOTIFICATION, ALL GRADE STAKES SHALL BE IN PLACE IDENTIFYING LIMITS OF ALL CUT AND FILL ACTIVITIES. AFTER NOTIFICATION, ENGINEERING STAFF SHALL BE PROVIDED THE OPPORTUNITY TO FIELD REVIEW THE GRADING LIMITS TO ENSURE CONFORMITY WITH THE APPROVED IMPROVEMENT AND GRADING PLANS. IF DIFFERENCES ARE NOTED IN THE FIELD, GRADING ACTIVITIES SHALL BE DELAYED UNTIL THE ISSUES ARE RESOLVED.
4. BACKFILL TRENCHES SHALL BE COMPACTED TO 90% RELATIVE COMPACTION PER ASTM D-1557 TO WITHIN 12" OF FINISHED GRADE. BACKFILL AT PIPE TRENCHES SHALL BE COMPACTED ON BOTH SIDES OF PIPE IN 6" LIFTS
5. TRENCH BACKFILL PLACED IN LOCATIONS UNDER JURSDICTION OF PUBLIC UTILITIES OR LOCAL PUBLIC WORK AGENCIES SHALL BE PLACED IN ACCORDANCE WITH THE RESPECTIVE AGENCY SPECIFICATIONS, IF SUCH SPECIFICATIONS EXCEED REQUIREMENTS NOTED ABOVE.
6. FILL MATERIAL SHALL BE PLACED IN LIFTS NOT EXCEEDING 6 IN. IN COMPACTED THICKNESS, MOISTENED OR DRIED AS NECESSARY TO NEAR OPTIMUM MOISTURE CONTENT COMPACTED BY AN APPROVED METHOD. FILL MATERIAL SHALL BE COMPACTED TO A MINIMUM OF 90% MAXIMUM DENSITY AS DETERMINED BY ASTM D-1557 (MODIFIED TO 3 LAYERS) OR SIMILAR APPROVED METHODS. SOME FILL AREAS MAY REQUIRE COMPACTION TO A GREATER DENSITY AS CALLED FOR IN THE CONSTRUCTION DOCUMENTS.

DATE

5-1-26

DESCRIPTION

ADDED SEWER BFP

REV.

A

135 E. EMPIRE RESIDENCE

135 E EMPIRE ST

GRASS VALLEY, CA 95945

NOTES

REGISTERED PROFESSIONAL ENGINEER

MICHELLE C. LAYSHOT

No. C79918

Michelle Layshot

CIVIL

STATE OF CALIFORNIA

DATE SIGNED: 04-29-2026

DESIGNED BY: MCL

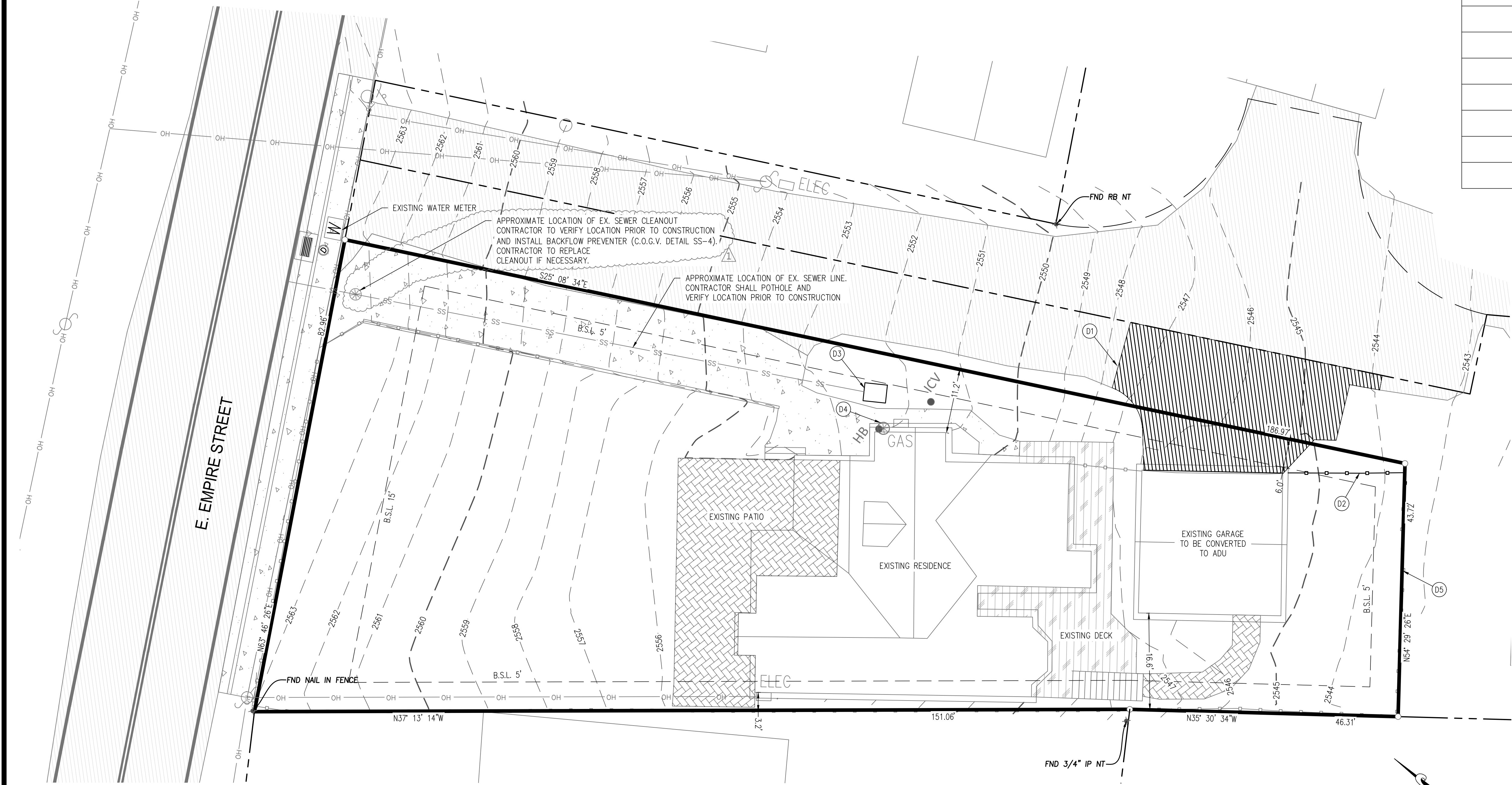
DRAWN BY: BE5

PROJECT NO: 25-0908

DATE: APRIL 2026

SHEET NUMBER:

C2.0



LEGEND	
	PROPERTY LINE
	EXISTING CONCRETE
	EXISTING ASPHALT
	DEMO EXISTING ASPHALT
	EXISTING WOOD FENCE TO REMAIN
	REMOVE EXISTING WOOD FENCE
	OHU
	EXISTING SANITARY SEWER CLEANOUT
	EXISTING WATER METER
	UTILITY POLE
	EXISTING ELECTRICAL BOX/PANEL
	EXISTING GAS METER
	ICV
	HB
	STORM DRAIN MANHOLE
	CURB INLET

- DEMOLITION NOTES**
- D1 REMOVE EXISTING ASPHALT.
 - D2 REMOVE EXISTING FENCE.
 - D3 ABANDON EXISTING SEWER PUMP TANK.
 - D4 REMOVE AND REPLACE EXISTING SEWER CLEANOUT (IF NECESSARY). PROTECT EXISTING SEWER CLEANOUT IN PLACE. REPLACE LID IF NECESSARY (C.O.G.V. DETAIL SS-4).
 - D5 EXISTING FENCE TO REMAIN.

UTILITY NOTE
EXISTING UTILITIES ARE SHOWN WHERE THEY ARE BELIEVED TO EXIST. ACTUAL LOCATION AND ELEVATION MAY VARY. CONTRACTOR SHALL CALL U.S.A. (UNDERGROUND SERVICE ALERT- 1-800-642-2444) TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND SHALL TAKE EXTRA CAUTION TO AVOID DAMAGE TO EXISTING UTILITIES.

ENGINEERING DIVISION CITY OF GRASS VALLEY GRADING AND IMPROVEMENT PLANS FOR COUNTY OF NEVADA 135 E. EMPIRE STREET		
PROJECT ENGINEER:	MICHELLE LAYSHOT	
ACCEPTED BY:		
CITY ENGINEER	DATE	RCE NUMBER
PROJECT NUMBER -		
SHEET	4 OF 5	DRAWING NUMBER:

159 SOUTH AUBURN STREET, GRASS VALLEY, CA 95945 (530) 446-6765

REV.	DESCRIPTION	DATE
A	ADDED SEWER BFP	5-1-26

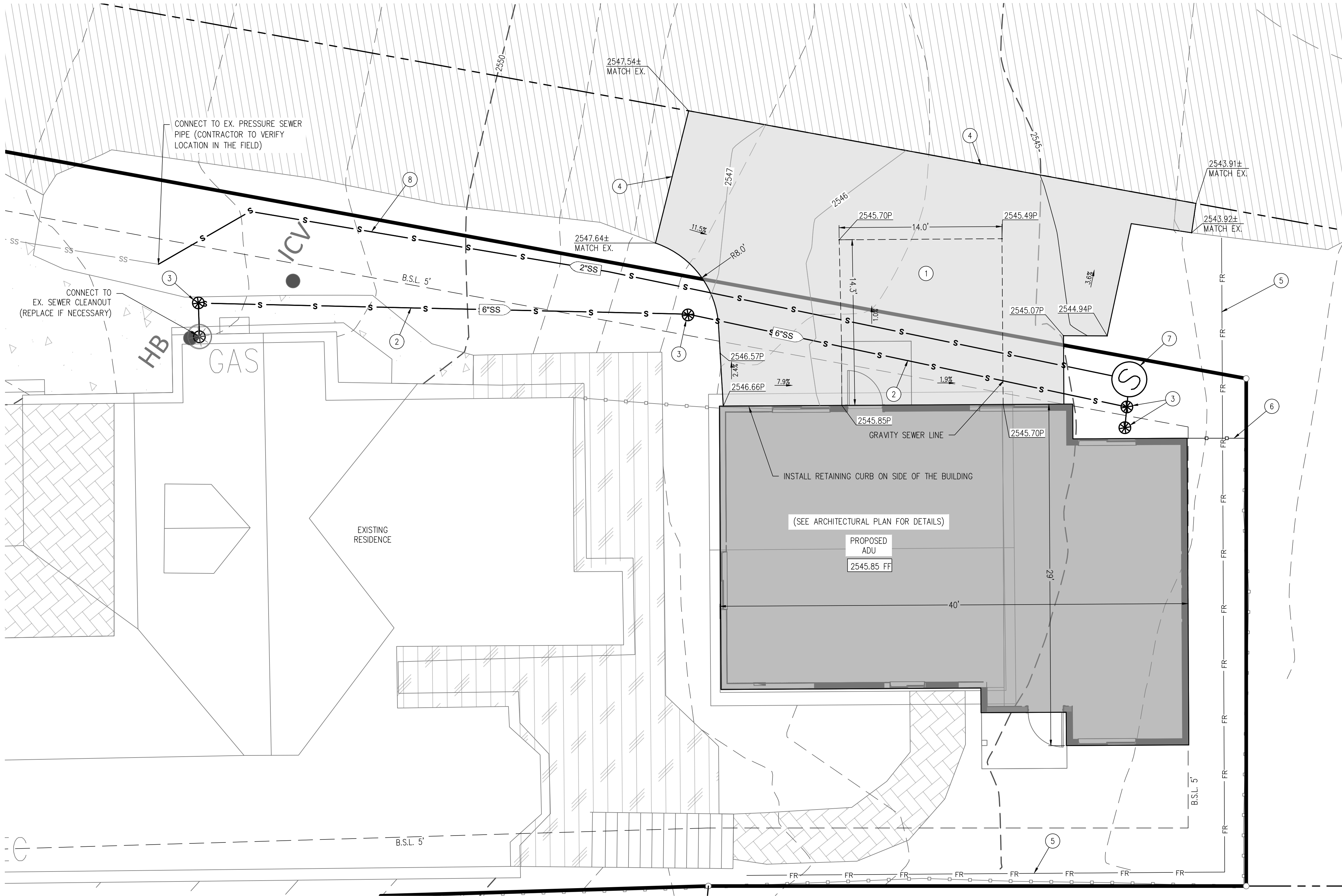
135 E. EMPIRE RESIDENCE
135 E EMPIRE ST
GRASS VALLEY, CA 95945

EXISTING TOPOGRAPHY & DEMOLITION PLAN

DATE SIGNED: 04-29-2026

DESIGNED BY: MCL
DRAWN BY: BES
PROJECT NO: 25-0908
DATE: APRIL, 2026
SHEET NUMBER:

C4.0



UTILITY NOTES

- CONTRACTOR TO POTHOLE ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER IF ACTUAL LOCATION AND DEPTH DIFFERS SIGNIFICANTLY FROM LOCATION AND DEPTH SHOWN ON PLANS.
- CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO OBTAIN FINAL CONSTRUCTION DRAWINGS AND STANDARD SPECIFICATIONS. ALL UNDERGROUND CONDUIT AND PIPING TO BE INSTALLED IN ACCORDANCE WITH THE LATEST ADOPTED VERSION OF THE CALIFORNIA PLUMBING CODE AS WELL AS PLANS/STANDARDS AND DETAILS OF THE LOCAL UTILITY COMPANY HAVING JURISDICTION.
- CONTRACTOR SHALL ADJUST ALL (E) UTILITY BOXES, VAULTS AND MANHOLES WHICH OCCUR WITHIN NEW PAVEMENT TO 1/2" TO 1/4" BELOW FINISH GRADE. CONTRACTOR SHALL UPGRADE ALL BOXES, VAULTS AND LIDS TO H-20 TRAFFIC RATED WHERE BOXES VAULTS AND LIDS OCCUR WITHIN VEHICLE TRAFFIC AREAS.
- EXISTING UTILITIES ARE SHOWN WHERE THEY ARE BELIEVED TO EXIST. ACTUAL LOCATION AND ELEVATION MAY VARY. CONTRACTOR SHALL CALL U.S.A. (UNDERGROUND SERVICE ALERT- 1-800-642-2444) TO LOCATE ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION AND SHALL TAKE EXTRA CAUTION TO AVOID DAMAGE TO EXISTING UTILITIES.

EARTHWORK QUANTITIES:

GRADING/EXCAVATION QUANTITIES:
CUT: 0 CUBIC YARDS
FILL: 18 CUBIC YARDS
NET: 18 CUBIC YARDS IMPORT

CUT FACTOR: 1.0
FILL FACTOR: 1.1

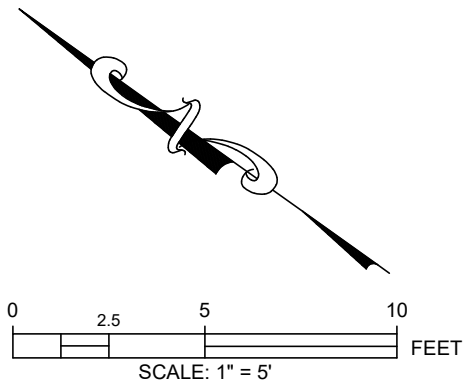
- THE TOPOGRAPHY FROM WHICH THE ABOVE QUANTITIES WERE COMPUTED WAS OBTAINED FROM A FIELD TOPOGRAPHIC SURVEY, RESULTING IN A 1' CONTOUR INTERVAL MAP THAT WAS PROVIDED BY MILLENNIUM, DATED SEPTEMBER 13, 2025.
- THE CONTRACTOR IS ADVISED TO MAKE AN INDEPENDENT EVALUATION OF THE EARTHWORK QUANTITIES INVOLVED. THE OWNER AND MILLENNIUM PLANNING AND ENGINEERING DO NOT, EXPRESSLY OR BY IMPLICATION, AGREE THAT THE ACTUAL EARTHWORK QUANTITIES WILL CORRESPOND TO THOSE GIVEN ABOVE. EARTHWORK QUANTITIES MAY FLUCTUATE DEPENDING UPON SIZE AND AMOUNT OF ROCK ENCOUNTERED. ANY EXCESS OR UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE OWNER'S PROPERTY AND DISPOSED OF AT THE CONTRACTOR'S EXPENSE.

LEGEND

	PROPERTY LINE
	ADJACENT PROPERTY LINE
	BUILDING SETBACK
	EXISTING ASPHALT PAVEMENT
	EXISTING CONCRETE
	REMOVE EXISTING WOOD FENCE
	EXISTING SANITARY SEWER CLEANOUT
	EXISTING OVERHEAD ELECTRICAL
	EXISTING GAS METER
	IRRIGATION CONTROL VALVE
	HOSE BIB
	PROPOSED ASPHALT PAVEMENT
	PAVEMENT ELEVATION
	CONCRETE ELEVATION
	MATCH EXISTING GRADE
	SE-5-FIBER ROLLS (DETAIL 1, SHEET C3.0)
	PROPOSED SEWER LINE
	PROPOSED SEWER CLEANOUT
	PROPOSED 48" SEWER PUMP TANK

CONSTRUCTION NOTES

- INSTALL 2" ASPHALT OVER 6" CLASS II A.B. COMPACTED TO 95% R.C. OVER 12" NATIVE SOIL COMPACTED TO 90% R.C.
- INSTALL 6" PVC SDR-26 SEWER LINE WITH 48" MIN COVER WITH 2% MIN. SLOPE(TYPICAL) (C.O.G.V. DETAIL ST-2).
- INSTALL SEWER CLEANOUT (C.O.G.V. DETAIL SS-4).
- SAWCUT LINE, JOIN EXISTING ASPHALT (DETAIL 3, SHEET C3.0).
- INSTALL FIBER ROLLS (DETAIL 1, SHEET C3.0). SEE BMP SE-5 IN THE CALIFORNIA STORM WATER QUALITY ASSOCIATION (CASQA) CONSTRUCTION BMP HANDBOOK FOR ADDITIONAL REQUIREMENTS. INSTALL CHECK DAMS AT 30' INTERVALS ALONG FLOWLINE OF GUTTER OR SWALE (TYPICAL) (SEE BMP SE-4 IN CASQA BMP HANDBOOK).
- INSTALL WOOD FENCE (MATCH EXISTING FENCE TYPE).
- INSTALL ZOELLER E-820 SINGLE DIRECTIONAL GRINDER PUMP WITH 48" DIAMETER TANK.
- INSTALL 2" PVC SCH. 80 PVC PRESSURE PIPE WITH 36" MIN. COVER.



ENGINEERING DIVISION CITY OF GRASS VALLEY GRADING AND IMPROVEMENT PLANS FOR COUNTY OF NEVADA 135 E. EMPIRE STREET		
PROJECT ENGINEER:	MICHELLE LAYSHOT	
ACCEPTED BY:		
CITY ENGINEER	DATE	RCE NUMBER
PROJECT NUMBER -		
SHEET 5 OF 5	DRAWING NUMBER:	

159 SOUTH AUBURN STREET, GRASS VALLEY, CA 95945 (530) 446-6765

DATE	5-1-26
DESCRIPTION	ADDED SEWER BFP
REV.	A

135 E. EMPIRE RESIDENCE
135 E EMPIRE ST
GRASS VALLEY, CA 95945

SITE, GRADING, DRAINAGE AND UTILITY J PLAN

DATE SIGNED: 04-29-2026

DESIGNED BY:	MCL
DRAWN BY:	BES
PROJECT NO:	25-0908
DATE:	APRIL, 2026
SHEET NUMBER:	C5.0



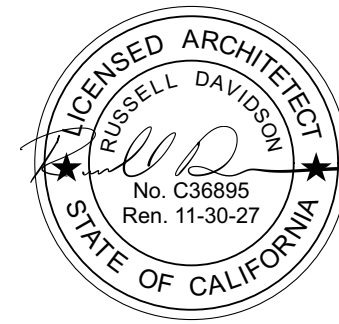
 (E) WALL TO REMAIN
 (E) WALL TO BE DEMOLISHED
 (E) FINISHES TO BE REMOVED
 STRUCTURE TO REMAIN

DEMO PLAN NOTES

1. REMOVE EXISTING FINISHES AS NOTED ON PLANS & REPAIR & PREPARE ALL SURFACES FOR FINISHES
2. MATERIAL HAVING SALVAGE VALUE SHALL BECOME THE PROPERTY OF THE OWNER ALL OTHER MATERIAL AND DEBRIS ACCUMULATED AS A RESULT OF DEMOLITION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PREMISES BY THE CONTRACTOR AND DISPOSED OF IN A LEGAL AND PROPER MANNER
3. FURNISH, INSTALL, AND MAINTAIN IN SAFE CONDITIONS AT ALL TIMES TEMPORARY PROTECTION REQUIRED TO ENSURE SAFETY FOR PERSONS AND PROPERTY DURING DEMOLITION AND REMOVAL WORK.
4. FURNISH, INSTALL, AND MAINTAIN DUST COVERINGS TO PREVENT THE SPREAD OF DUST BEYOND THE IMMEDIATE AREA WHERE DEMOLITION IS BEING PERFORMED.
5. REMOVE EXISTING ELECTRICAL OUTLETS AND WIRING AS REQUIRED IN WALLS, FLOORS AND FURNISHINGS TO BE DEMOLISHED.
6. ALL ELECTRICAL, PLUMBING AND MECHANICAL WORK (DEMOLITION AND NEW) IS TO BE PERFORMED BY LICENSED, COMPETENT CONTRACTORS.
7. PRIOR TO THE START OF DEMOLITION WORK GENERAL CONTRACTOR SHALL DETERMINE THE LOCATION OF LOAD BEARING PARTITIONS AND COLUMNS AND PROVIDE TEMPORARY SUPPORTS AS REQUIRED BY REMOVAL OR RELOCATION OF SUCH PARTITIONS. G.C. TO ENSURE ALL TEMPORARY SUPPORTS ARE CARRIED TO SUFFICIENT BEARING MATERIALS.
8. REFER TO STRUCTURAL DRAWINGS FOR ALL STRUCTURAL DEMOLITION LOCATIONS & DETAILS.
9. IF ANY HAZARDOUS MATERIALS ARE ENCOUNTERED DURING DEMOLITION, CONTRACTOR SHALL NOTIFY OWNER IN WRITING IMMEDIATELY. CONTRACTOR SHALL COMPLY WITH APPLICABLE REGULATIONS, LAWS AND ORDINANCES RELATIVE TO REMOVAL, HANDLING, AND PROTECTION AGAINST EXPOSURE OR ENVIRONMENTAL POLLUTION.
10. ANY INTERRUPTION TO BUILDING UTILITIES SHALL BE CLEARED WITH OWNER 72 HOURS PRIOR TO PROPOSED INTERRUPTION.

KEYNOTES

- | | |
|------|--|
| 2.01 | DEMOLISH DESIGNATED WALLS INCLUDING STUDS, DRYWALL, AND ASSOCIATED MATERIALS |
| 2.04 | REMOVE ALL WINDOWS, FRAMES, AND ASSOCIATED HARDWARE, TYPICAL ALL EXTERIOR |
| 2.06 | REMOVE DESIGNATED DOORS, FRAMES, AND ASSOCIATED HARDWARE |
| 2.12 | REMOVE EXISTING CONCRETE SLAB AT LOCATION OF NEW RECESSED SLAB ACCESSIBLE SHOWER |
| 6.09 | INSTALL NEW SHELF AND HANGER ROD AT 5'-0" HEIGHT |



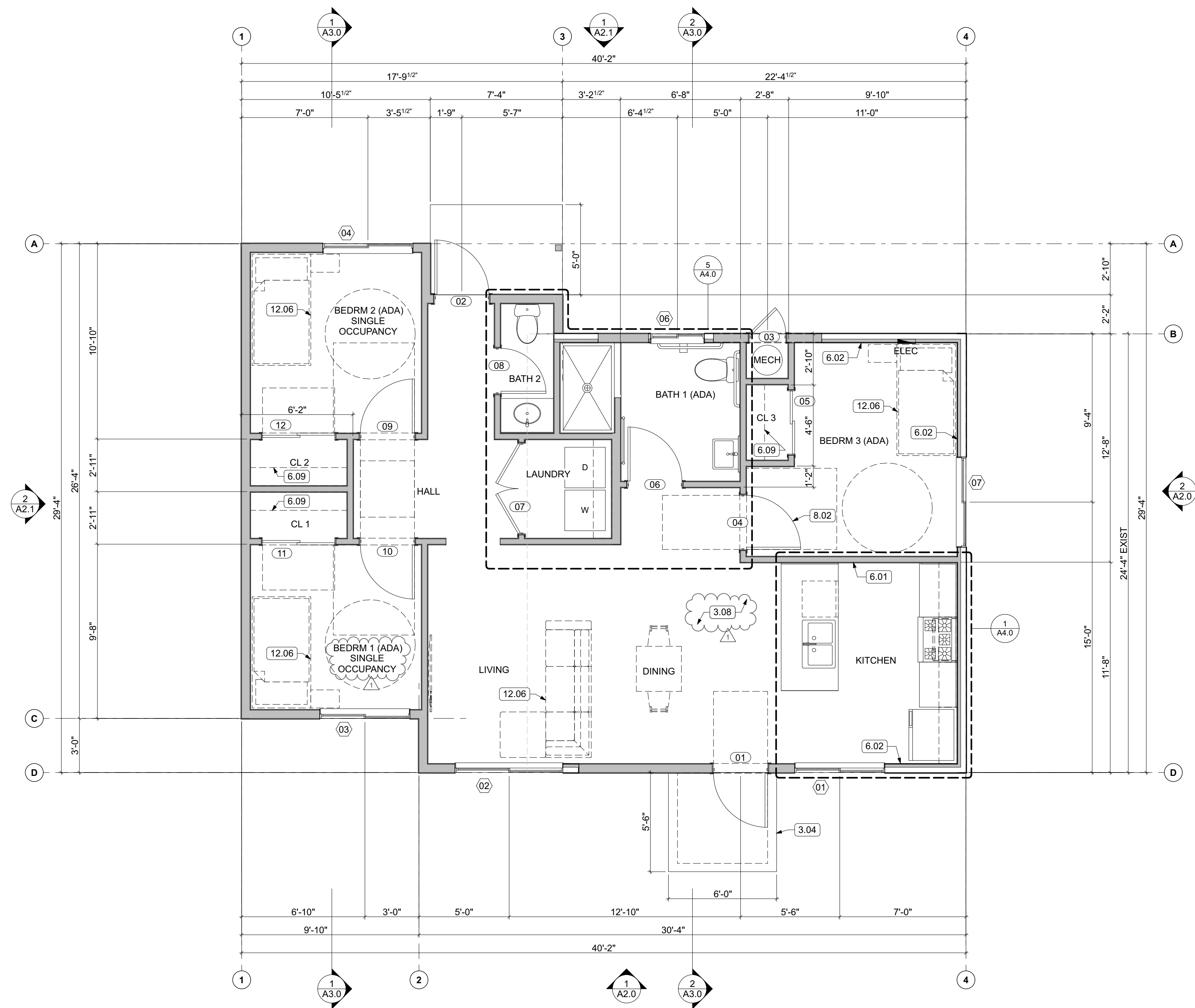
EAST EMPIRE RESIDENCE

135 EAST EMPIRE STREET
GRASS VALLEY, CA 95945
APN: 029-250-015-000

ID	NAME	DATE
SUBMITTED:		7/20/2026
SCALE		AS NOTED
DRAWN BY:		GTB
CHECKED BY:		RPD
JOB:		2025.33

DEMOLITION FLOOR PLAN

A1.0



1 NEW FLOOR PLAN
SCALE: 1/4" = 1'-0"

LEGEND

- | | |
|---|---------------------|
|  | (E) WALL TO REMAIN |
|  | (N) WALL |
| ROOM NAME | |
|  | ROOM IDENTIFICATION |
|  | WINDOW NUMBER |
|  | DOOR NUMBER |
|  | KEYNOTE |

GENERAL NOTES

REFERENCES

1. REFER TO SHEET A6.0 FOR PARTITION ASSEMBLIES. ALL EXTERIOR WALLS K6 U.N.O. ALL INTERIOR WALLS A4 U.N.O.
2. REFER TO SHEET A6.0 FOR WINDOW & DOOR SCHEDULES.
3. REFER TO ENLARGED PLANS ON SHEET A4.0 FOR ADDITIONAL NOTATION AND DIMENSIONS.
4. REFER TO REFLECTED CEILING PLAN FOR CEILING HEIGHTS.
5. REFER TO MECHANICAL, ELECTRICAL AND PLUMBING GENERAL NOTES ON SHEET G1.0
6. INSTALL FINISHES PER FINISH PLAN ON SHEET A1.4
7. INSTALL WINDOWS & DOORS PER SCHEDULE ON SHEET A6.0

NOTES

1. WRITTEN DIMENSIONS TO PREVAIL OVER SCALING OF DRAWINGS. SUBCONTRACTOR TO VERIFY ALL DIM. PRIOR TO CONSTRUCTION
2. EXTERIOR DIMENSIONS ARE MEASURED TO FACE OF STRUCTURAL STUD / CMU / SLAB EDGE OR CENTERLINE OF STRUCTURE U.O.
3. INTERIOR DIMENSIONS ARE MEASURED TO FACE OF STUD, U.O.
4. DOORS AND WINDOWS ARE MEASURED TO CENTERLINE OF OPENINGS.
5. ALL ANGLED WALLS ARE AT 45 DEGREES U.O.
6. SET JAMB AT HINGE SIDE OF:
EXTERIOR DOORS @ 4.5" U.O.
INTERIOR DOORS @ 4.5" U.O.
7. PROVIDE MIN. 36"x36" LEVEL LANDINGS OUTSIDE AT ALL EXTERIOR DOORS PER CRC SECTION R311.3, WITH LANDINGS NOT MORE THAN 7.75' BELOW INSIDE FINISHED FLOORS AT INWARD SWINGING (OR SLIDING) DOORS AND 1.5' AT OUTWARD SWINGING PER CRC SECTION R311.3.1. ALL LANDINGS SHALL SLOPE 1/4" / FT AWAY FROM DOORS MIN. TYP. PROVIDE MIN. 12" CLASS 2 AGGREGATE BASEROCK UNDER SLABS AT ALL DOORWAY LANDINGS, TYP.
8. GLASS DOORS & PANELS OF SHOWER & BATHTUB ENCLOSURES & ADJACENT WALL OPENINGS WITHIN 60" ABOVE A STANDING SURFACE OR DRAIN INLET SHALL BE TEMPERED SAFETY GLASS, AS PER CRC SECTION R308.4.5.
9. BATHROOM FLOORS TO HAVE SKID-RESISTANT SURFACE.
10. BASE LINING MATERIAL BENEATH SHOWER PAN SLOPED TO DRAIN AS PER CPC SECTION 408.7.
11. OPEN GUARDRAILS SHALL HAVE INTERMEDIATE RAILS OR AN ORNAMENTAL PATTERN SUCH THAT A SPHERE 4 INCHES IN DIAMETER CANNOT PASS THROUGH.
12. PROVIDE FIREBLOCKING IN CONCEALED SPACES PER CRC R302.11.

WILDLAND URBAN INTERFACE

1. PROPOSED CONSTRUCTION MATERIALS ARE NON-COMBUSTIBLE / IGNITION RESISTANT PER CRC SECTION R337.4
2. PROPOSED ROOFING SHALL COMPLY WITH CRC SECTION R337.5
3. VENTING FOR SOFFITS AND EAVES SHALL HAVE MESH SCREENING PER CRC SECTION R337.6
4. EXTERIOR WINDOWS AND DOORS SHALL BE MULTI-PANED, TEMPERED GLASS PER CRC SECTION R337.8
5. EXTERIOR DECKING AND WALKWAYS SHALL BE NON-COMBUSTIBLE, IGNITION RESISTANT PER CRC SECTION R327.9

KEYNOTES

- | | |
|-------|---|
| 3.04 | INSTALL EXTERIOR CONCRETE FLATWORK WITH SPECIFIED FINISH AND JOINT PATTERN |
| 3.08 | EXISTING CONCRETE SLAB TO BE CLEANED AND PREPARED. PROVIDE SURFACE-APPLIED MOISTURE VAPOR BARRIER (EPOXY OR MANUFACTURER APPROVED EQUIVALENT) PRIOR TO INSTALLATION OF LVP FINISH FLOORING. INSTALL LVP FINISH FLOORING WITH INTEGRAL OR SEPARATE VAPOR RETARDER. USE MANUFACTURER PERMANENT INSTALLATION REQUIREMENTS. VERIFY MOISTURE CONDITIONS ARE WITHIN FLOORING MANUFACTURER LIMITS PRIOR TO INSTALLATION. |
| 6.01 | INSTALL WOOD FRAMING WITH REQUIRED SEISMIC BLOCKING AND CONNECTIONS, TYPICAL. |
| 6.02 | INSTALL WOOD FRAMING WITH REQUIRED SEISMIC BLOCKING AND CONNECTIONS AT EXISTING 2x4 WALLS TO CREATE 2x6 EXTERIOR WALL, TYPICAL. |
| 6.09 | INSTALL NEW SHELF AND HANGER ROD AT 5'-0" HEIGHT |
| 8.02 | INSTALL INTERIOR DOORS WITH CASINGS, HARDWARE, AND PROPER OPERATION, TYPICAL. |
| 12.06 | NEW FURNITURE, SHOWN DASHED, TYPICAL. |



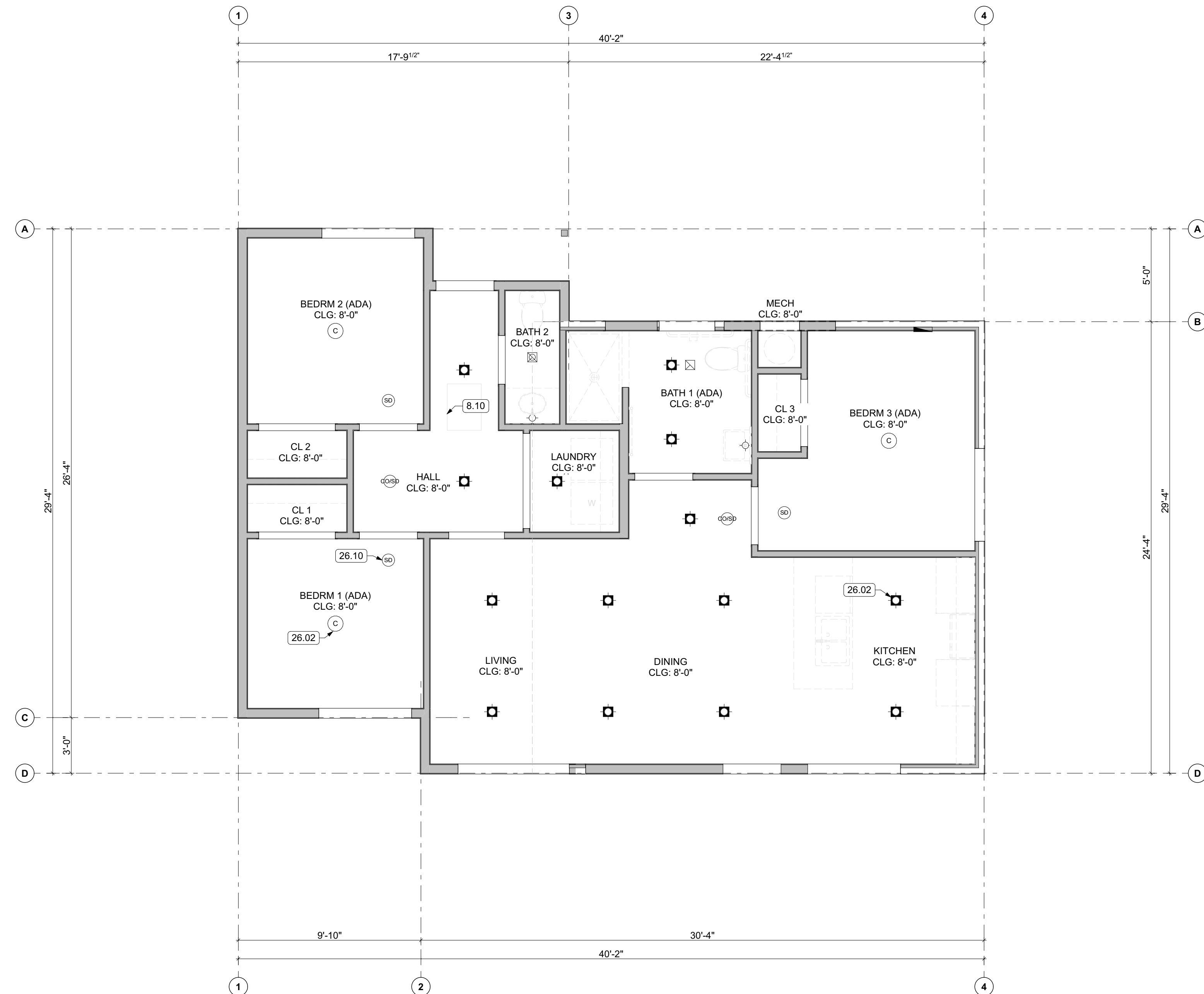
EAST EMPIRE RESIDENCE

135 EAST EMPIRE STREET
GRASS VALLEY, CA 95945
APN: 029-250-015-000

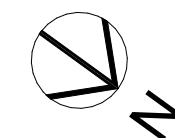
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SUBMITTED:		7/20/2026
SCALE		AS NOTED
DRAWN BY:		GTB
CHECKED BY:		RPD
JOB:		2025.33

NEW FLOOR PLAN

A1.1



1 NEW REFLECTED CEILING PLAN
SCALE: 1/4" = 1'-0"



PLAN NOTES

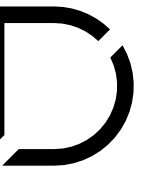
1. WHERE BEAMS, PIPES OR OR OTHER CONSTRUCTION DETAILS PREVENT THE USE OF STANDARD RECESSED FIXTURES, SHALLOW RECESSED FIXTURES SHALL BE USED. (FIXTURE CUTS SHALL BE SUBMITTED FOR APPROVAL BY ARCHITECT OR ENGINEER.)
2. LAYOUT REQUIREMENTS: CONTRACTOR SHALL COORDINATE ALL STRUCTURAL FRAMING WITH ARCHITECTURAL LIGHTING, REFLECTED CEILING PLANS, MECHANICAL, PLUMBING, AND ELECTRICAL INFRASTRUCTURE. CONTRACTOR SHALL NOT PROVIDE TO RECESSED AND SEMI- RECESSED LIGHTING, ROOF DRAINS, FIRE SPRINKLER PIPES AND HEADS, AND PLUMBING DRAINS, WASTE AND SUPPLY LINES.
3. CEILING HEIGHTS SHALL BE AS SHOWN ON ARCHITECTS REFLECTED CEILING PLAN AND ANY DEVIATION FROM HEIGHTS SHOWN SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL.
4. PRIOR TO ENCLOSING ANY CEILING, ANY PLENUM SYSTEMS (HVAC, PLUMBING & ELECTRICAL) SHALL BE INSPECTED AND WHERE REQUIRED, TESTED BY CONTRACTORS, ENGINEERS AND PROPER AUTHORITIES HAVING JURISDICTION TO INSURE THEIR PROPER INSTALLATION AND FUNCTION.
5. WHERE CALIFORNIA FRAMING OCCURS PROVIDED MIN. 22" x 30" ACCESS THROUGH EXISTING ROOF SHEATHING.
6. THE CONTRACTOR SHALL PROVIDE ADEQUATE SPACE FOR MAINTENANCE ACCESS TO ALL LIGHT FIXTURES AS PER MANUFACTURER'S RECOMMENDATIONS AND LOCAL CODES.

LEGEND

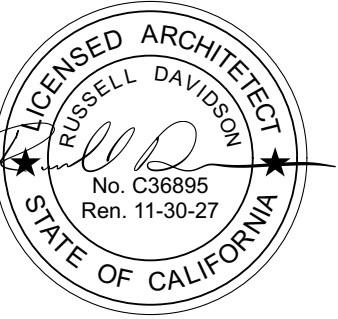
- | | |
|---|-----------------------------|
|  | DUPLEX OUTLET |
|  | GFCI DUPLEX OUTLET |
|  | OVERHEAD GFCI DUPLEX OUTLET |
|  | FLOOR OUTLET |
|  | WATERPROOF DUPLEX OUTLET |
|  | 240V DUPLEX OUTLET |
|  | SWITCHED DUPLEX OUTLET |
|  | SWITCH |
|  | 3-WAY SWITCH |
|  | DIMMER SWITCH |
|  | VACANCY SWITCH |
|  | ELECTRICAL PANEL (200A UNO) |
|  | SMOKE DETECTOR |
|  | CO DETECTOR |
|  | CO/SD COMBO DETECTOR |
|  | FAN / LIGHT COMBO |
|  | RECESSED LIGHT |
|  | PENDANT FIXTURE |
|  | CEILING MOUNT FIXTURE |
|  | WALL MOUNTED FIXTURE |
|  | UNDERCOUNTER LIGHT |
|  | FLOURESCENT FIXTURE |
|  | CEILING FAN |

KEYNOTES

- | | |
|-------|--|
| 8.10 | INSTALL NEW 22" x 30" ATTIC ACCESS HATCH |
| 26.02 | INSTALL NEW LIGHT FIXTURES PER ELECTRICAL DRAWING E1. TYPICAL. |
| 26.10 | INSTALL NEW DETECTORS PER ELECTRICAL DRAWINGS, TYPICAL. |



RUSSELL DAVIDSON
ARCHITECTURE + DESIGN



EAST EMPIRE RESIDENCE

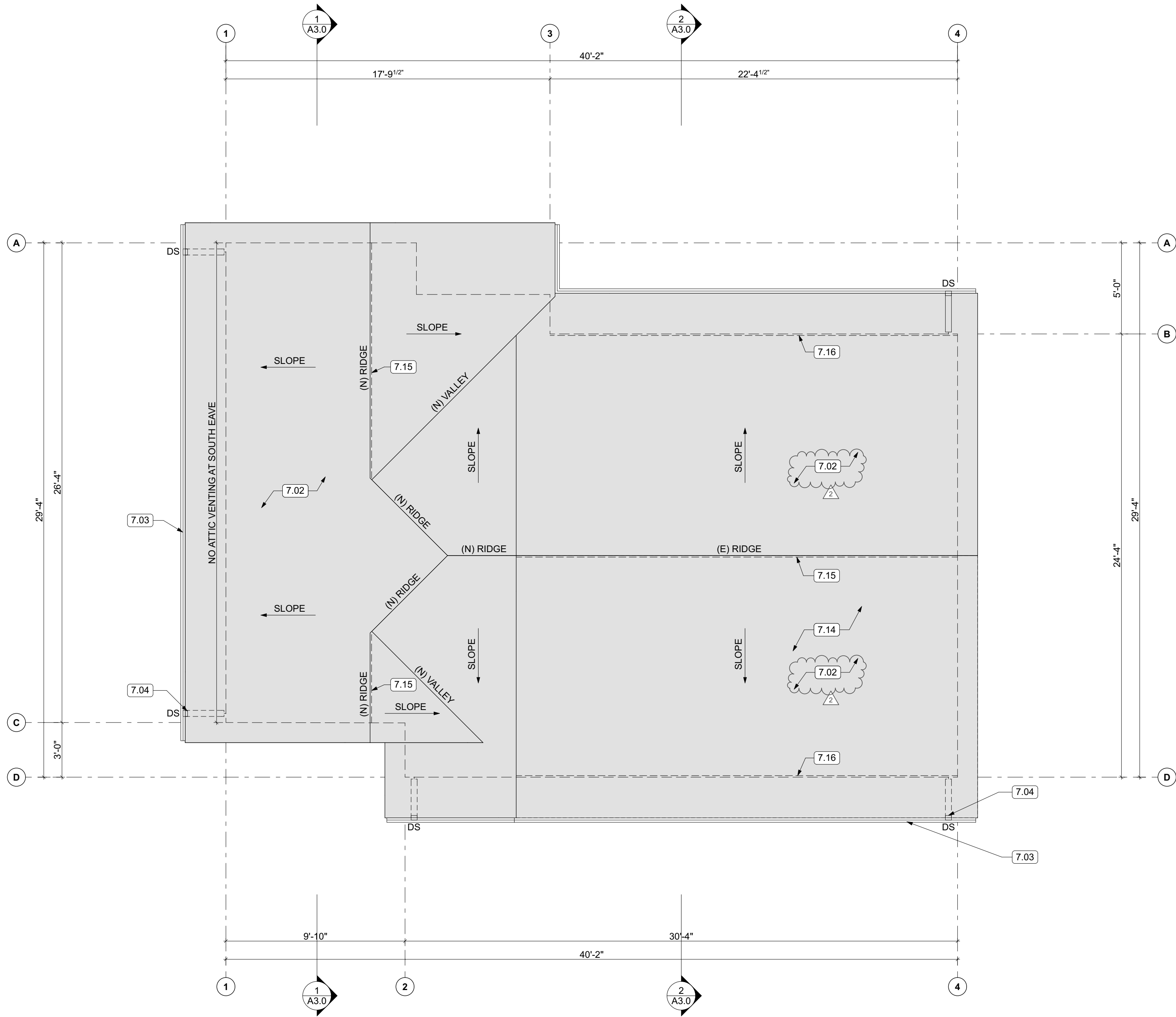
135 EAST EMPIRE STREET
GRASS VALLEY, CA 95945
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JOB:		2025.33

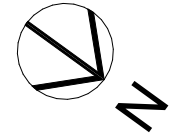
NEW REFLECTED
CEILING PLAN

A1.2

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1 NEW ROOF PLAN
SCALE: 1/4" = 1'-0"



LEGEND

WALL BELOW

3" DOWNSPOUT

NEW ROOF AREA

ROOF PLAN NOTES

1. THE CONTRACTOR SHALL HAVE PRESENT AT INSPECTIONS A COPY OF THE ICC-ES EVALUATION REPORT ON THE ROOFING SYSTEM.

2. ALL ROOF COVERING SHALL BE 'IGNITION RESISTANT' COMPLYING WITH CRC SECTION R902.1 AND CLASS "A".

CLASS 'A' ROOFING COVERING: GAF TIMBERLINE OR EQUAL

3. ALL ROOFING WORK MUST ADHERE TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS TO MAINTAIN WARRANTY COVERAGE.

4. ALL ROOF AND DECK SURFACES SHALL SLOPE AT 1/4" PER FOOT MINIMUM, U.O.N.

5. PROVIDE 1/2" EXT-GRADE SHEATHING OVER 2X CRICKETING AT 16" O.C. SLOPED TO DRAIN 1/4" PER FOOT MIN. OVER 5/8" STRUCTURAL PLYWOOD SHEATHING W/ INTEGRAL RADIANT BARRIER AT ALL CHIMNEYS, MECHANICAL EQUIPMENT, AND OTHER LOCATIONS AS REQUIRED FOR POSITIVE DRAINAGE TOWARD DRAINS.

6. FLASH AND SEAL ALL ROOF PENETRATIONS SUCH AS VENTS, FANS, HOODS, AS REQUIRED FOR A WATER-TIGHT INSTALLATION.

7. NOT USED.

8. EXPOSED VALLEY FLASHINGS SHALL BE CONSTRUCTED WITH NOT LESS THAN 0.019-INCH (NO. 26 GALVANIZED SHEET GAGE) CORROSION-RESISTANT METAL INSTALLED OVER A MINIMUM 36-INCH-WIDE UNDERLAYMENT CONSISTING OF ONE LAYER OF NO. 72 ASTM CAP SHEET RUNNING THE FULL LENGTH OF THE VALLEY.

9. ANY ROOF GUTTERS SHALL BE PROVIDED WITH MEANS TO PREVENT ACCUMULATION OF LEAVES AND DEBRIS.

10. SKYLIGHTS SHALL BE TEMPERED GLASS.

11. ALL VENTS (ROOF, FOUNDATION, COMBUSTION-AIR, ETC) SHALL RESIST THE INTRUSION OF FLAMES AND EMBERS

12. VENTILATION OPENINGS FOR ENCLOSED ATTICS, EAVE SOFFIT SPACES, ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS, UNDERFLOOR VENTILATION OPENINGS, AND VENT OPENINGS IN EXTERIOR WALLS AND EXTERIOR DOORS SHALL BE LISTED TO ASTM E 2886 AND COMPLY WITH ALL OF THE FOLLOWING:

A. THERE SHALL BE NO FLAMING IGNITION OF THE COTTON MATERIAL DURING THE EMBER INTRUSION TEST

B. THERE SHALL BE NO FLAMING IGNITION DURING THE INTEGRITY TEST PORTION OF THE FLAME INTRUSION TEST

C. THE MAXIMUM TEMPERATURE OF THE UNEXPOSED SIDE OF THE VENT SHALL NOT EXCEED 662 DEGREES FAHRENHEIT (350 DEGREES CELSIUS)

13. NOT USED.

14. NOT USED.

15. ALL SHEET METAL FLASHING AND TRIM SHALL BE G.S.M.

16. ENCLOSED RAFTER SPACES SHALL HAVE 1 IN. CLEAR CROSS VENTILATION.

ATTIC VENT CALCULATION

ATTIC AREA = 1,016 SF
REQ'D VENT AREA = 1,016 / 300 = 3.39 SF = 488 SQ IN NFVA

EXHAUST: RIDGE VENT @ 20 SQ IN/LF
PROVIDE 13 LF = 260 SQ IN NFVA

INTAKE: 8" X 16" SOFFIT VENTS @ 50 SQ IN EA
PROVIDE 5 VENTS = 250 SQ IN NFVA

TOTAL PROVIDED = 510 SQ IN NFVA > 488 SQ IN REQ'D

KEYNOTES

7.02 NEW ROOF AND SHINGLES. SHOWN SHADED

7.03 INSTALL NEW GUTTER, TYPICAL

7.04 INSTALL NEW DOWNSPOUT. TERMINATE TO DRAIN AWAY FROM FOUNDATION OR PIPED TO DAYLIGHT, TYPICAL

7.14 EXISTING ROOF STRUCTURE TO REMAIN. REPAIR EXISTING SHEATHING AS REQUIRED

7.15 INSTALL NEW RIDGE VENT ALONG DASHED LINE PER ATTIC VENT CALCULATIONS

7.16 INSTALL NEW EAVE VENT ALONG DASHED LINE PER ATTIC VENT CALCULATIONS

RUSSELL DAVIDSON

ARCHITECTURE + DESIGN

LICENSED ARCHITECT

RUSSELL DAVIDSON

No. C36895

Ren. 11-30-27

EAST EMPIRE RESIDENCE

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GRASS VALLEY, CA 95945
APN: 029-250-015-000

2

7/20/2026

AS NOTED

GTB

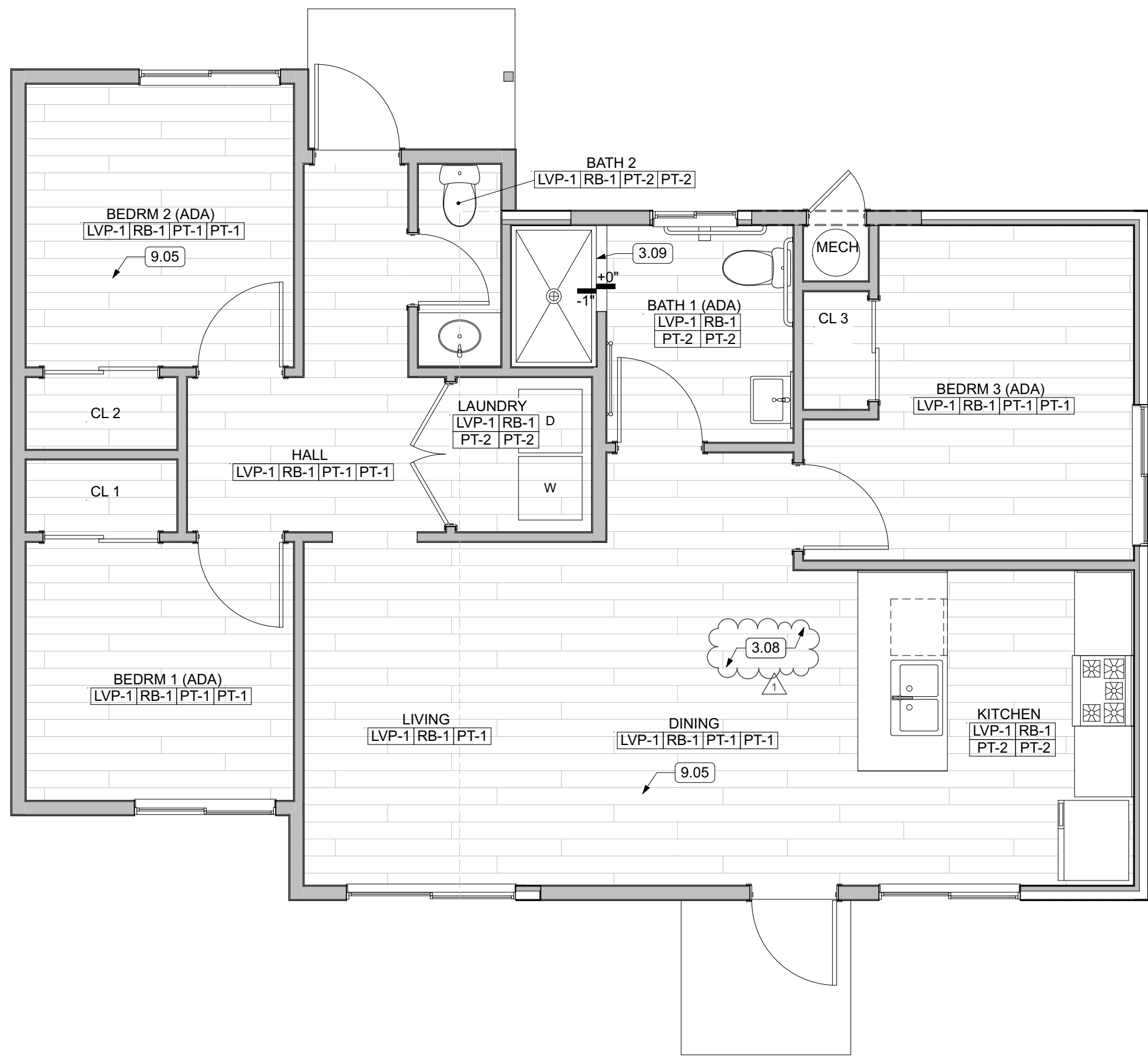
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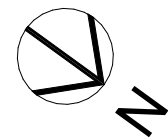
NEW ROOF PLAN

A1.3

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1 NEW FINISH FLOOR PLAN
SCALE: 1/4" = 1'-0"



FINISH NOTES

- THE FINISHES NOTED ON THE PLANS INDICATES THE TYPES AND EXTENT OF FINISHES. REFER TO OTHER CONTRACT DOCUMENTS FOR ADDITIONAL INFORMATION.
- SUBMIT SAMPLES IN ACCORDANCE WITH SPECIFICATIONS OF EACH FINISH AND FLOOR COVERING TO THE ARCHITECT FOR REVIEW AND APPROVAL BEFORE BEGINNING WORK. THE ARCHITECT HAS TEN (10) WORKING DAYS TO PROCESS SHOP DRAWINGS.
- SUBSTITUTIONS, REVISIONS OR CHANGES MUST HAVE APPROVAL OF THE ARCHITECT PRIOR TO PURCHASE AND INSTALLATION
- PAINT AT ALL INTERIOR WALLS & CEILINGS TO BE LOW SHEEN, UNLESS OTHERWISE NOTED.
- NO GYP. BD. SURFACES EXPOSED TO VIEW SHALL BE LEFT UNFINISHED OR UNPAINTED.
- "WATER RESISTANT" GYP. BD. AND/OR CEMENTITIOUS BOARD AT ALL BATHROOMS, POWDER ROOM, AND UTILITY ROOM.
- VERIFY WITH MANUFACTURER'S SPECIFICATIONS THAT FLOOR FINISHES ARE COMPATIBLE WITH RADIANT FLOOR HEATING SYSTEM IN AREAS WHERE INSTALLED.
- ALL FINISH SURFACES OF MILLWORK TO BE FILLED, SEALED, AND SANDED SMOOTH. PAINT FINISHES AT MILL WORK TO BE SPRAYED ON FOR A SMOOTH FINISH FREE OF STREAKS, DROPS, BLOBS, ETC.
- PROVIDE METAL TRIM OR CASING AT ALL EDGES OF PLASTER OR GYPSUM BOARD WHERE IT TERMINATES OR MEETS ANY OTHER MATERIAL, EXCEPT FLOORS.
- IN ALL CASES, PROVIDE ISOLATION OF ALUMINUM FROM ADJACENT STEEL OR COAT SURFACES IN CONTACT WITH BITUMINOUS PAINTS.

FINISH LEGEND

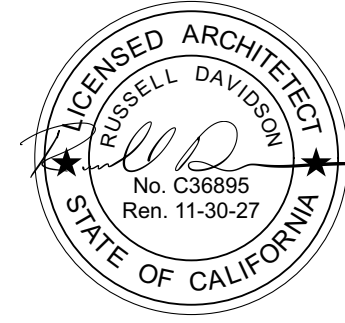
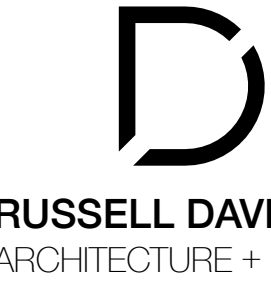
ROOM NAME	
FLOOR	BASE WALL CEILING
FLOOR	
LVP-1:	LUXURY VINYL PLANK
MANUFACTURER:	MANNINGTON OR EQUAL
COLOR:	TBD
NUMBER:	TBD
INSTALLATION:	AS SHOWN ON PLAN
LOCATION:	AS NOTED
SC-1:	
MANUFACTURER:	SEALED CONCRETE
FINISH:	BENJAMIN MOORE OR EQUAL
NUMBER:	CLEAR ACRYLIC SEALER
LOCATION:	HP1270
	AS NOTED
BASE:	
RB-1:	RUBBER BASE
MANUFACTURER:	ROPPE OR EQUAL
COLOR:	150 DARK GREY
TYPE:	4" TOPSET COVE
LOCATION:	THROUGHOUT, UON
PAINT:	
PT-1:	BENJAMIN MOORE OR EQUAL
MANUFACTURER:	SWISS COFFEE
COLOR:	OC-45
FINISH:	EGGSHELL
LOCATION:	AS NOTED
PT-2:	BENJAMIN MOORE OR EQUAL
MANUFACTURER:	SWISS COFFEE
COLOR:	OC-45
FINISH:	SEMI-GLOSS
LOCATION:	AS NOTED
PT-3:	BENJAMIN MOORE OR EQUAL
MANUFACTURER:	CHANTILLY LACE
COLOR:	2121-70
FINISH:	SEMI-GLOSS
LOCATION:	ALL WOOD TRIM
COUNTER:	
QC-1:	QUARTZ COMPOSITE:
MANUFACTURER:	VIATARA OR EQUAL
COLOR:	TBD
NUMBER:	
LOCATION:	KITCHEN & NOOK
CASEWORK:	
MANUFACTURER:	TBD
COLOR:	FACTORY PAINT FINISH
LOCATION:	KITCHEN & NOOK

NOTE: (E) = EXISTING TO REMAIN

NOTE: CLOSET FINISHES TO BE THE SAME AS ADJOINING ROOM

KEYNOTES

- 3.08 EXISTING CONCRETE SLAB TO BE CLEANED AND PREPARED. PROVIDE SURFACE-APPLIED MOISTURE VAPOR BARRIER (EPOXY OR MANUFACTURER APPROVED EQUIVALENT) PRIOR TO INSTALLATION OF LVP FINISH FLOORING. INSTALL LVP FINISH FLOORING WITH INTEGRAL OR SEPARATE VAPOR RETARDER UNDERLAYMENT PER MANUFACTURER REQUIREMENTS. VERIFY MOISTURE CONDITIONS ARE WITHIN FLOORING MANUFACTURER LIMITS PRIOR TO INSTALLATION.
- 3.09 PROVIDE RECESSED CONCRETE SLAB FOR PREFABRICATED ROLL-IN ACCESSIBLE SHOWER
- 9.05 INSTALL LVTLVP FLOORING WITH PROPER SUBFLOOR PREPARATION



EAST EMPIRE RESIDENCE

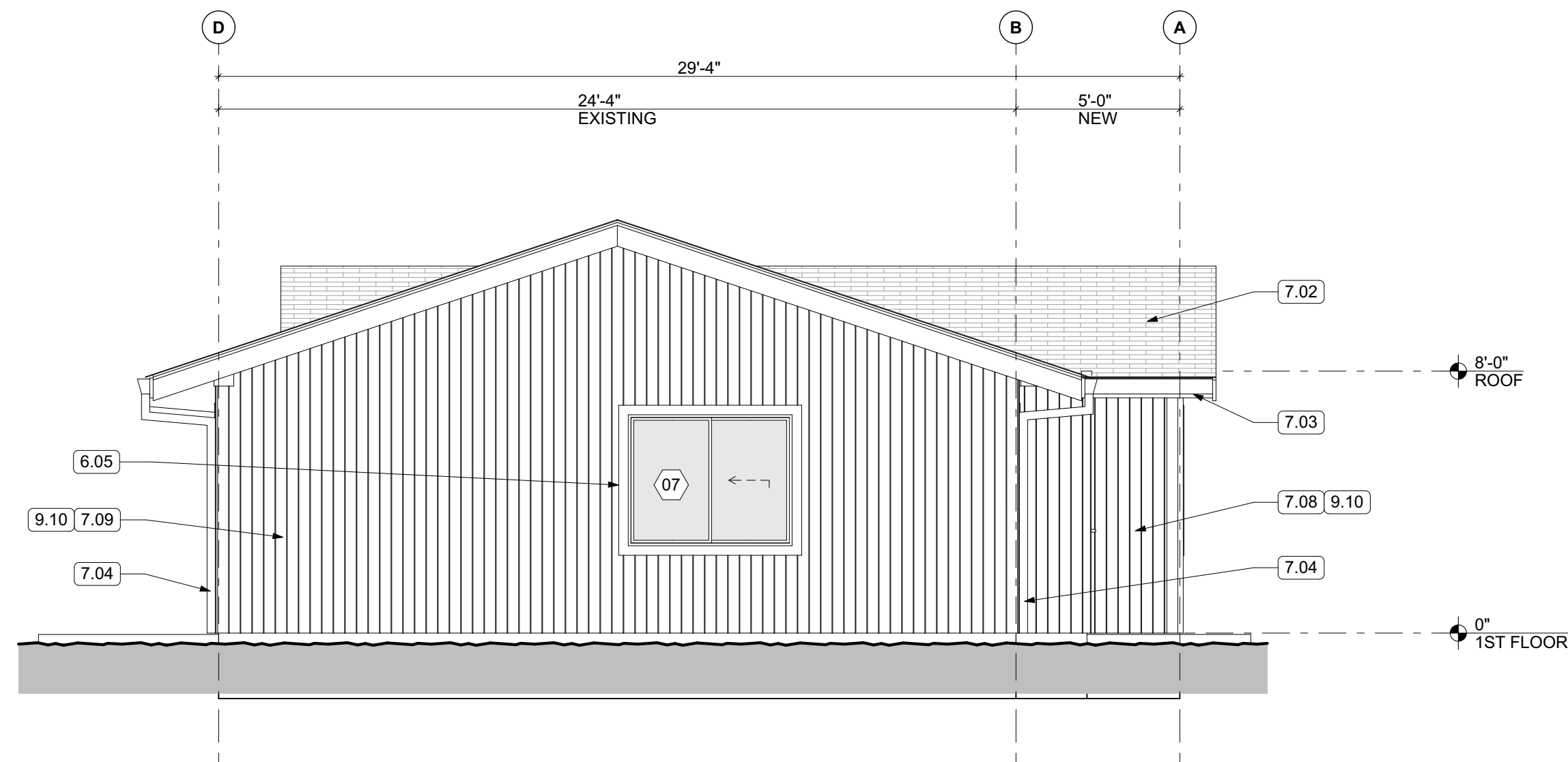
135 EAST EMPIRE STREET
GRASS VALLEY, CA 95945
APN: 029-250-015-000

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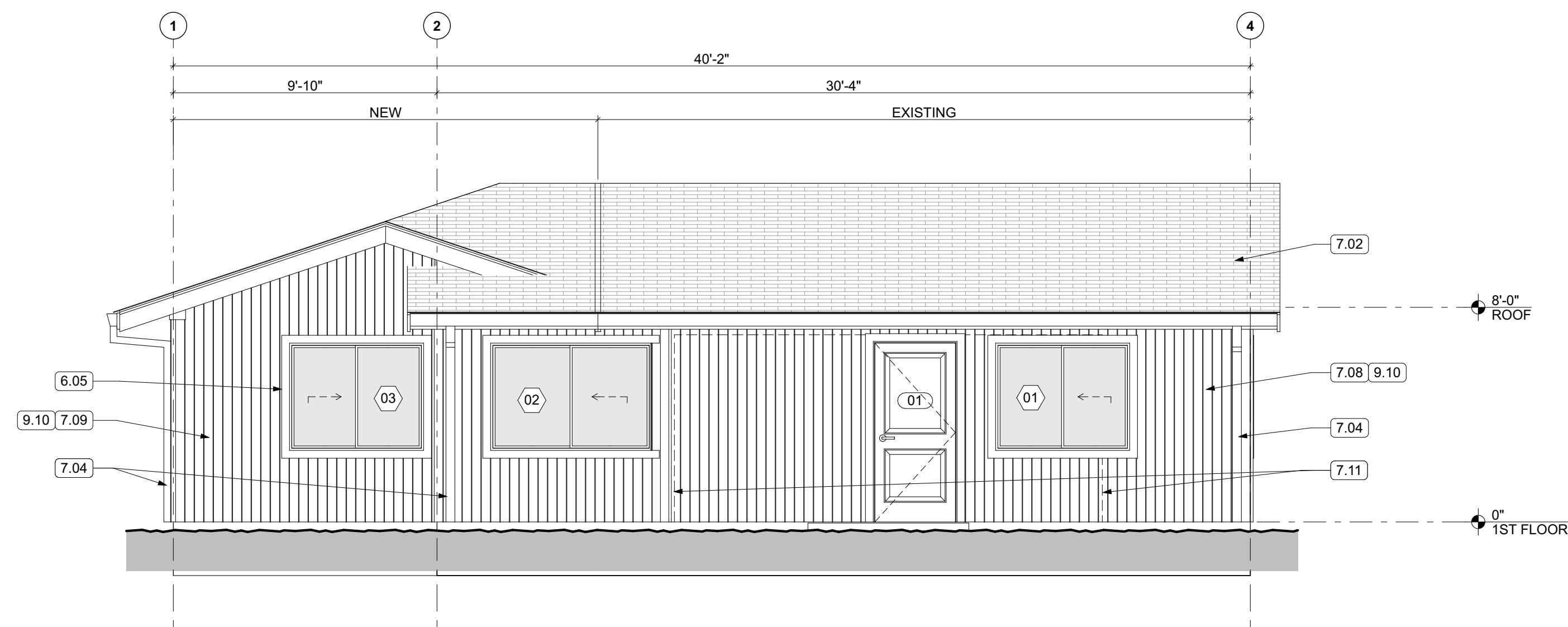
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CHECKED BY:	RPD
JOB:	2025.33

NEW FINISH FLOOR PLAN

A1.4



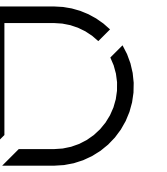
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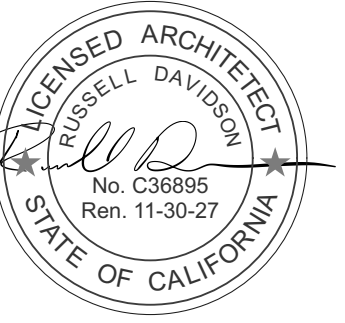
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GENERAL NOTES

1. REFER TO SHEET A6.0 FOR WINDOW & DOOR SCHEDULES.
2. INSTALL ALL FINISHES PER MANUFACTURER SPECIFICATIONS



RUSSELL DAVIDSON
ARCHITECTURE + DESIGN



KEYNOTES

- | | |
|------|--|
| 6.05 | NEW WOOD TRIM AT ALL EXTERIOR OPENINGS AND SIDING. APPLY NEW PAINT TO MATCH EXISTING. |
| 7.02 | NEW ROOF AND SHINGLES. SHOWN SHADED |
| 7.03 | INSTALL NEW GUTTER, TYPICAL |
| 7.04 | INSTALL NEW DOWNSPOUT. TERMINATE TO DRAIN AWAY FROM FOUNDATION OR PIPED TO DAYLIGHT, TYPICAL |
| 7.08 | REPAIR AND REPLACE EXISTING SIDING AS REQUIRED. |
| 7.09 | INSTALL NEW SIDING TO MATCH EXISTING WITH PROPER SPACING, FLASHING, AND FINISH |
| 7.11 | INSTALL INFILL FRAMING AT REMOVED OPENING WITH EXTERIOR SIDING FINISH TO MATCH EXISTING. |
| 9.10 | APPLY PAINT AT ENTIRE EXTERIOR WOOD SIDING FINISH TO MATCH EXISTING |

EAST EMPIRE RESIDENCE

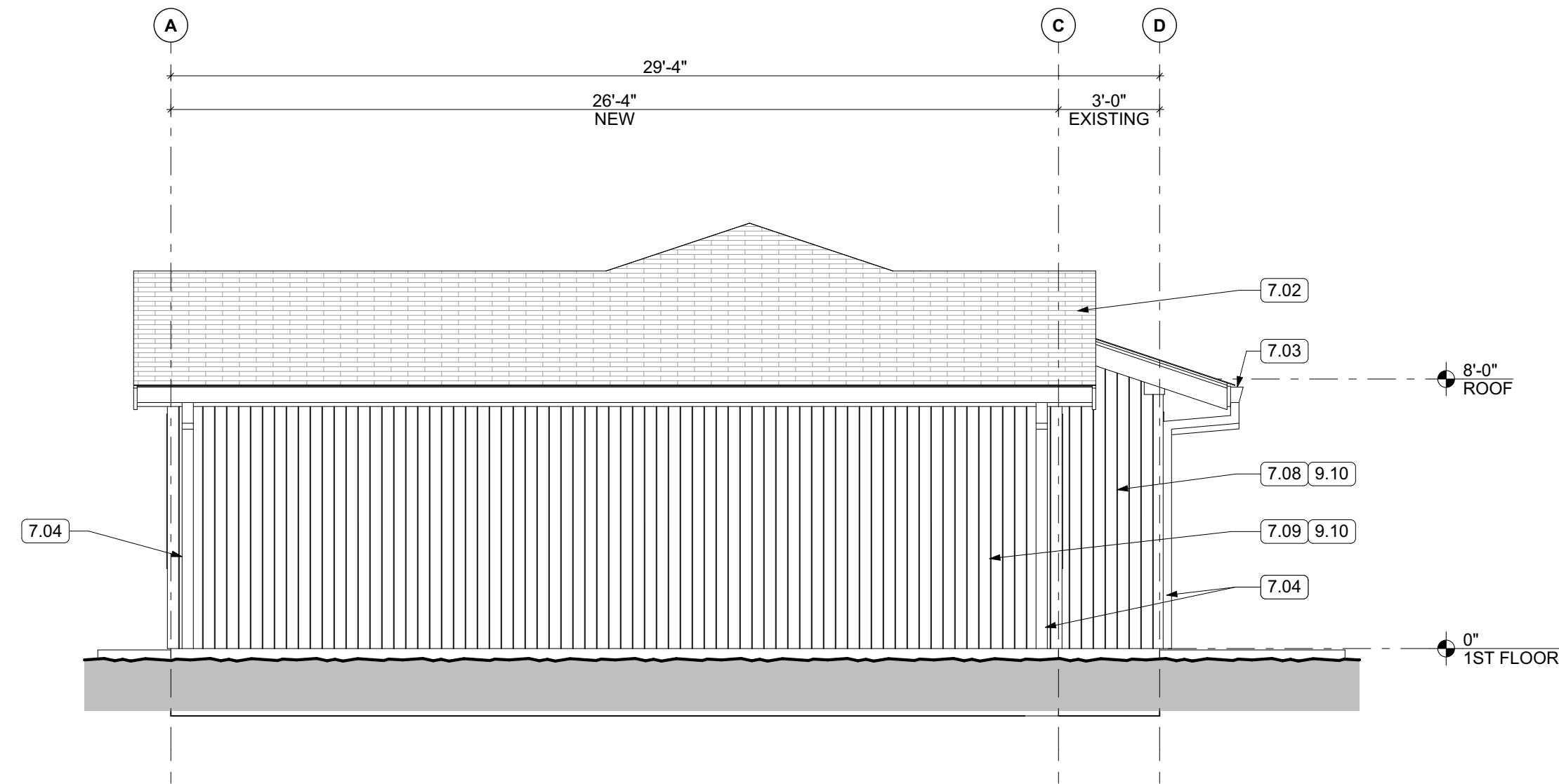
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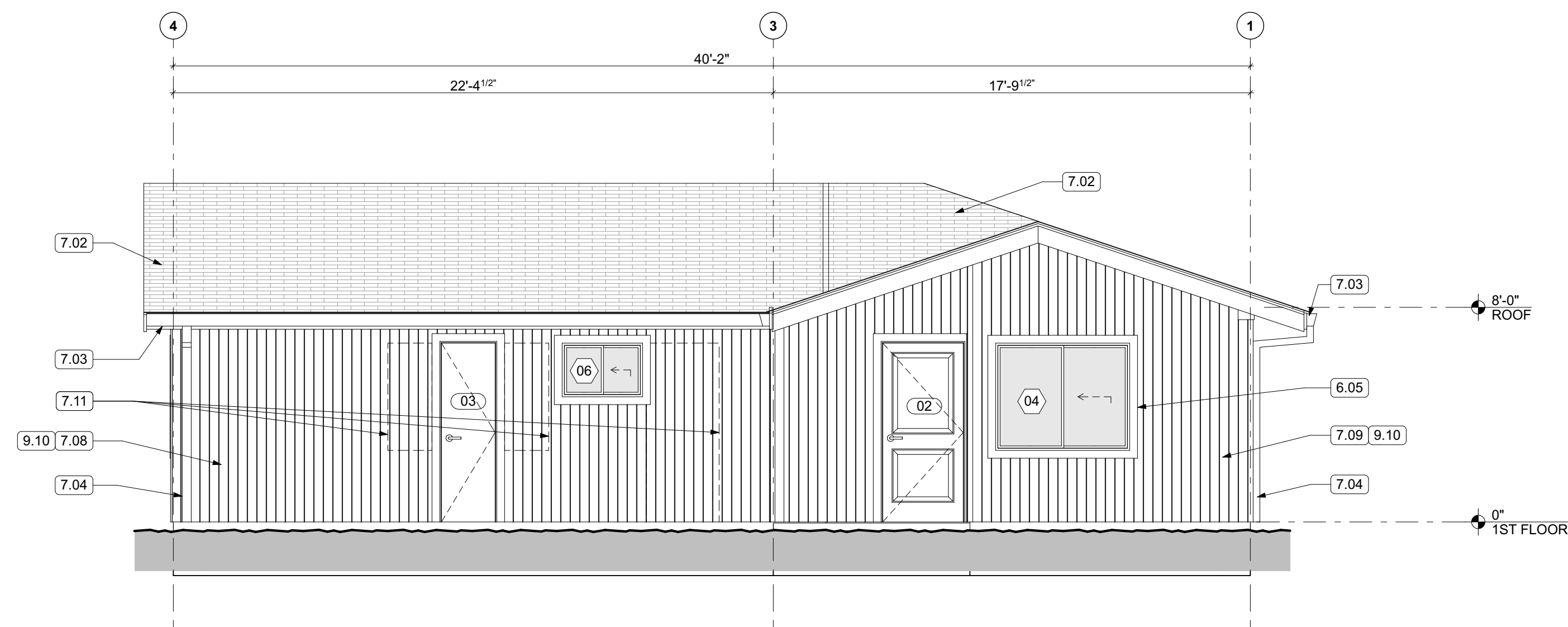
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BUILDING ELEVATIONS

A2.0



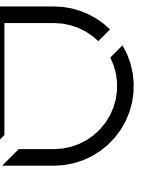
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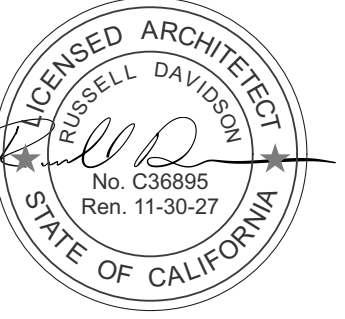
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GENERAL NOTES

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RUSSELL DAVIDSON
ARCHITECTURE + DESIGN



KEYNOTES

- | | |
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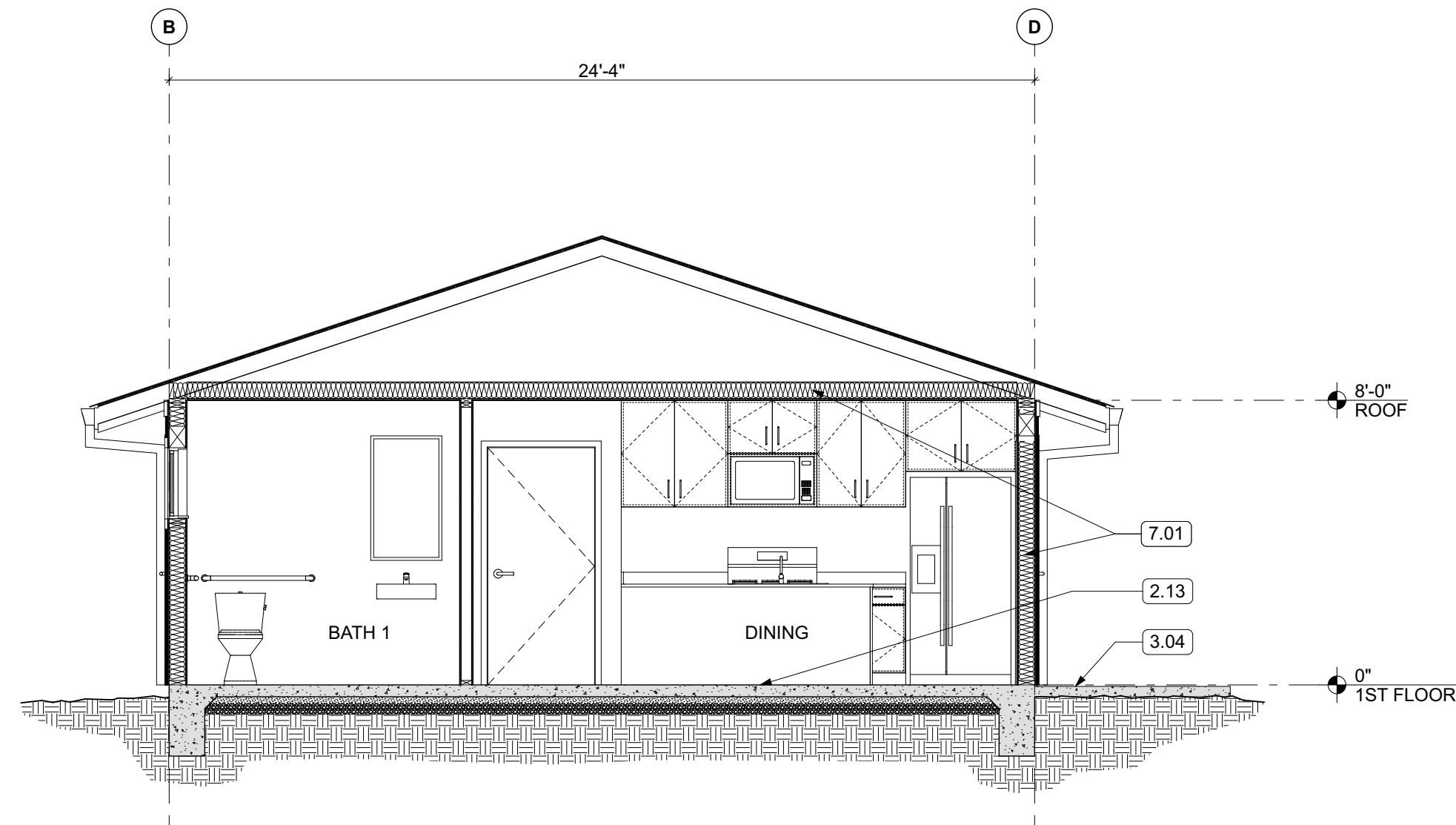
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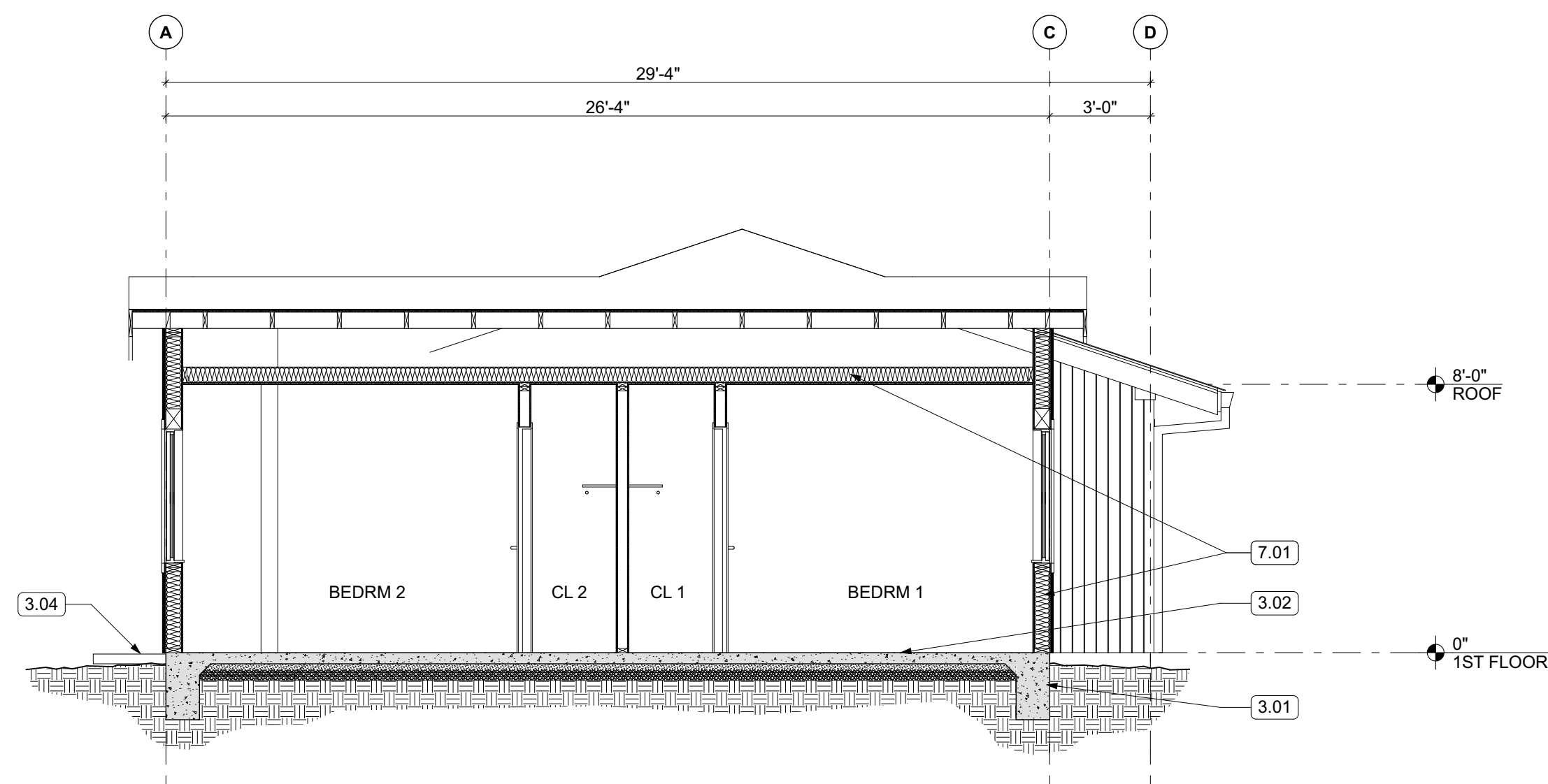
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BUILDING ELEVATIONS

A2.1



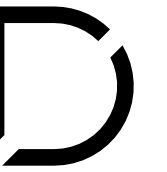
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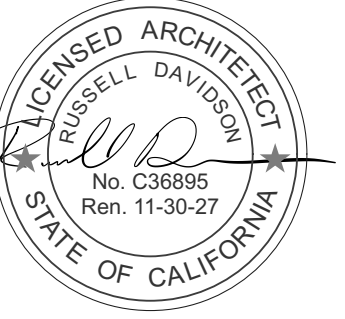
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SCALE: 1/4" = 1'-0"

GENERAL NOTES

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2. INSTALL ALL FINISHES PER MANUFACTURER SPECIFICATIONS



RUSSELL DAVIDSON
ARCHITECTURE + DESIGN



KEYNOTES

- | | |
|------|---|
| 2.13 | EXISTING CONCRETE SLAB TO REMAIN |
| 3.01 | CONSTRUCT REINFORCED CONCRETE FOOTINGS PER
STRUCTURAL DRAWINGS |
| 3.02 | INSTALL CONCRETE SLAB WITH VAPOR BARRIER AND
REINFORCEMENT AS SPECIFIED |
| 3.04 | INSTALL EXTERIOR CONCRETE FLATWORK WITH
SPECIFIED FINISH AND JOINT PATTERN |
| 7.01 | INSTALL HIGH-R-VALUE INSULATION IN WALLS, FLOORS,
AND CEILINGS |

EAST EMPIRE RESIDENCE

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JOB:	2025.33

BUILDING SECTIONS

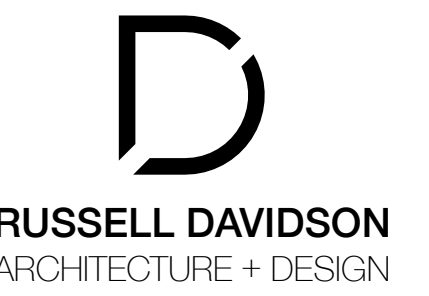
A3.0



1. REFER TO SHEET G3.1 FOR ACCESSIBLE REQUIREMENTS.

KEYNOTES

- 3.09 PROVIDE RECESSED CONCRETE SLAB FOR PREFABRICATED ROLL-IN ACCESSIBLE SHOWER
- 6.08 INSTALL HAMPTON BAY OR APPROVED EQUAL CABINETS AND BUILT-INS PER DRAWINGS. PROVIDE HARDWARE PULLS ON ALL DOORS AND DRAWERS
- 10.09 INSTALL ENGINEERED QUARTZ COUNTERTOP AND BACKSPLASH WITH PROPER JOINTS, EDGES AND SEAMS
- 10.05 INSTALL BATHROOM MIRRORS AND MEDICINE CABINETS WITH PROPER ANCHORING
- 10.08 INSTALL ADA ACCESSIBLE UNISEX RESTROOM SIGNAGE PER DETAIL 13/G3.1
- 22.08 INSTALL INSULATION WRAP OR SHROUD AT HOT WATER SUPPLY AND DRAIN PIPE AT ACCESSIBLE LAVATORY.



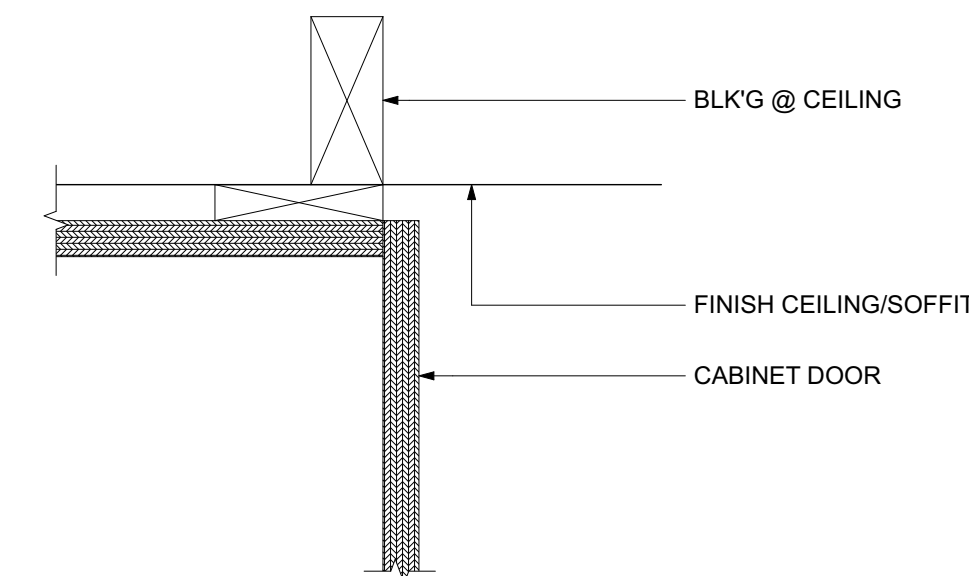
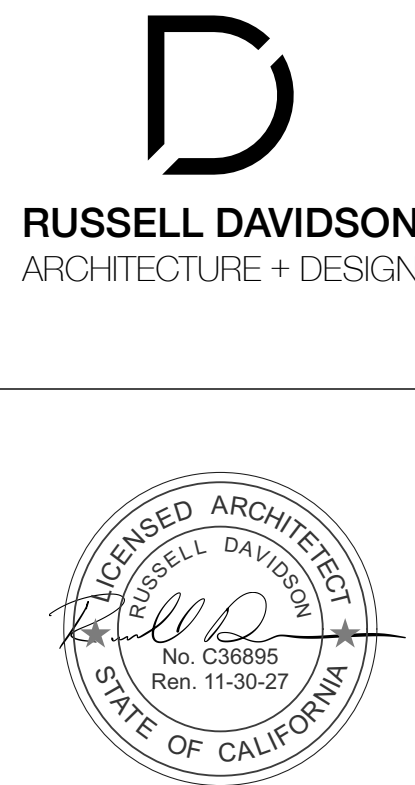
EAST EMPIRE RESIDENCE

135 EAST EMPIRE STREET
GRASS VALLEY, CA 95945
APN: 029-250-015-000

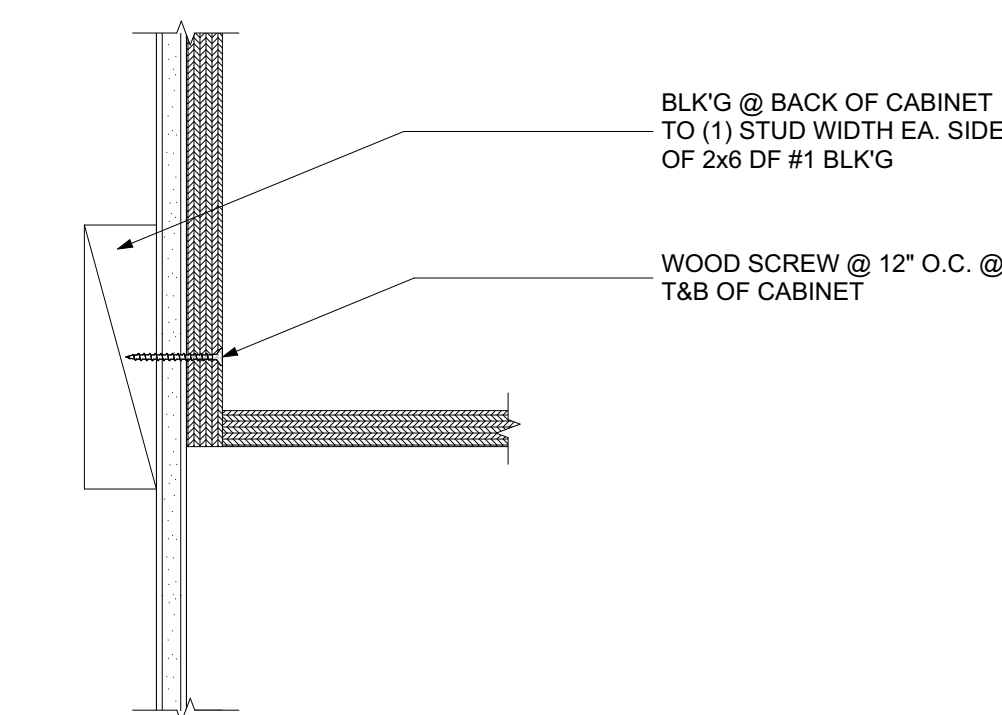
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SUBMITTED:		7/20/2026
SCALE		AS NOTED
DRAWN BY:		GTB
CHECKED BY:		RPD
JOB:		2025.33

ENLARGED PLAN
& INTERIOR
ELEVATIONS

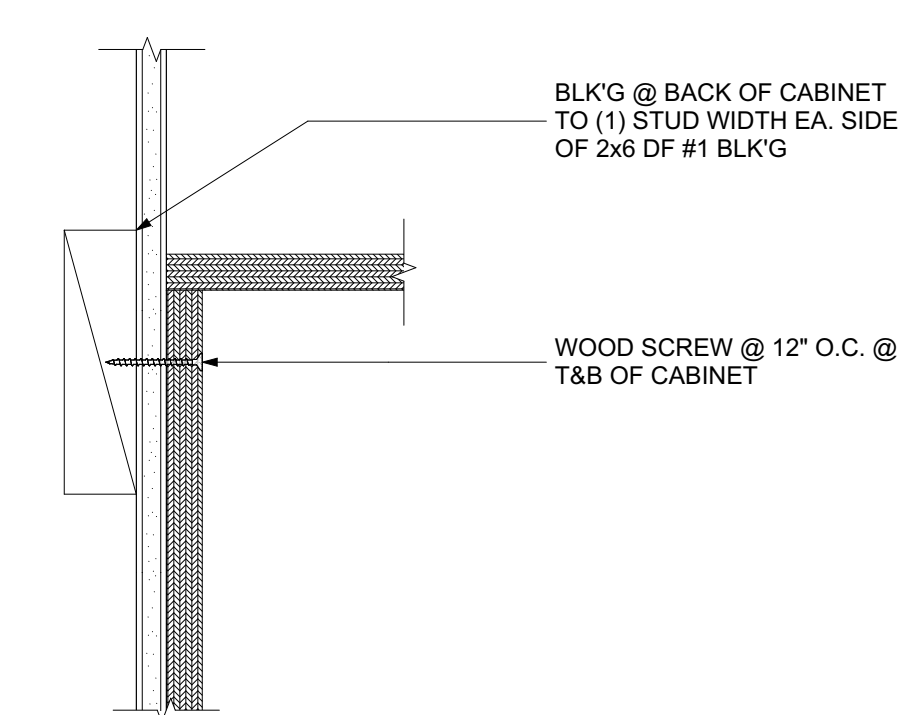
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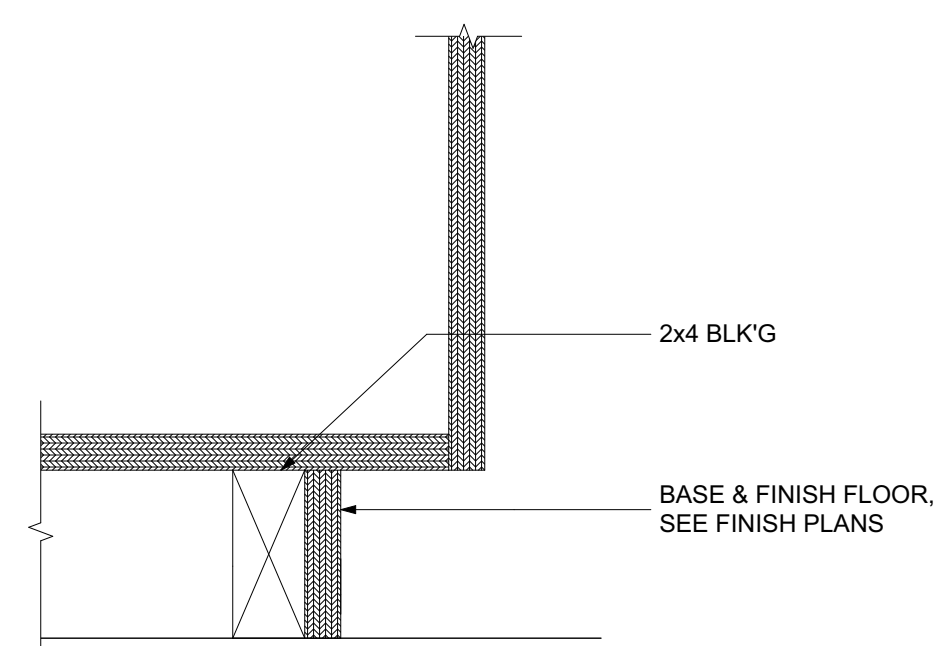
16 UPPER CABINET CEILING ATTACHMENT
SCALE: 3" = 1'-0"



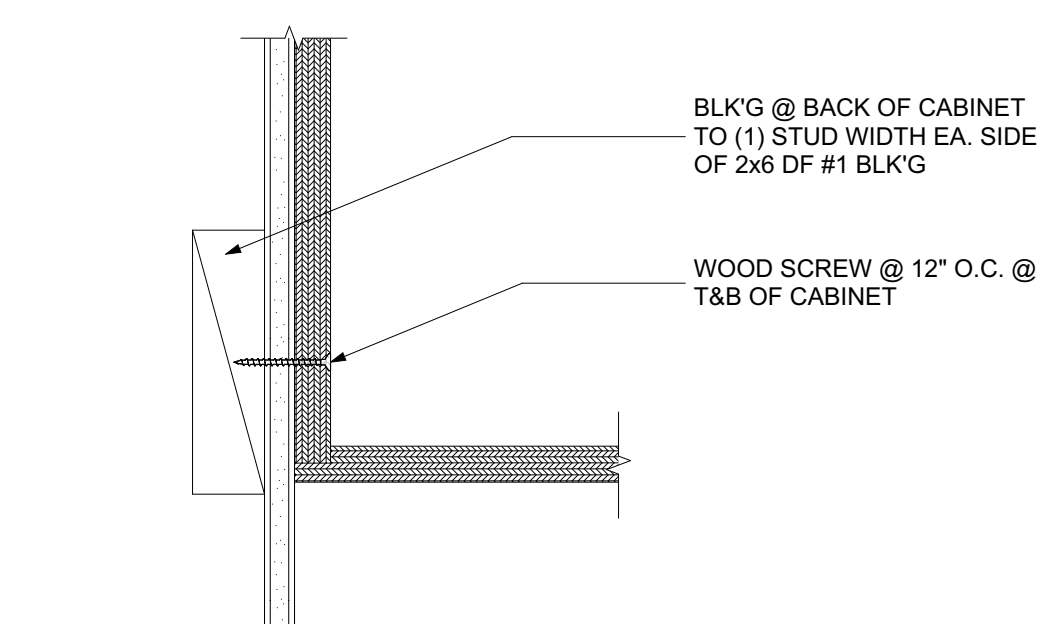
17 UPPER CABINET WALL ATTACHMENT
SCALE: 3" = 1'-0"



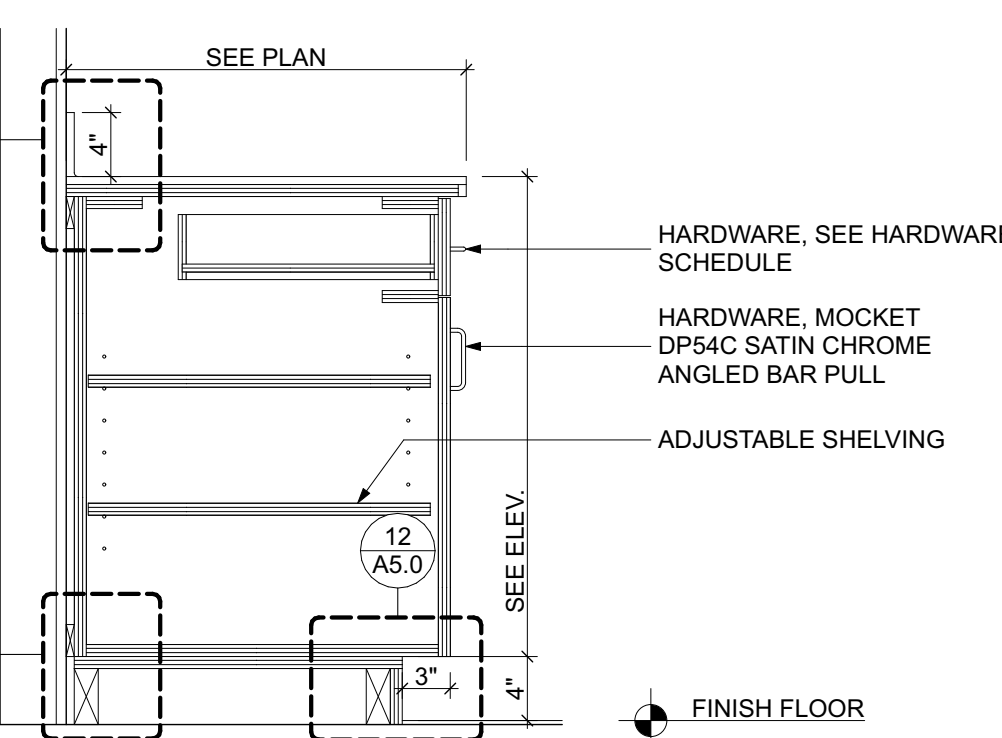
18 UPPER CABINET WALL ATTACHMENT
SCALE: 3" = 1'-0"



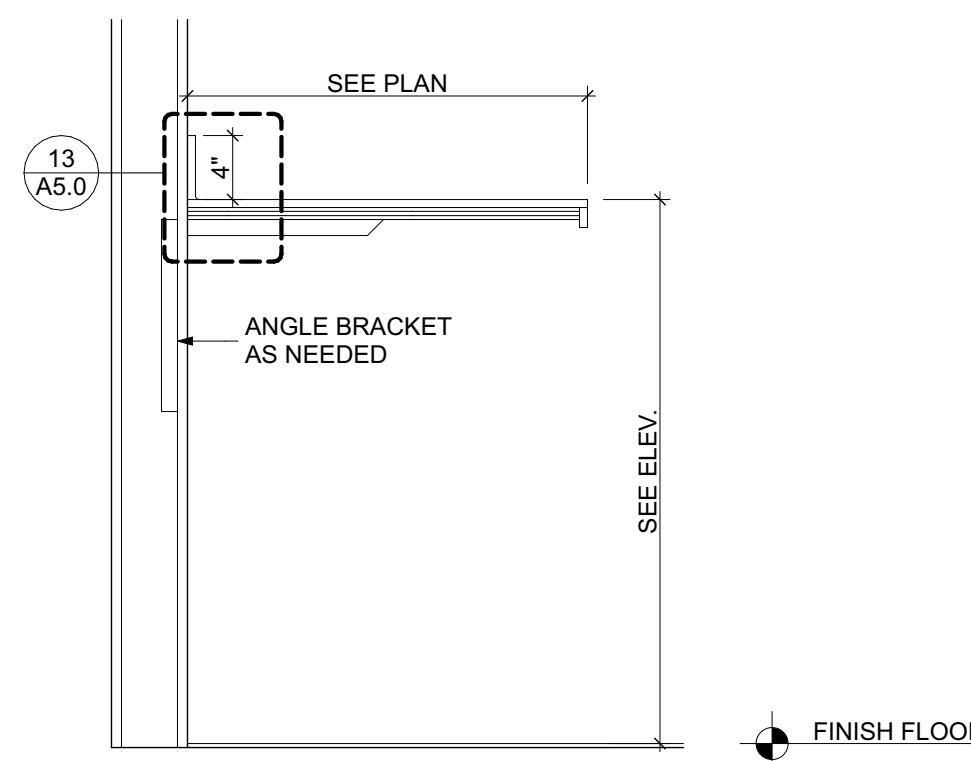
12 LOWER CABINET TOE KICK
SCALE: 3" = 1'-0"



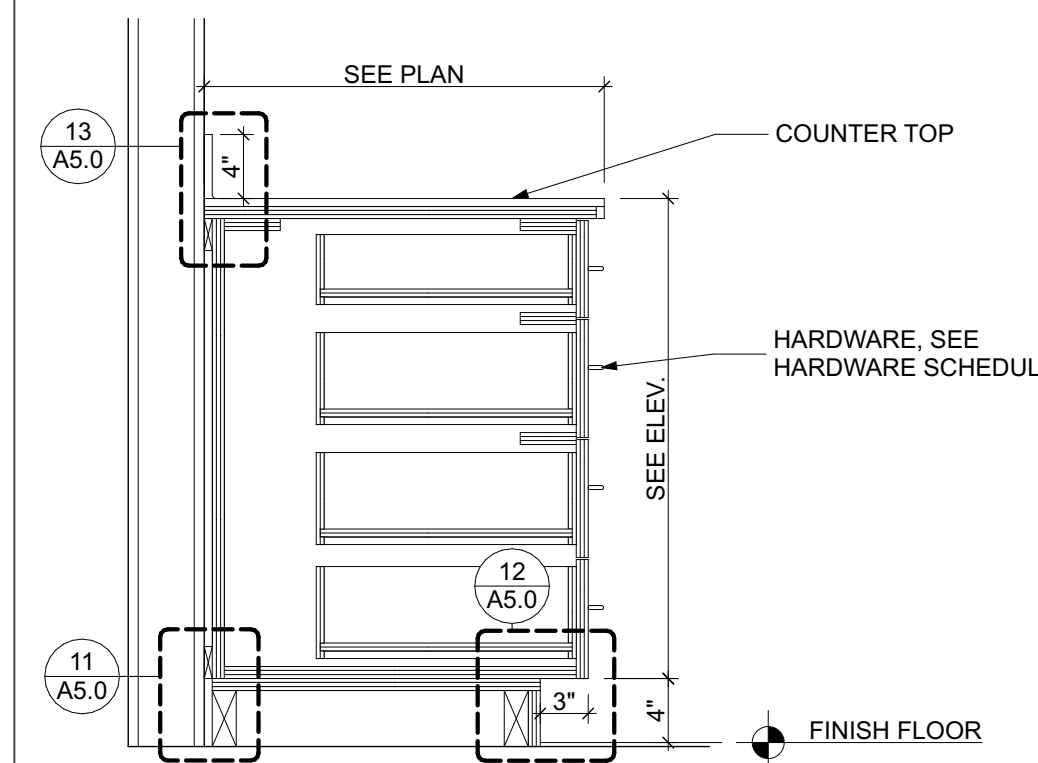
11 LOWER CABINET WALL ATTACHMENT
SCALE: 3" = 1'-0"



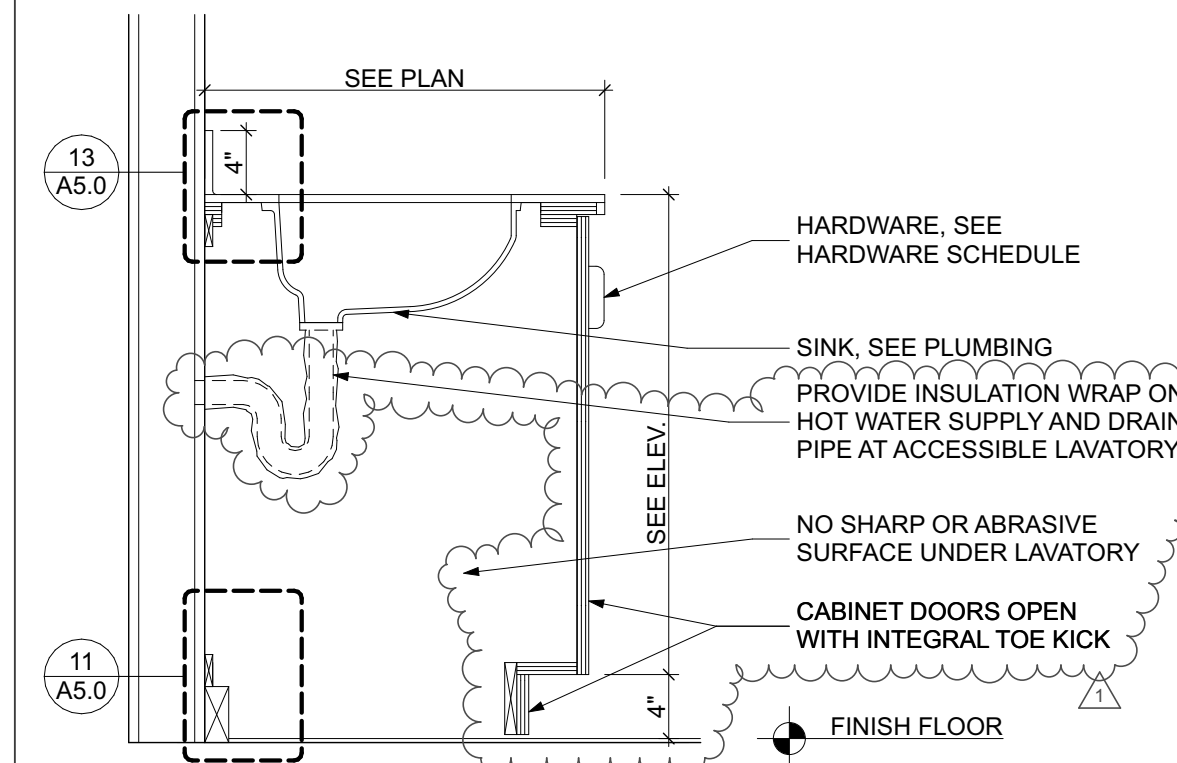
7 LOWER CABINET W/ DRAWER & DOOR
SCALE: 1" = 1'-0"



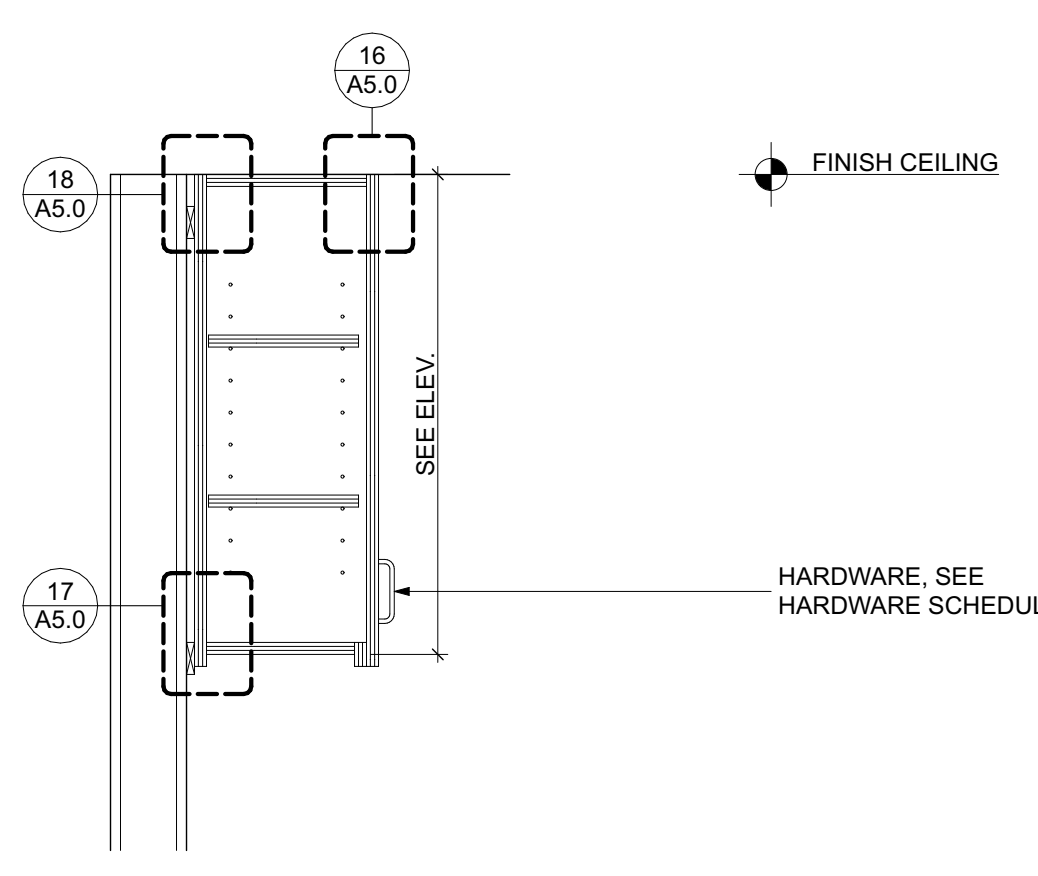
6 COUNTER, OPEN BELOW
SCALE: 1" = 1'-0"



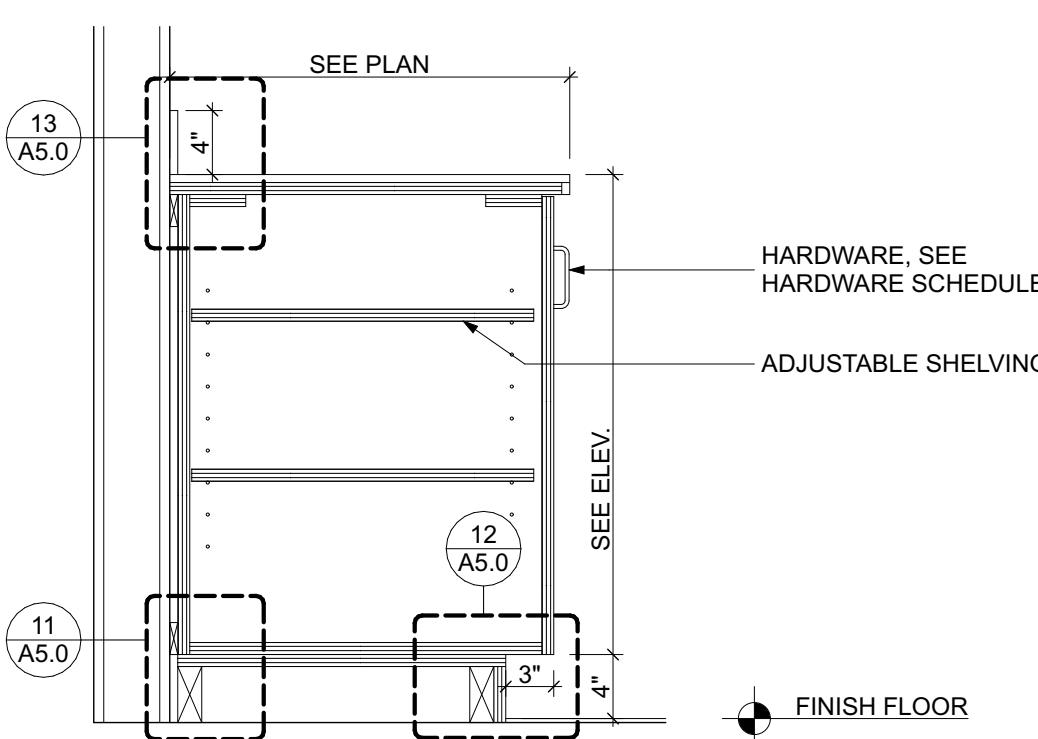
2 LOWER CABINET W/ FOUR DRAWERS
SCALE: 1" = 1'-0"



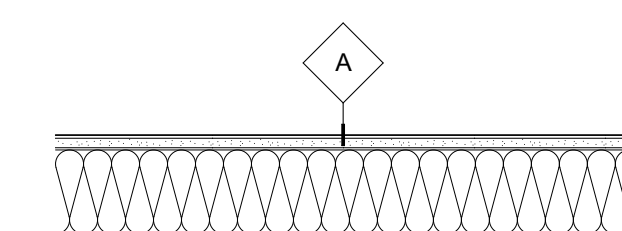
1 LOWER CABINET W/ SINK
SCALE: 1" = 1'-0"



8 UPPER CABINET W/ DOOR
SCALE: 1" = 1'-0"



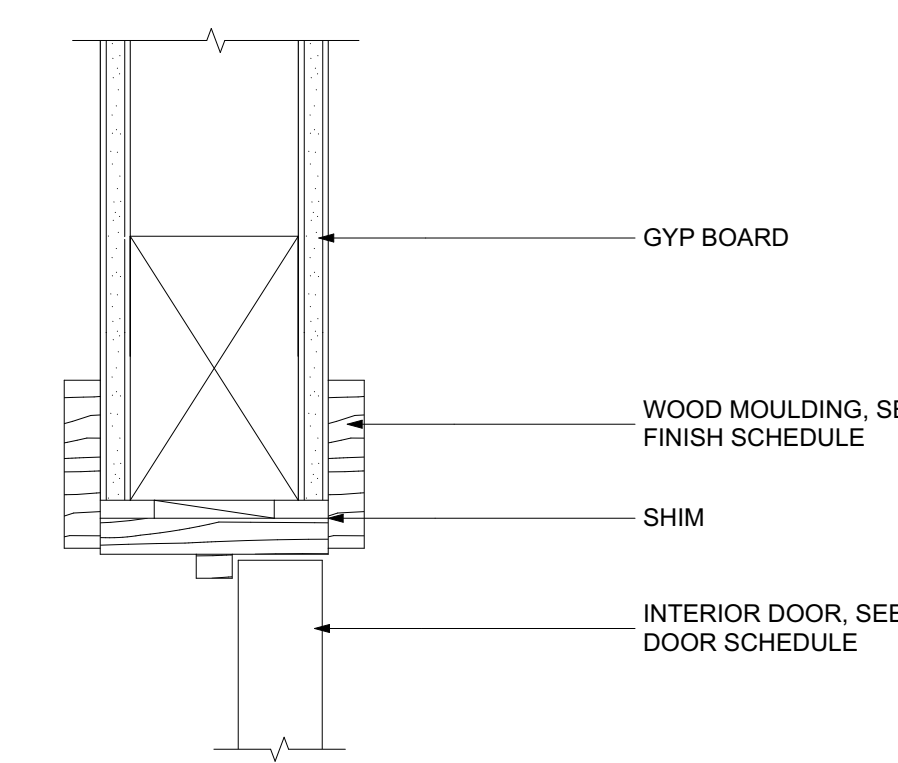
3 LOWER CABINET W/ DOOR
SCALE: 1" = 1'-0"



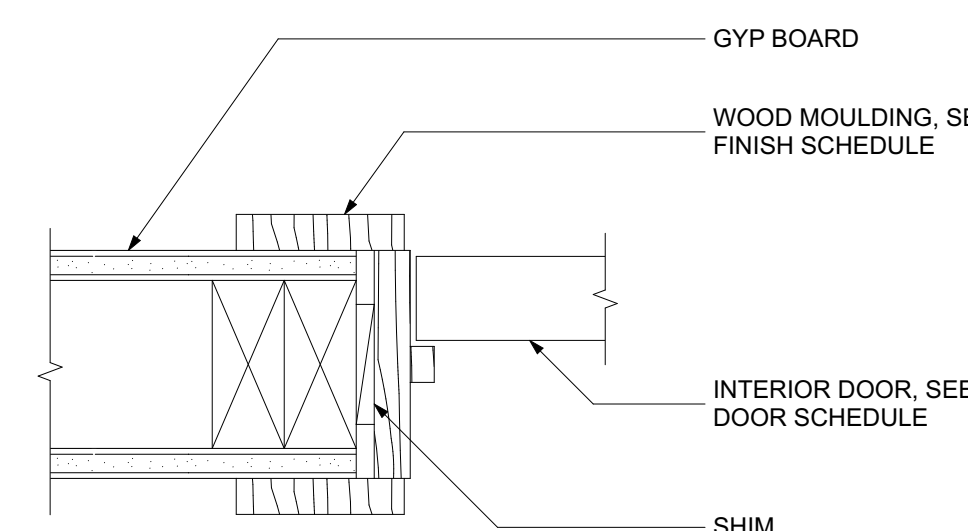
- STUDS @ 16" O.C.
- 5/8" GYPSUM BOARD ON EA. SIDE
- SOUND BATT INSULATION

TYPE	STUD WIDTH	ASSEMBLY WIDTH
A4	3 1/2"	4 3/4"
A6	5 1/2"	6 3/4"
A8	7 1/4"	9"

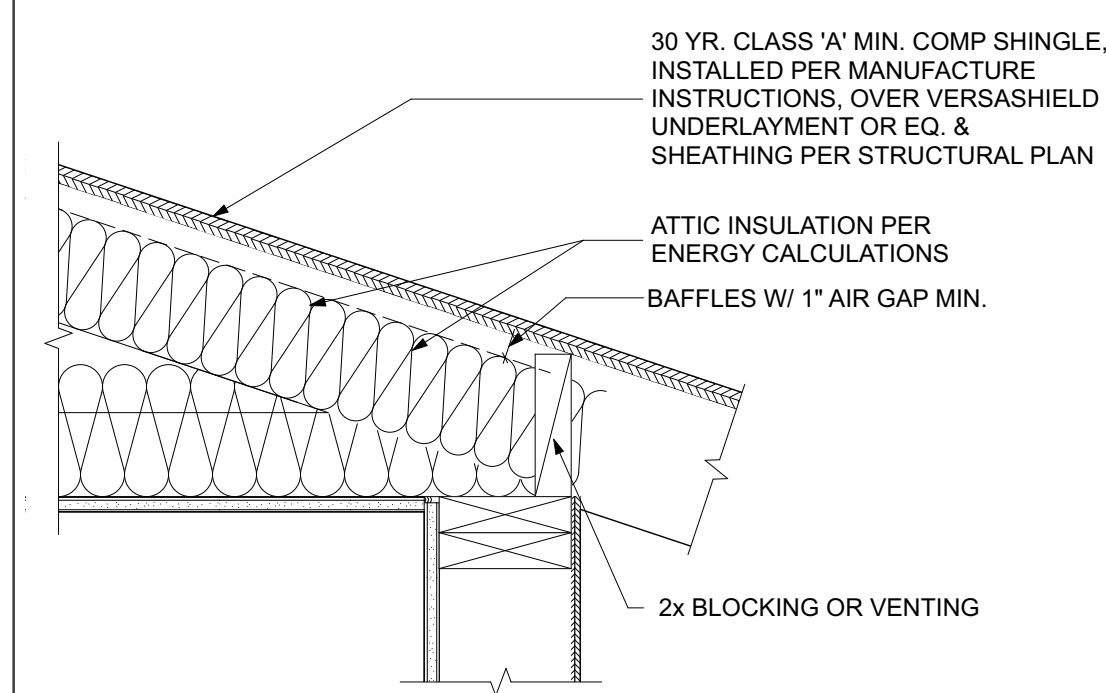
14 INTERIOR WALL TYPES



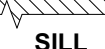
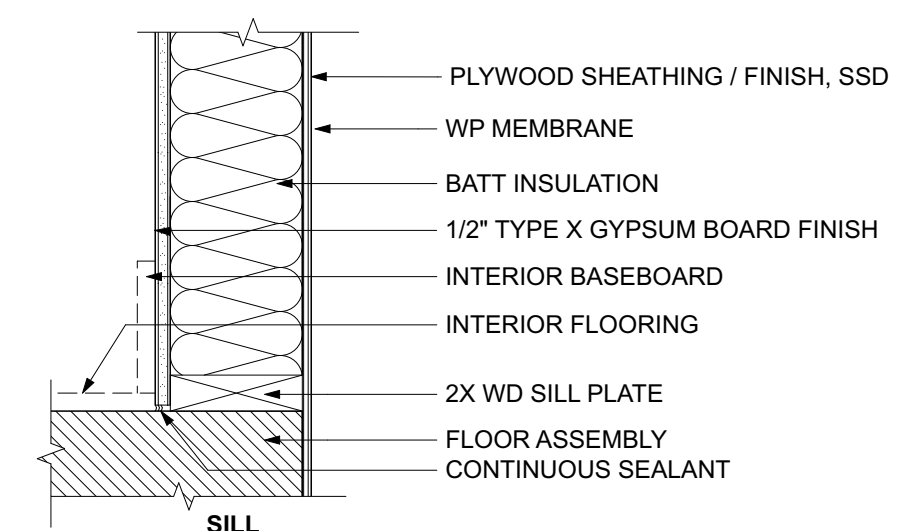
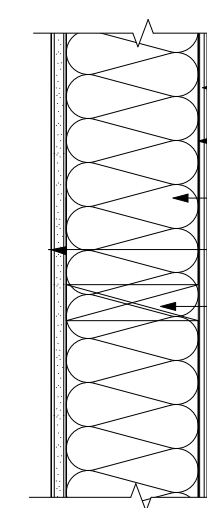
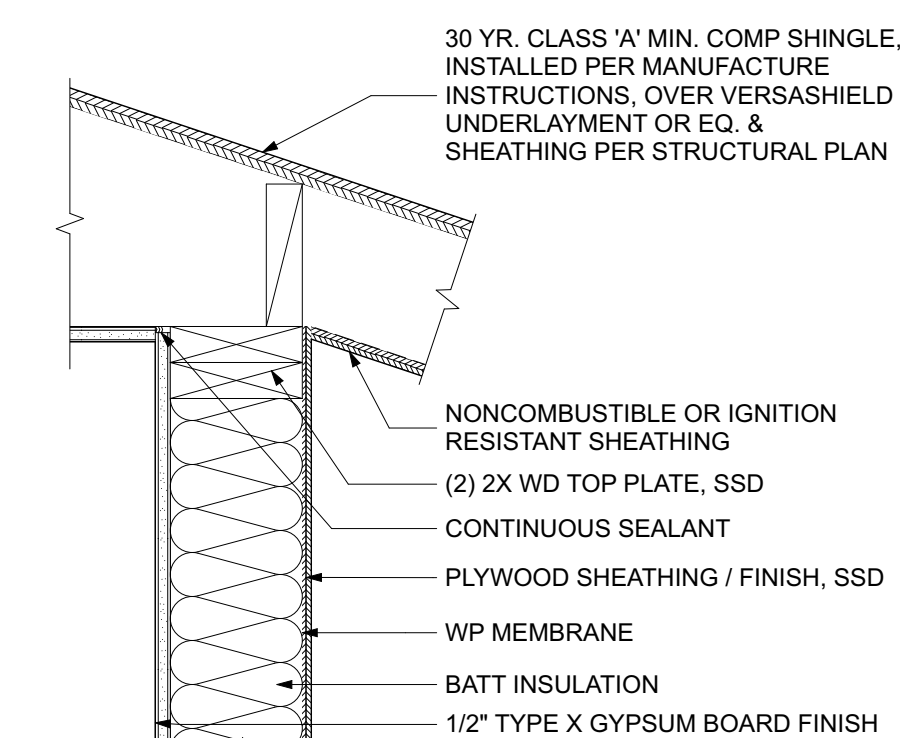
9 INTERIOR DOOR HEAD
SCALE: 3" = 1'-0"



4 INTERIOR DOOR JAMB
SCALE: 3" = 1'-0"



15 EXTERIOR WALL CONSTRUCTION
SCALE: 1 1/2" = 1'-0"



5 EXTERIOR WALL CONSTRUCTION
SCALE: 1 1/2" = 1'-0"

EAST EMPIRE RESIDENCE

135 EAST EMPIRE STREET
GRASS VALLEY, CA 95945
APR- 020 250 015 000

ID	NAME	DATE
1	REV 1	5/1/20

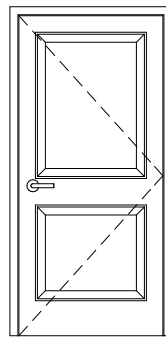
SUBMITTED:	7/20/2026
SCALE	AS NOTED
DRAWN BY:	GTB
CHECKED BY:	RPD
JOB:	2025.33

DETAILS

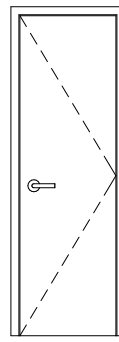
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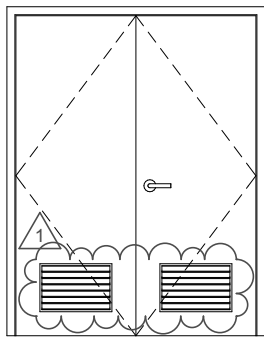
DOOR SCHEDULE														
DOOR #	ROOM NAME	TYPE	STATUS	W	H	MFG	FRAME		LEAF		FIRE RATING	HARDWARE SET	CLOSER	REMARKS
							MATERIAL	FINISH	MATERIAL	FINISH				
EXTERIOR														
01	DINING	A	New	3'-0"	6'-8"	TBD	WOOD	PAINTED	SCWD	PAINTED		PRIVACY, LEVER TYPE	N	ADA ACCESSIBLE THRESHOLD. SEE DEWTAIL 1/G3.0
02	HALL	A	New	3'-0"	6'-8"	TBD	WOOD	PAINTED	SCWD	PAINTED		PRIVACY, LEVER TYPE	N	ADA ACCESSIBLE THRESHOLD. SEE DEWTAIL 1/G3.0
03	MECH	B	New	2'-0"	6'-8"	TBD	WOOD	PAINTED	SCWD	PAINTED		PRIVACY, LEVER TYPE	N	
INTERIOR														
04	BEDRM 3 (ADA)	B	New	3'-0"	6'-8"	MASONITE OR EQUAL	WOOD	PAINTED	HCWD	PAINTED		PRIVACY, LEVER TYPE	N	
05	BEDRM 3 (ADA)	D	New	3'-6"	6'-8"	MASONITE OR EQUAL	WOOD	PAINTED	HCWD	PAINTED		PASSAGE, PULL TYPE	N	
06	BATH 1 (ADA)	B	New	3'-0"	6'-8"	MASONITE OR EQUAL	WOOD	PAINTED	HCWD	PAINTED		PRIVACY, LEVER TYPE	N	
07	HALL	C	New	5'-0"	6'-8"	MASONITE OR EQUAL	WOOD	PAINTED	HCWD	PAINTED		PASSAGE, LEVER TYPE	N	PROVIDE MIN 100 SQ IN OF NET FREE OPENING LOUVERS
08	BATH 2	B	New	2'-6"	6'-8"	MASONITE OR EQUAL	WOOD	PAINTED	HCWD	PAINTED		PRIVACY, LEVER TYPE	N	
09	BEDRM 2 (ADA)	B	New	3'-0"	6'-8"	MASONITE OR EQUAL	WOOD	PAINTED	HCWD	PAINTED		PRIVACY, LEVER TYPE	N	
10	BEDRM 1 (ADA)	B	New	3'-0"	6'-8"	MASONITE OR EQUAL	WOOD	PAINTED	HCWD	PAINTED		PRIVACY, LEVER TYPE	N	
11	BEDRM 1 (ADA)	D	New	4'-0"	6'-8"	MASONITE OR EQUAL	WOOD	PAINTED	HCWD	PAINTED		PASSAGE, PULL TYPE	N	
12	BEDRM 2 (ADA)	D	New	4'-0"	6'-8"	MASONITE OR EQUAL	WOOD	PAINTED	HCWD	PAINTED		PASSAGE, PULL TYPE	N	



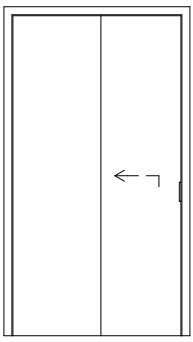
A
HINGED, SGL
01, 02



B
HINGED, SGL
03, 04, 06, 08, 09, 10



C
HINGED, DBL
07

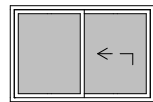


D
SLIDER, DBL
05, 11, 12

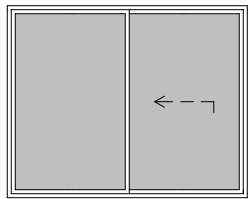
2 DOOR TYPES

SCALE: 1" = 1'-0"

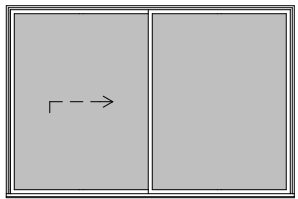
WINDOW SCHEDULE													
ID	LOCATION	TYPE	STATUS	W	H	MFG	TEMPERING	GLAZING	U-VALUE	U/SHGC	FRAME		REMARKS
											MATERIAL	FINISH	
01	KITCHEN	B	New	5'-0"	4'-0"	ANDERSEN 100 OR EQUAL	TEMPERED (SGL)	SMARTSUN	0.29	0.21	COMP.	WHITE	
02	LIVING	C	New	6'-0"	4'-0"	ANDERSEN 100 OR EQUAL	TEMPERED (SGL)	SMARTSUN	0.29	0.21	COMP.	WHITE	
03	BEDRM 1 (ADA)	B	New	5'-0"	4'-0"	ANDERSEN 100 OR EQUAL	TEMPERED (SGL)	SMARTSUN	0.29	0.21	COMP.	WHITE	
04	BEDRM 2 (ADA)	B	New	5'-0"	4'-0"	ANDERSEN 100 OR EQUAL	TEMPERED (SGL)	SMARTSUN	0.29	0.21	COMP.	WHITE	
06	BATH 1 (ADA)	A	New	3'-0"	2'-0"	ANDERSEN 100 OR EQUAL	TEMPERED (SGL)	SMARTSUN	0.29	0.21	COMP.	WHITE	
07	BEDRM 3 (ADA)	B	New	5'-0"	4'-0"	ANDERSEN 100 OR EQUAL	TEMPERED (SGL)	SMARTSUN	0.29	0.21	COMP.	WHITE	



A
SLIDER
06



B
SLIDER
07, 03, 04, 01



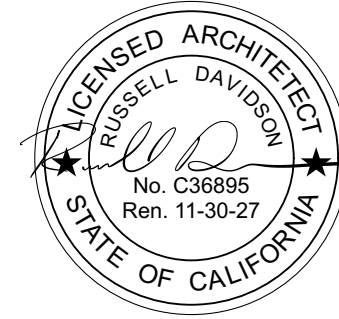
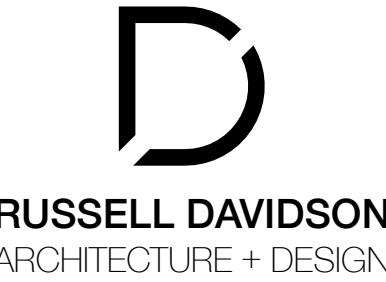
C
SLIDER
02

1 WINDOW TYPES

SCALE: 1" = 1'-0"

DOOR NOTES

- ALL GLASS IN DOORS SHALL BE TEMPERED. TEMPERED GLASS SHALL BE PERMANENTLY IDENTIFIED AND VISIBLE WHEN THE UNIT IS GLAZED.
- ALL GLAZING WILL BE INSTALLED WITH A CERTIFYING LABEL ATTACHED, SHOWING THE "U" VALUE.
- REFER TO FLOOR PLANS FOR DIRECTION OF DOOR SWING.
- DOORS SHALL MEET THE MINIMUM INFILTRATION REQUIREMENTS PER SECTION 116 E.E.S.
- VENTILATION SHALL COMPLY WITH C.B.C. 1203.4 AND R303.
- ALL EXTERIOR WINDOW AND EXTERIOR DOOR ASSEMBLIES TO HAVE AN STC RATING OF 36 OR GREATER.
- DOORS MAY OPEN TO THE EXTERIOR ONLY IF THE FLOOR OR LANDING IS NOT MORE THAN 11/2 INCH LOWER THAN THE DOOR THRESHOLD. SECTION R311.3.1 CRC
- GLAZED OPENINGS WITHIN EXTERIOR DOORS SHALL BE INSULATNG-GLASS UNITS WITH A MINIMUM OF ONE TEMPERED PANE.



EAST EMPIRE RESIDENCE

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GRASS VALLEY, CA 95945
APN: 029-250-015-000

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1	REV 1	5/1/26
SUBMITTED:		7/20/2026
SCALE		AS NOTED
DRAWN BY:		GTB
CHECKED BY:		RPD
JOB:		2025.33

DOOR & WINDOW SCHEDULES

A6.0

Nevada County Homekey+ Empire Residence ADU

135 East Empire Street
Grass Valley, CA 95945



1504 Eureka Road #370
Roseville, CA 95661
(916) 790-3181

WWW.ASHLEYVANCE.COM

CIVIL • STRUCTURAL

ENGINEER OF RECORD:

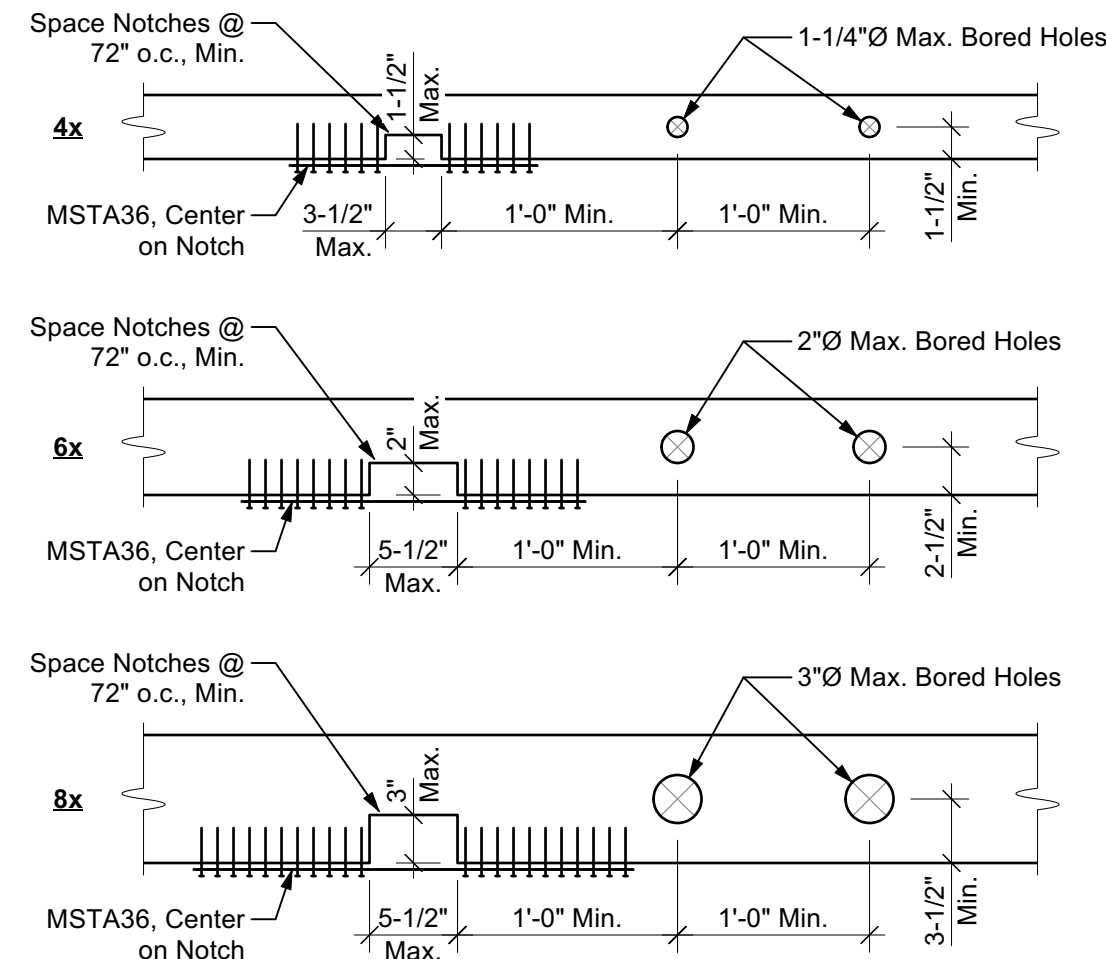


Nevada County Homekey +
Empire Residence ADU
135 East Empire Street
Grass Valley, CA 95945

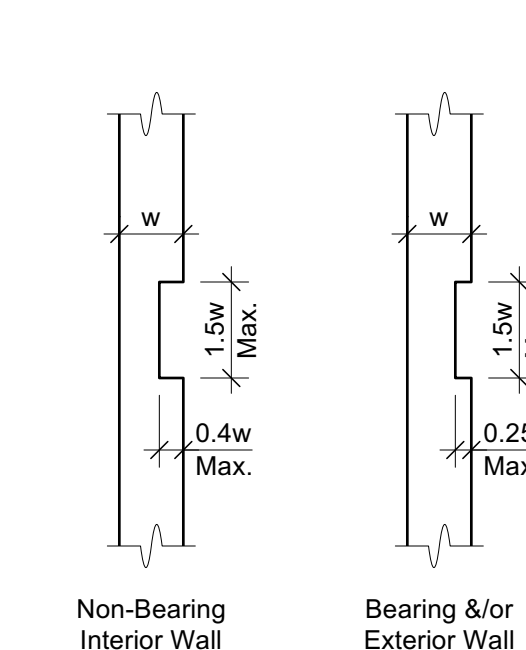
STANDARD DETAILS

9 TYPICAL NOTCHING & BORING

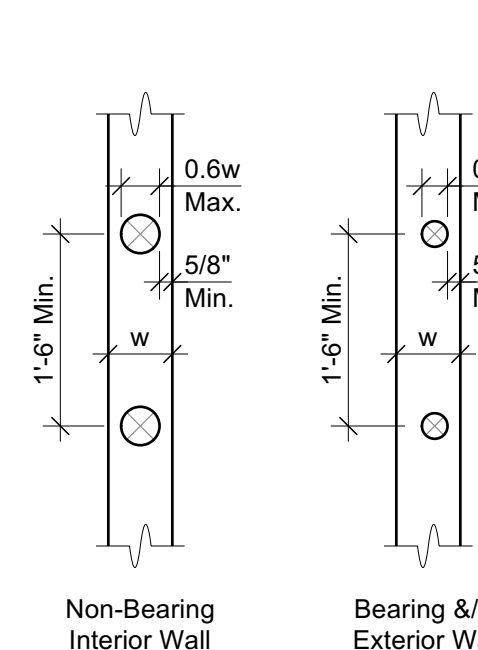
PENETRATIONS IN TOP PLATES & SILL PLATES



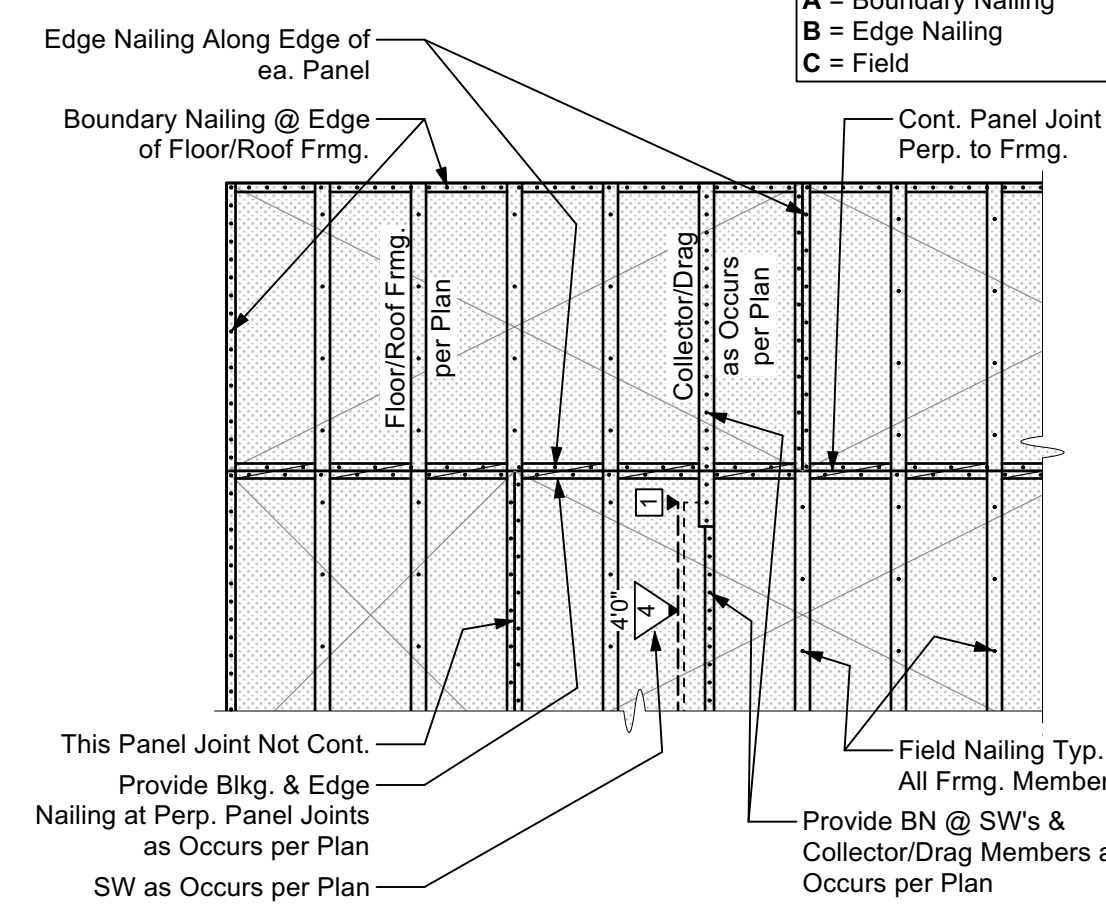
NOTCHING LIMITS FOR WOOD STUDS



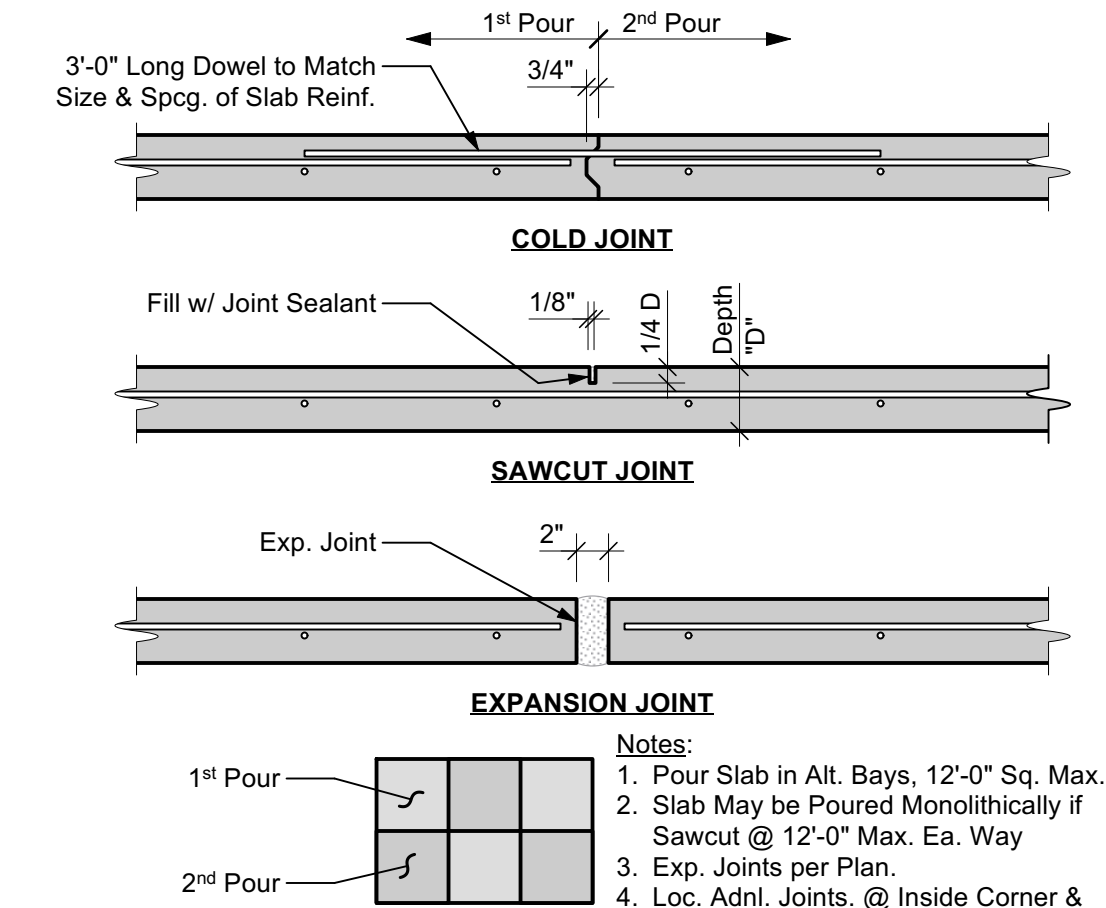
BORING LIMITS FOR WOOD STUDS



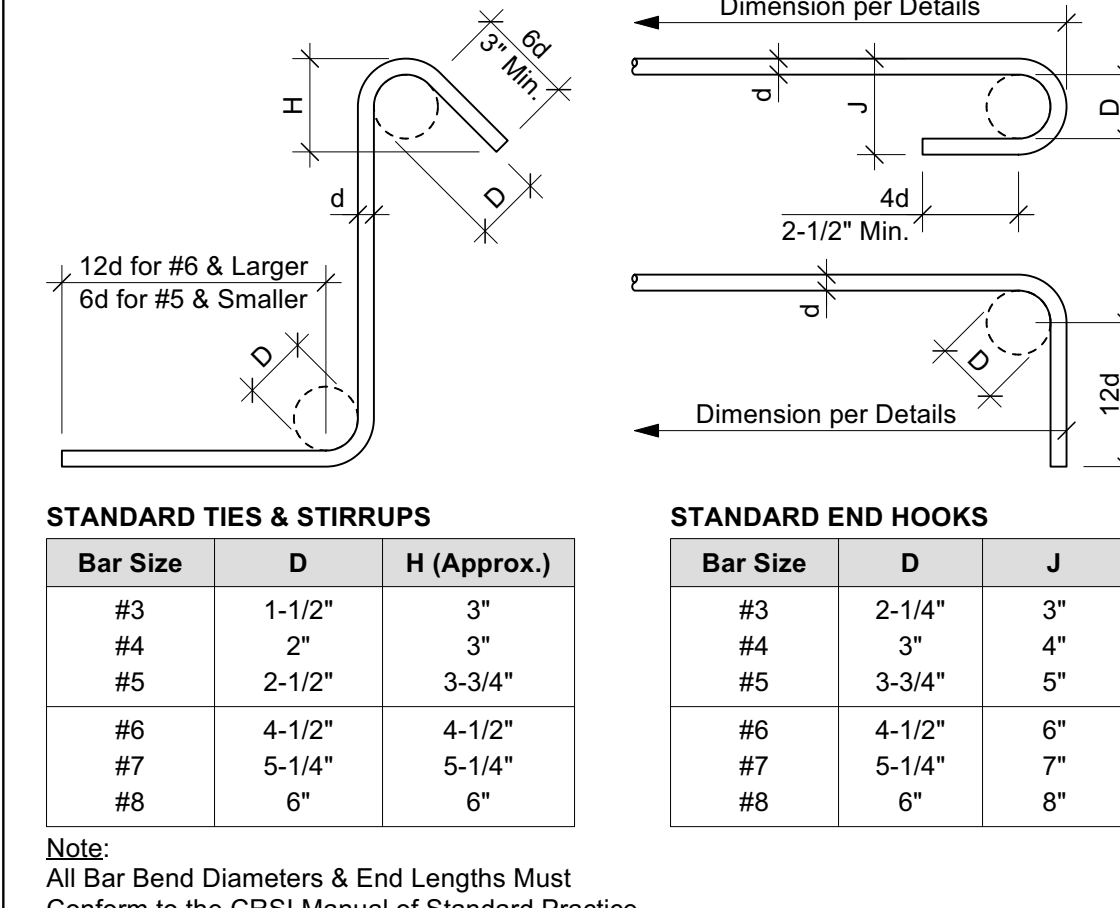
6 TYPICAL FLOOR / ROOF NAILING



4 TYPICAL CONCRETE SLAB JOINTS



1 TYPICAL REINFORCING BAR BENDS



ABBREVIATIONS

AB	Anchor Bolt	MB	Maximum Machine Bolt
A&B	Above and Below	MF	Moment Frame
Adv.	Additional	Mfr.	Manufacture(r)
Adj.	Adjacent	Min.	Minimum
Alt.	Alternate(s), (ive)	Mod.	Modular, Module
Appd.	Approved	(N)	New
Arch.	Architect(ural)	N/A	Not Applicable
Avg.	Average	NTS	Not to Scale
AYC	Alaskan Yellow Cedar	oc	On Center
Bldg.	Building	OD	Outside Diameter
Bkg.	Blocking	Opng.	Opening
Bw.	Below	Opp.	Opposite
Bm.	Beam	Opt.	Option, (al)
BN	Boundary Nailing	Para.	Parallel
Bot.	Bottom	Pen.	Penetrate(e), (ion)
Brg.	Bearing	Perf.	Perforated
Btwn.	Between	Perim.	Perimeter
Cant.	Cantilever(ed)	Perp.	Perpendicular
CIP	Cast in Place	PI	Plywood Index
CJ	Ceiling Joist	PJP	Partial Joint Pen.
CJP	Complete Joint Penetration	PL	Plate
CL	Center Line	Ply.	Plywood
Clg.	Ceiling	Prep.	Prepare, (ation)
Clr.	Clear	Press.	Pressure
CMU	Conc. Masonry Unit	Proj.	Project
Col.	Column	Prop.	Property
Conc.	Concrete	Psf.	Pounds per Sq. Ft.
Const.	Construction	PT	Pressure-Treated
Cont.	Continue(e), (ous)	PV	Photovoltaic (Solar Panels)
Cr.	Center	R	Radius
d	Penny	Rec'd.	Recommendation(s)
Dbl.	Double	Ref.	Reference
Defl.	Deflection	Reinf.	Reinforce(e), (ed), (ement), (ing)
Demo.	Demolish(sh), (tion)	Req'd.	Require(d)
Dep.	Depress(ed)	Reqs.	Requirements
DF	Douglas Fir	Ret.	Retain(ing)
Dia.	Diameter	RJ	Roof Joist
Diaph.	Diaphragm	RR	Roof Rafter
Dim.	Dimension	RV	Redwood
Dist.	Distance	Sched.	Schedule
DJ	Deck Joist	Shg.	Sheathing
Dwg.	Drawing	Sim.	Similar
(E)	Existing	SIP	Struct. Insulated Panel
Ea.	Each	SMS	Sheet Metal Screw
EF	Each Face	SOG	Slab on Grade
Elev.	Elevation	Spec.	Specify(ed), (cation)s
Embed	Embed(ded), (ment)	Spec.	Specify(ed), (cation)s
Engr.	Engineer	Sq.	Square
EOR	Engineer of Record	SS	Select Struct. Grade
Eq.	Equal, Equivalent	SS	Stainless Steel
ES	Each Side	Std.	Standard
EW	Each Way	Stl.	Steel
Exp.	Expansion	Struc.	Structure(e), (al)
Ext.	Exterior	SW	Shear Wall
Fdn.	Foundation	T&B	Top and Bottom
FF	Finished Floor	T&G	Tongue and Groove
FJ	Floor Joist	Temp.	Temporary
Flr.	Floor	Thk.	Thick(ness)
Frmg.	Framing	TN	Toe-Nail
Fl.	Feet	TP	Top Plate
Fig.	Footing	TOT	Top of Beam
Gal.	Gauge	TOC	Top of Concrete
Galv.	Galvanized	TOG	Top of Grade
GB	Grade Beam	TOS	Top of Steel
GC	General Contractor	TOW	Top of Wall
GLB	Glulam Beam	Trmr.	Trimmer Stud
Gyp.	Gypsum	Typ.	Typical
HD	Holdown	UNO	Unless Noted Otherwise
Hdr.	Header	Vert.	Vertical
Hdw.	Hardware	VIF	Verify in Field
Hgr.	Hanger	w/	With
Horiz.	Horizontal	w/in	Within
Ht.	Height	w/o	Without
ID	Inside Diameter	Wt.	Weight
In.	Inches	WWF	Welded Wire Fabric
Insp.	Inspect(ion)	WWW	Welded Wire Mesh
Int.	Interior		
Inv.	Invert, Inverted		
KS	King Stud	@	At
KP	King Post	&	And
Loc.	Location	°	Degrees
LW	Light Weight	Ø	Diameter
		>	Greater Than
		#	Number, Pound(s)
		%	Percent(age)
		±	Plus or Minus

PROJECT INFORMATION

ARCHITECT:
Russell Davidson Architecture + Design
143 Crown Point Court, Suite C
Grass Valley, CA 95945

DESIGN PARAMETERS

GENERAL PARAMETERS

Building Code 2025 CBC *
Roof Loads
Dead Loads** (DL) 15 psf
Live Loads (LL) 20 psf
Snow Loads (SL) Pg/Ps 92/78 psf

SOILS VALUES

Bearing Pressure 1500 psf

WIND DESIGN BASIS

Ultimate Wind Speed, V_{ULT} 95 mph
Risk Category II
Exposure C
Int. Press. Coefficient, GC_{pi} ±0.18

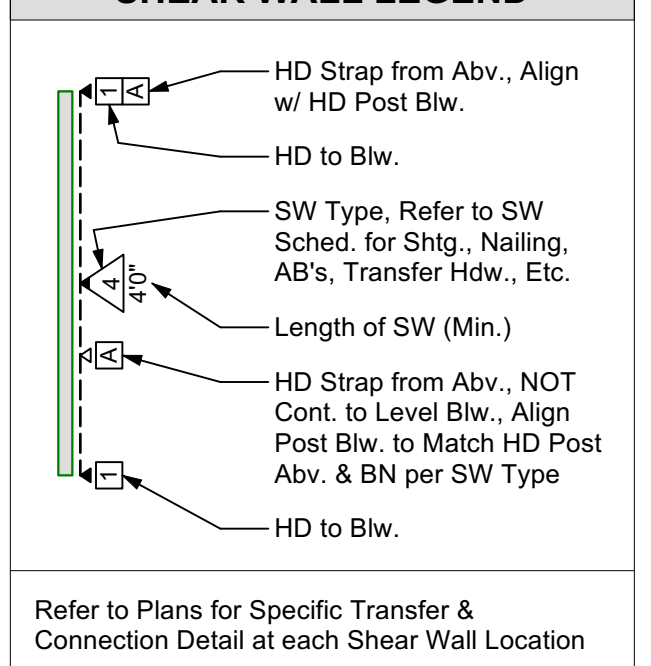
SEISMIC DESIGN BASIS

Seismic Design Category D
Site Class D
Seismic Factors
 S_S / S_1 0.770 / 0.240
 S_{DS} / S_{D1} 0.680 / 0.410
Risk Category II
Importance Factor, I_p 1.00
Resisting System: Wood Shear Walls
Response Mod. Coefficient, R 6.5
Design Base Shear $V = 0.105W$
Analysis Procedure: Eqv. Lateral Force (ASCE 7-22, 12.8)

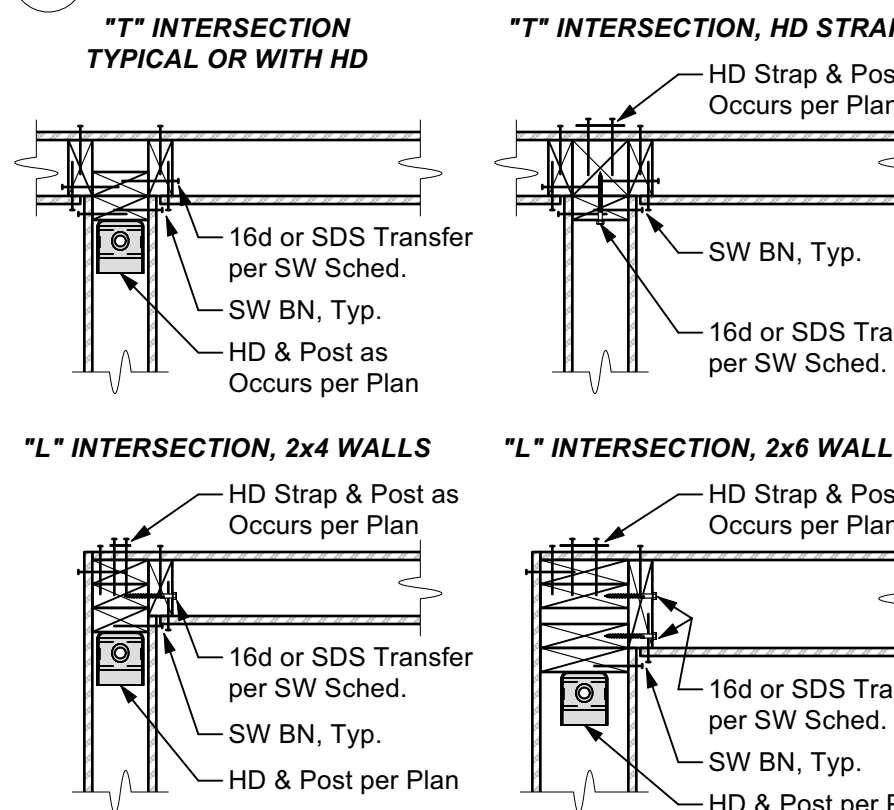
TYPICAL SHEAR WALL FRAMING NOTES:

- Single sided shear walls may be placed on EITHER side of the framed wall.
- Sill plates on masonry or concrete to be pressure treated per Timber / Lumber specifications. Sill plate thickness per SW Sched.
- Wall studs and bkg. are required at all adjoining panel edges. Thickness of wall studs and bkg. at panel edges per SW Sched.
- Where plywood is applied on both faces of a wall, edge nails shall be staggered on adjacent panel edges OR panel joints shall be offset to fall on different framing members. Plywood joint and sill plate nailing shall be staggered in all cases.
- Plywood panels shall butt along centerlines of framing members. Minimum plywood dimension for shearwall shall be 12".
- Nails shall be located at least 3/8" from all panel edges.
- The use of pneumatic nail guns for shear wall nailing is subject to continued satisfactory jobsite performance and subject to the review and approval by the Engineer of Record and/or Building Inspector. If the nail heads penetrate the outer ply more than would be normal for a hand held hammer, or if the minimum edge distances are not maintained, the performance will be deemed as unsatisfactory and the continued use of pneumatic nail for shear wall nailing will not be permitted.
- At all bearing walls (both exterior and interior walls) not noted as shear walls, continuous full depth blocking shall be provided between joists and rafters with LTP4 or A35 to top plates @ 32" oc at floors and 48" oc at roofs, unless noted otherwise per plan.
- Refer to material specifications for additional framing requirements.

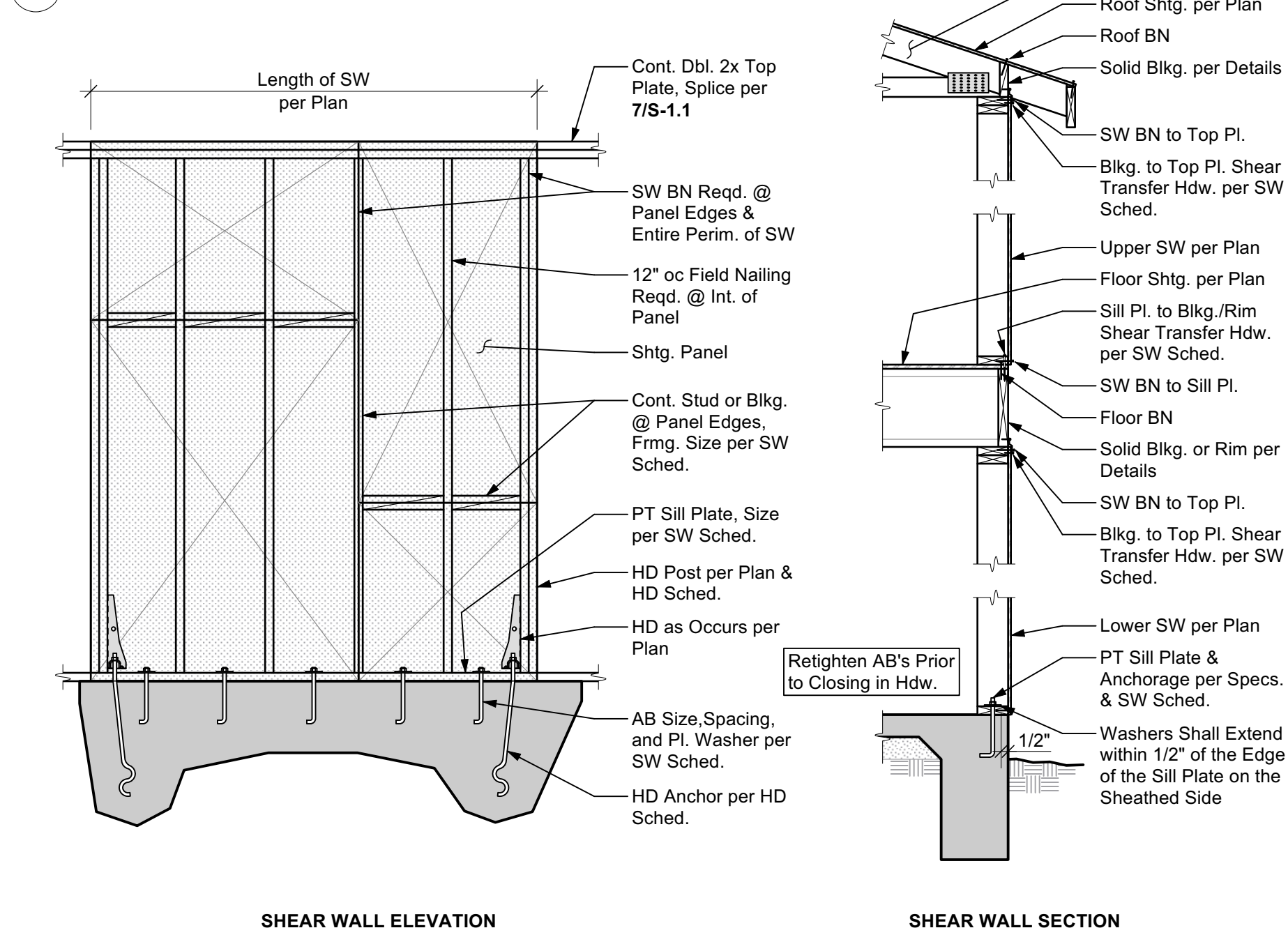
SHEAR WALL LEGEND



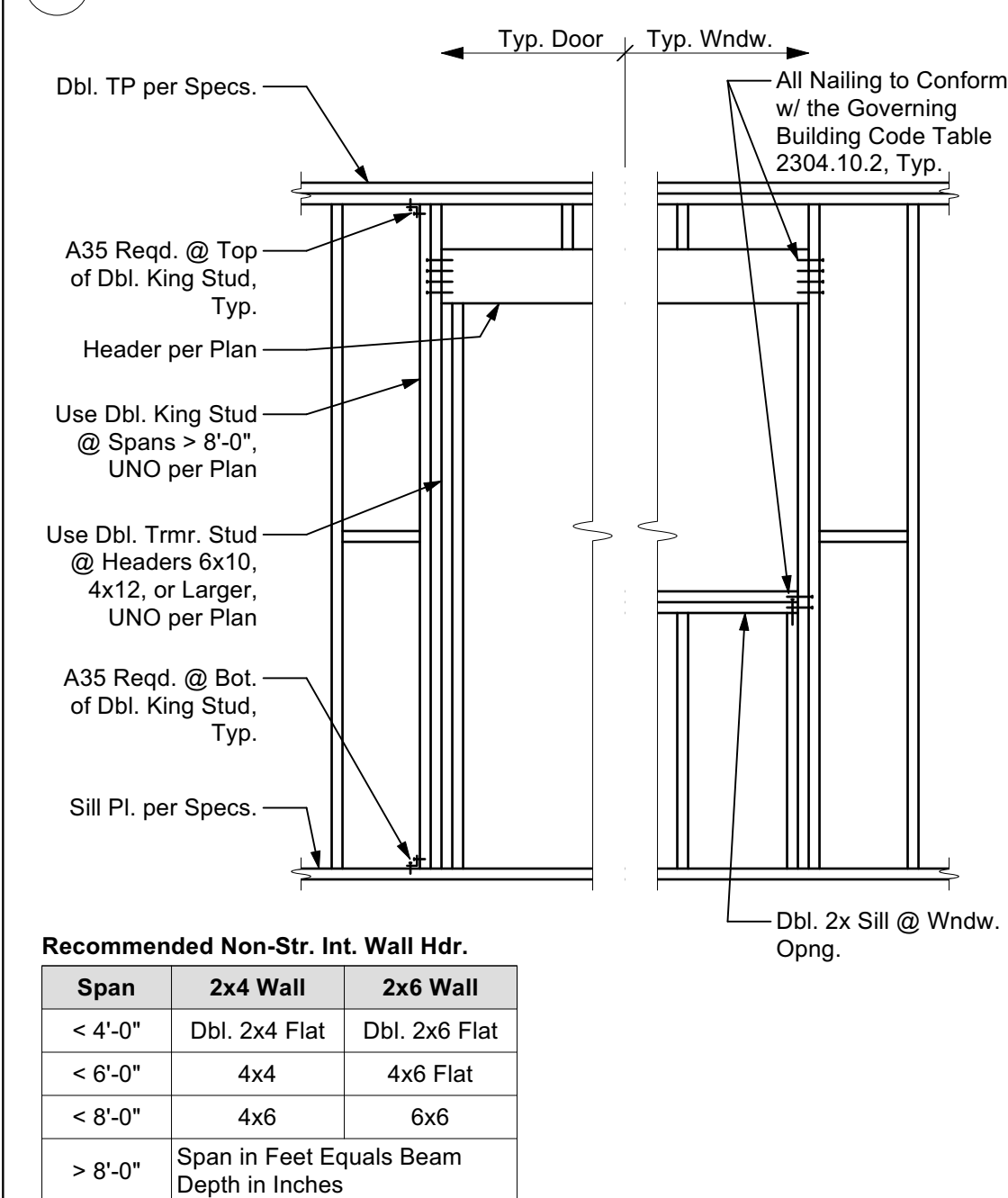
10 TYPICAL SHEAR WALL INTERSECTIONS



8 TYPICAL SHEAR WALL FRAMING



3 TYPICAL WOOD FRAMED OPENING



* The 2025 California Building Code (CBC), based on the 2024 International Building Code (IBC), is the governing code in the State of California.

SHEET INDEX

S-1.1	Structural Title Sheet
S-1.2	Structural Specifications
S-1.3	Special Inspections
S-2.1	Foundation Plan
S-2.2	Roof Framing Plan
S-3.1	Structural Details
S-3.2	Structural Details

REVISION:

04.02.2026	Issued for Permit
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PROJECT ENGINEER:
Arlene Castillo
(916) 790-3181 x217
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DATE: 04/02/2026 SCALE: NTS
AV JOB: 251477 SHEET SIZE: 24"x36"

STRUCTURAL TITLE SHEET

S-1.1

STATEMENT OF SPECIAL INSPECTIONS

- This Statement of Special Inspection is submitted in fulfillment of the requirements of the Governing Building Code, section 1704 and 1705.
- Special Inspections and Testings will be performed in accordance with the approved plans and specifications, this statement and the Governing Building Code, Section 1704 , 1705 , 1707 , and 1708.
- The schedule of Special Inspections summarizes the Special Inspections and tests required. Special Inspectors will refer to the approved plans and specifications for detailed special inspection requirements. Any additional tests and inspections required by the approved plans and specifications will also be performed.
- Interim reports will be submitted to the Building Official and the Registered Design Professional in Responsible Charge in accordance with the Governing Building Code Section 1704.2.4.
- A Final Report of Special Inspections documenting required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy (Section 1704.2.4). The Final Report will document:
 - Required special inspections.
 - Correction of discrepancies noted in inspections.
- The Owner recognizes his or her obligation to ensure that the construction complies with the approved permit documents and to implement this program of special inspections. In partial fulfillment of these obligations, the Owner will retain and directly pay for the Special Inspections as required in the Governing Building Code, Section 1704.2.
- 1704.4 Contractor responsibility. Each contractor responsible for the construction of a main wind- or seismic force-resisting system, designated seismic system or a wind- or seismic force-resisting component listed in the statement of special inspections shall submit a written statement of responsibility to the building official and the owner or the owner's authorized agent prior to the commencement of work on the system or component. The contractor's statement of responsibility shall contain acknowledgement of awareness of the special requirements contained in the statement of special inspection.

SEISMIC REQUIREMENTS (Section 1705.13)

Description of seismic-force-resisting system and designated seismic systems subject to special inspections per Section 1705.13:

Light-framed walls sheathed with wood structural panels rated for shear resistance or steel sheets (ASCE 7, Table 12.2-1, Line A.15)

The extent of the main seismic-force-resisting system is defined in more detail in the construction documents.

SCHEDULE OF SPECIAL INSPECTIONS

Column Header Notation Used in Table:

- C Indicates continuous inspection is required.
 - P Indicates periodic inspections are required. The notes and/or contract documents should clarify.
- Box Entry Notation Used in Table:
- X Is placed in the appropriate column to denote either "C" continuous or "P" periodic inspections.
 - Denotes a one-time activity or one whose frequency is defined in some other manner.

Additional details regarding inspections are provided in the project specifications or notes on the drawings.

Verification & Inspection	C	P	Notes
1705.3 - Concrete			
4. Inspect anchors post-installed in hardened concrete			
a. Adhesive anchors' installed in horizontally or upwardly inclined orientations to resist sustained tension			
b. Mechanical anchors' and adhesive anchors' not defined in 4.a		X	
FOOTNOTES:			
1. Prior to epoxy placement, it must be verified that the hole is clean, dry, and free of loose debris			
2. Periodic inspection shall take place such that the installation of a minimum of two (2) anchors per each shear wall are observed			

GENERAL NOTES

- The following notes, details, schedules & specifications shall apply to all phases of this project unless specifically noted otherwise. Notes and details on the structural plans shall take precedence over general notes and typical details. Where no details are given, construction shall be as shown for similar work.
- All drawings are considered to be part of the contract documents. The Contractor shall be responsible for the review and coordination of all drawings and specifications prior to the start of construction. Any discrepancies shall be brought to the attention of the Engineer prior to the start of construction so that a clarification can be issued. Any work performed in conflict with the contract documents or any applicable code requirements shall be corrected by the Contractor at no expense to the Owner or Engineer.
- All information on existing conditions shown on the structural plans are based on best present knowledge available, but without guarantee of accuracy. The Contractor shall be responsible for the verifications of all dimension and conditions at the site. Any discrepancies between actual site conditions and information shown on the drawings or in the specifications shall be brought to the attention of the EOR prior to the start of construction.
- Refer to the Architectural plans for the following:
 - Dimensions
 - Size and location of all interior and exterior wall locations.
 - Size and location of all floor, roof and wall openings
 - Size and location of all drains, slopes, depressions, steps, etc.
 - Specification of all finishes & waterproofing
 - All other non-structural elements
- Refer to the mechanical, electrical and plumbing plans for the following:
 - Size and location of all equipment
 - Pipe runs, sleeves, hangers and trenches
 - All other mechanical, electrical or plumbing related elements
- DO NOT** scale structural plans. Contractor shall use all written dimensions on Architectural plans.
- Construction materials shall be uniformly spread out if placed on floor or roof so as to not overload the framing. Load shall not exceed the design live load per square foot. It is the Contractor's responsibility to provide adequate shoring and/or bracing as required.
- Specifications and detailing of all waterproofing and drainage items, while sometimes shown on the structural plans for general information purposes only, are solely the design responsibility of others.
- The Engineer will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the construction delineated by these plans. It should be understood that the Contractor or his/her agent(s) shall supervise and direct all work and shall be solely and completely responsible for all construction means, methods, techniques, sequences, procedures and conditions on the job site, including safety of all persons and property during the entire period of construction. Periodic observations by the Engineer, his staff or representatives are not intended to include verification of dimensions or review the adequacy of the Contractor's safety measures on or near the construction site.
- Modifications of the plans, notes, details and specifications shall not be permitted without prior approval from the Engineer.
- All workmanship shall conform to the best practice prevailing in the various trades performing the work. The Contractor shall be responsible for coordinating the work of all trades.
- It is the Contractor's responsibility to ensure that only approved structural plans are used during the course of construction. The use of unapproved documents shall be at the contractor's own risk. Corrections of all work based on such documents shall be performed at the Contractor's expense.
- These plans and specifications represent the structural design only. No information nor warranty is provided for the work of any other Consultant (Architect, Mechanical, Electrical, etc.). This includes, but is not limited to, waterproofing, drainage, ventilation, accessibility, or dimensions.

FOUNDATIONS

- Refer to Structural Design Parameters section on sheet S-1.1 for all soil design values used in calculations.
- Soils values per Table 1806.2 of the latest edition of the Governing Building Code.
- Unexpected Soil Conditions: At the discretion of the engineer of record, or the local building department, a soils report may be required in the event that substantial material is discovered on site. If this occurs, contact Engineer of Record for further guidance.
- All compaction, fill, backfilling and site preparation shall be performed in accordance with project soils report or the Governing Building Code Chapter 18 & Appendix J. All such work shall be performed under the supervision of the building official.
- Excavate to required depths & dimensions (as indicated in the drawings), cut square and smooth with firm level bottoms. Care shall be taken not to over-excavate foundation at lower elevation and prevent disturbance of soils around high elevation.
- Foundations forms and excavations shall be clean and free of debris, achieving all minimum dimensions noted. Encroachment of soil at corners and reduced reinforcement clearances are not permitted.
- Excavate all foundations to required depths into compacted fill or natural soil (as per plans and details) and as verified by the building official.
- All foundations shall be inspected and approved by the appropriate building official prior to forming and placement of reinforcing or concrete.
- Foundations shall not be poured until all required reinforcing steel, framing hardware, sleeves, inserts, conduits, pipes, etc. and formwork is properly placed and inspected by the appropriate building official/inspector(s).
- It is the responsibility of the contractor in charge of framing to properly position all holdown bolts, anchor bolts, column bases, and all other cast-in-place hardware. Refer to typical details. All hardware to be secured prior to foundation inspections.
- The sides and bottoms of dry excavations must be moistened to optimum moisture content or just above, just prior to placing concrete. Conversely, de-water footings as required to remove standing water and to maintain optimum working conditions.
- The Contractor shall be solely responsible for all excavation procedures including lagging, shoring, and the protection of adjacent property, structures, streets, and utilities in accordance with all federal, state and local safety ordinances. The Contractor shall provide for the design and installation of all cribbing, bracing and shoring required.

EXISTING CONDITIONS

- Work shown is new unless noted as Existing: (E).
- Existing construction shown on these drawings was obtained from existing drawings and/or site investigation. Field verify all conditions & dimensions prior to shop drawing production and fabrication of structural elements.
- Where existing conditions vary significantly from those shown on these drawings, the Engineer shall be notified prior to continued construction related to subject conditions. Shore all existing construction as required, including where welding to existing steel framing. Shoring designs by others.
- Do not core or cut new openings in existing concrete or masonry without specific approval of the Engineer. All existing concrete structures to be in contact with new concrete shall be cleaned and roughened to 1/4" minimum amplitude. Use ICC approved bonding agent on existing concrete prior to placing new concrete.
- Verify location of existing rebar before fabrication using non-destructive testing. Existing reinforcing shall be avoided where drilling for post-installed anchors or concrete dowels.
- All existing (E) wood elements to remain shall be field inspected during construction and treated for dryrot removal / control. Where existing GLB's to remain are found to have extensive dryrot deeper than the top two laminations (3"), the structural engineer shall be notified prior to continued construction related to subject GLB's.
- All existing connections at elements to be replaced shall be replaced or re-attached to match existing conditions.

CONCRETE

- All portions of work pertaining to concrete construction shall conform to the Governing Building Code, Chapter 19, ACI Standard 318, and other referenced documents.
- All concrete shall have:
 - an ultimate compressive strength (f'c) of 3,000 psi at 28 days, UNO.
 - slabs and walls shall be cast and cured at 57° at point of placement.
 - a W/C ratio of 0.55 or less for all slabs, walls, and columns, and 0.60 or less for all foundations, UNO.
 - a normal dry-weight density, UNO.
- In regions with freeze/thaw cycles, 5% air entrainment shall be included in concrete exposed to weather.
- Special inspection is NOT required as the foundations have been *designed* with f'c = 2,500 psi and concrete shall be placed and cured in accordance with the Governing Building Code, section 1705.3, exceptions 1, 2, 1, and 2.3, unless explicitly specified herein, on the structural plans, or by the Building Department. At a minimum, special inspection is always required on:
 - structural slabs, flat plates
 - walls, columns, beams
 - piles, caissons
 - welding of reinforcement, installation of mechanical bar splice devices, epoxy application
- When required or specified, special inspection services shall conform to the Governing Building Code, Chapter 17 and shall be provided by an ICC certified inspector or Building Department approved engineer. The Building Department reserves the right to waive or require special inspections. Nothing in these plans waives the Building Department's right to require special inspection at any point and on any material.
- Testing of materials used in concrete construction may be performed as noted on structural plans or at the request of the Building Department to determine if materials are quality specified. Tests of materials and of concrete shall be made by an approved agency; such tests shall be made in accordance with the standards listed in the Governing Building Code, Table 1705.3. Copies of all test reports shall be provided to Engineer and Building Department for review in a timely manner.
- The Contractor shall remove and replace any concrete which fails to attain specified 28 day compressive strength if so directed by the Engineer. Any defects in the hardened concrete shall be repaired to the satisfaction of the Engineer and/or Architect or the hardened concrete shall be replaced at the Contractor's expense.
- All concrete shall be in accordance with ASTM C94. Placement of concrete shall be in accordance with ASTM C94 and ACI Standard 304.
- All cement shall be Portland Cement Type I or II and shall conform to ASTM C150. Where concrete is placed against soil that contains high levels of sulfides, use Type V cement.
- All aggregates shall conform to ASTM C33. Maximum aggregate sizes:
 - Footings: 1-1/2"
 - All other work: 3/4"
- Where not specifically detailed, the minimum concrete cover on reinforcing steel shall be:
 - Permanently exposed to earth or weather
 - Cast against earth: 3"
 - Cast against forms: 2"
 - Not exposed to earth or weather:
 - Slabs, walls, joists: 3/4"
 - Beams, girders, columns: 1-1/2"

- The minimum lap splice length for all reinforcing steel shall be as noted in the typical details on sheet S-1.1. All lap splices to be staggered.
- All reinforcing steel, anchor bolts, dowels, inserts, and any other hardware to be cast in concrete shall be well secured in position prior to foundation inspection. All hardware to be installed in accordance with manufacturer's specifications. Refer to architectural and structural plans for locations of embedded items.
- Locations of all construction joints, other than specified on the structural plans, shall be approved by the Architect and Engineer prior to forming. Construction joints shall be thoroughly air and water cleaned and roughened to 1/4" amplitude, UNO. All surfaces to receive fresh concrete shall be maintained continuously wet at least three (3) hours in advance of concrete placement.
- Control joints shall be provided in all concrete slabs-on-grade per typical detail on sheet S-1.1, UNO.
- The Architect, Engineer and appropriate inspectors shall be notified in a timely manner for a reinforcement inspection prior to the placement of any concrete.
- The Contractor shall obtain approval from the Architect and the Engineer prior to placing sleeves, pipes, ducts, chases, coring and opening on or through structural concrete beams, walls, floors, and roof slabs unless specifically detailed or noted on the plans. All pipes or conduits passing through concrete members shall be sleeved with standard steel pipe sections.
- The Contractor is responsible for design, installation, maintenance and removal of all formwork. Forms shall be properly constructed, sufficiently tight to prevent leakage, sufficiently strong, and braced to maintain their shape and alignment until no longer needed for concrete support. Joints in formwork shall be tightly fitted and blocked, and shall produce a finished concrete surface that is true and free from blemishes. Forms for exposed concrete shall be pre-approved by the Architect to ensure conformance with design intent.
- Remove formwork in accordance with the following schedule:
 - Forms at slab edge: 1 day
 - Side forms at footings: 2 days
 - All other vertical surfaces: 7 days
 - Beams, columns, girders: 15 days
 - Elevated slabs: 28 days

- Engineer reserves the right to modify removal schedule above based on field observations, concrete conditions, and/or concrete test results.
- Retaining walls shall not be backfilled until concrete has set a minimum of 14 days. Refer to structural plans for slab and/or framing installation sequencing.
 - All concrete (except slabs-on-grade 6" or less) shall be mechanically vibrated as it is placed to properly consolidate the concrete.
 - Concrete shall be maintained in a moist condition and above 40 degrees fahrenheit for a min. of seven (7) days after placement unless otherwise accepted by EOR.
 - Concrete shall not be permitted to free fall more than six (6) feet. For heights greater than six (6) feet, use tremie, pump or other method consistent with applicable standards.
 - When specified ultimate compressive strength is greater than 2500 psi, Contractor shall submit mix designs to Architect and Engineer for approval seven (7) days prior to placement. Mix designs shall be prepared by an approved testing laboratory. Sufficient data must be provided for all admixtures.
 - Refer to Architectural plans for locations of all dimensions, slab depressions, slopes, drains, curbs, and control joints.
 - Provide continuous horizontal reinforcing through all wall intersections and corner. See details for additional information.
 - Drypack or non-shrink grout shall have a minimum 28 day compressive strength of 7000 psi unless noted otherwise. Provide under base plates, etc., as required for full bearing. Grout shall be in conformance with ASTM C107.
 - Calcium chloride and concrete admixtures containing chloride salts shall not be used with steel pan decking.

REINFORCEMENT

- All portions of work pertaining to concrete reinforcing construction shall conform to the Governing Building Code, Chapter 19, ACI Standard 318, and other referenced documents.
- Fabrication, placement and installation of reinforcing steel shall conform to the Concrete Reinforcing Steel Institute (CRSI) Manual of Standard Practice and the Governing Building Code.
- Reinforcing steel shall be deformed, clean, free of rust, grease or any other material likely to impair concrete bond.
- All bars shall conform to ASTM A615, Grade 60 minimum (UNO on structural plans). All welded wire fabric (WWF) shall conform to ASTM A185 (flat sheets only).
- Reinforcing steel that is to be welded shall conform to ASTM A706. All welding of reinforcement shall be subject to special inspection. Welding of reinforcement shall be with low hydrogen electrodes and shall conform to structural welding code - reinforcing steel, AWS D1.4, by the American Welding Society and ACI 318 Sec. 3.5.2. Welding rods used for the welding of reinforcement shall be E60XX. All welding shall be performed by certified welders. Contractor shall take necessary steps (standard ties, anchorage devices, etc.) to secure all reinforcing steel in their true position and prevent displacement during concrete placement.
- Shop drawings for fabrication of reinforcing steel shall be approved by the Contractor and submitted to the Architect and Engineer for review and approval prior to fabrication. Shop drawings are not required for slabs-on-grade or foundations unless specifically noted on the structural plans.
- Heating of reinforcing steel to aid in bending and shaping of bars is not permitted. All bends in reinforcing steel are to be made cold. All bend radii shall conform to CRSI Manual of Standard Practice. Reinforcing bars shall not be pre-bent without approval of EOR.
- Refer to Concrete and Masonry notes for specific minimum splice length and splice staggering requirements. Lap welded wire fabric (WWF) reinforcement a minimum of two (2) modules or 12", whichever is greater. All splices are to be staggered.
- (Special lateral systems) The following reinforcement shall comply with ASTM A706, Grade 60, UNO:
 - Vertical reinforcement at intersections and ends of concrete walls enclosed in ties or stirrups.
 - Longitudinal moment frame reinforcement.
 - Ties and stirrups providing lateral support of longitudinal bars or concrete confinement in columns and walls shall be ASTM A706, Grade 80.

ROUGH CARPENTRY

- Refer to latest edition of the Governing Building Code, Table 2304.10.2, for all minimum nailing requirements.
- Refer to individual sections for applicable material specifications.
- Fabricate, size, install, connect, fasten, bore, notch, and cut wood and plywood with joints true, tight, and well-nailed, screwed or bolted as required, all members to have solid bearing without being shimmed, unless noted otherwise. Set horizontal members subject to bending with the crown up. Install framing plumb, square, true and cut for full bearing. Splices are not permitted between bearings. Use full lengths unless otherwise specified.
- Metal framing angles, anchor, clips, straps, ties, holdowns, etc. shall be manufactured by Simpson Strong-Tie Co. No substitutions shall be permitted without prior approval of the Engineer.
- All walls are to have continuous double 2x top plates spliced per Detail 7/S-1.1 unless specifically noted otherwise on the plans and details.
- Wall Studs:
 - Unless specifically noted on the plan and details, use the following guidelines for wall framing:
 - Use 2x4 studs at 16" oc for walls less than 9'-0" tall.
 - Walls 9'-0" to 16'-0" tall shall be constructed of 2x6 studs at 16" oc
 - Request specifically engineered wall details for walls greater than 16'-0" tall.
- Blocking:
 - Provide min. one row of nominal 2" thick blocking of same width as stud, fitted snugly and spiked into studs at mid-height of partitions or walls over 8' high.
 - All foundation cripple walls (or "pony walls" less than 14" in height shall be solid blocking.
 - Rim blocking/rim board to be 1-1/4" minimum width x full depth at bearing walls, UNO per plans and details. Refer to shearwall section for additional rim/blocking requirements.
- Nothing:
 - Is not permitted of any structural member without prior approval
 - In exterior and bearing walls, notches shall not exceed 25% of the stud depth.
 - Non-bearing partition walls, notches shall not exceed 40% of the stud depth.
 - Successive notches in the same member shall be spaced a min of 18" apart.
- Boring:
 - Is not permitted of any structural member without prior approval
 - In exterior and bearing walls, holes shall not exceed 40% of the stud depth.
 - Non-bearing partition walls, may be drilled not greater than 60% of stud depth.
 - Successive holes in the same member shall be spaced a minimum of 18" apart.
- Bearing:
 - Provide a min. of 1-1/2" of bearing for all 2x joists and hdrs 4x10 / 6x8 & smaller.
 - Provide a min. of 3" of bearing for all beams and hdrs 4x12 / 6x10 & larger, UNO on plans.
 - Members bearing on prefabricated hangers are to have full bearing and nailing per manufacturer's specifications.
- Posts:
 - Posts inside walls shall bear on sill plates and shall be continuous between top and bottom plates, unless specifically noted otherwise.
 - Provide posts under all beams, girders or double joists equal to the width of the supported member.
 - Posts on upper levels are to be stacked on posts of equal size at levels below, unless a larger post is specified on the plans.
 - Vertically oriented blocking ("squash blocking") shall be used to fully transfer the post area through floors to foundation. Vertical blocking shall be equal to floor thickness plus 1/16".
 - Headers framing into continuous posts without trimmer studs shall be supported in Simpson HUC hangers unless noted otherwise on the plans.
 - Isolated posts shall be seated in Simpson post or column bases, unless noted otherwise on the plans
- Roof Framing:
 - Provide wood joists, as specified, laid with the crown up and spaced as indicated.
 - Provide a minimum of 1-1/2" end bearing unless otherwise shown.
 - Provide full depth solid 2x blkgr or cross-bridging between the joists at 8' oc max.
 - Provide all cricket framing required to achieve positive drainage per Arch.
 - Install plywood panels with the face grain across the framing and close joints and nail at each support. Fully nail with common nails per the plans.
 - Plywood panels shall not be less than 4" x 8' except at boundaries and changes in framing direction, where the minimum panel dimension shall be no less than 24", unless all edges of undersized panels are supported by and fastened to framing members or blocking.
 - Provide Simpson "PSCL" clips at all plywood joints perpendicular to framing. Provide clips midway between framing members at the unsupported edges of plywood when members are spaced at 24" oc or greater. If clips are not used, provide solid blocking for joints perpendicular to framing.
- Floor Framing:
 - Provide wood joists, as specified, laid with the crown up and spaced as indicated.
 - Provide a minimum of 1-1/2" end bearing unless otherwise shown.
 - Provide full depth solid 2x blkgr or cross-bridging between the joists at 8' oc max. For floors framed with I joists, refer to the mfg's spec's for blkgr requirements.
 - Provide full depth solid 2x blocking between the joists under all walls and partitions where the wall or partition is perpendicular to the floor framing (including floors framed with I joists)
 - Install plywood sheathing with the face grain across supports, and supports staggered, and the edges of sheets centered over supports. If T&G plywood is used, blocking need not be provided at all plywood edges (UNO per plan). If T&G plywood is not used, blocking shall be provided at all plywood edges. Glue plywood to joists and fully nail with common nails per the plans.
 - Plywood panels shall not be less than 4" x 8' except at boundaries and changes in framing direction, where the minimum panel dimension shall be no less than 24", unless all edges of undersized panels are supported by and fastened to framing members or blocking.
- Shear Walls:
 - Refer to plans for all shearwall locations, length type and nailing.
 - Refer to Shearwall Schedule on title sheet for additional information.
 - Shear wall lengths specified on plans are minimum required.
 - Shear walls to be nailed with common nails. All nails to have minimum 3/8" edge distance to panel or framing member.
 - Where 3x framing is required per the shear wall schedule, stagger edge nailing.
 - Oriented Strand Board (OSB) may be used in lieu of plywood.
 - Typical Rim Board/Blocking at Shearwalls shall be 1-3/4" Min. LSL (refer to Engineered Lumber Section for Material Specifications). Refer to Shearwall Schedule per Plan for Min. Rim/Blkg Width Requirements per Transfer Fasteners.

TIMBER / LUMBER

- All structural lumber shall be Douglas Fir-Larch, S4S and shall conform to the Governing Building Code, section 2303.1.1.
 - The minimum lumber grade of each member shall be as follows (unless specifically noted otherwise on plans and details):
 - 2x studs, blocking, plates: Stud
 - 2x joists #2 or better
 - 4x4, 4x6, or 6x6 beams or posts #2 or better
 - 4x8, 6x8, or larger beams or posts #1 or better
- It is recommended (but not required) that all exposed members be Select Structural or better and free of heart center due to visual characteristics.
- All lumber in contact with concrete or masonry shall be pressure treated Douglas Fir. Whenever it is necessary to cut, notch, bore or splice pressure treated material, all newly cut surfaces shall be thoroughly painted with the same preservative.
 - Maximum moisture content for all structural members shall not exceed 19%.
 - All plywood sheathing shall be CDX grade (or better) Douglas Fir with exterior glue. All sheathing shall conform to the Governing Building Code and grade-marked by the American Plywood Association (APA). Panel index to be 40/20 for floors and 24/0 for roofs unless specifically noted otherwise on the plans and details.

ENGINEERED LUMBER

- Glue-laminated Beams (GLB):
 - shall have the following properties:

Use	EWS Combination Symbol	Species / Grade	Flexural Stress, Fb (psi)	Modulus of Elasticity, E (ksi)	Horiz. Shear Stress, Fv (psi)	Comp. Stress, Fc (psi)	Comp. Fc para. (psi)	Comp. Fc perp. (psi)
Simple Span Bm	24F-V4	DF	+2,400/-1,850	1,800	265	1,650	650	
Continuous or Cantilever Bm	24F-V8	DF	+/- 2,400	1,800	265	1,650	650	
Columns	2	DF / L2	+/- 1,800	1,300	265	1,600	560	
 - shall not be notched, cut or drilled without prior approval from the Engineer
 - shall have exterior glue and weather-treatment prior to installation
 - shall be fabricated by an approved manufacturer & in accordance with ANSI A 190.1
 - shall have factory standard camber of 3,500-5,000 ft on beams UNO per Plan
- Laminated Veneer Lumber (LVL):
 - shall be 1-3/4" minimum thickness with the following minimum properties:
 - E = 2000 ksi
 - Fb = 2600 psi
 - Fv = 285 psi
 - Fc (parallel) = 2500 psi
 - Fc (perp.) = 750 psi
 - Ft (parallel) = 1500 psi
 - Specific Gravity = 0.50
 - shall be fabricated by an approved manufacturer
 - shall bear a minimum of 3-1/2" on specified supports. Provide full depth solid blocking at all bearing points
 - shall be nailed in accordance with mfg's specifications. Unless otherwise approved, nailing into the top edge shall not be spaced any closer than:
 - 16d @ 8" oc, 10d @ 5" oc, and 8d @ 4" oc
 - When nailing must be reduced, stagger rows a minimum of 1/2" apart while maintaining proper edge distances.
 - shall be, when comprised of multiple members, connected with 16d nail, 1/2" bolts or 1/4" lag screws in accordance with manufacturer's specifications.
 - shall not be cut, notched or drilled without specific written approval of the EOR.
- Laminated Strand Lumber (LSL):
 - shall be 1-3/4" minimum thickness with the following minimum properties:
 - E = 1550 ksi
 - Fb = 2325 psi
 - Fv = 310 psi
 - Fc (parallel) = 2170 psi
 - Fc (perp.) = 900 psi
 - Ft (parallel) = 1070 psi
 - Specific Gravity = 0.50
 - shall be fabricated by an approved manufacturer
 - shall bear a minimum of 3-1/2" on specified supports. Provide full depth solid blocking at all bearing points
 - shall be nailed in accordance with mfg's specifications. Unless otherwise approved, nailing into the top edge shall not be spaced any closer than:
 - 16d @ 8" oc, 10d @ 4" oc, and 8d @ 4" oc
 - When nailing must be reduced, stagger rows a minimum of 1/2" apart while maintaining proper edge distances.
 - shall be, when comprised of multiple members, connected with 16d nail, 1/2" bolts or 1/4" lag screws in accordance with manufacturer's specifications.
 - shall not be cut, notched or drilled without specific written approval of the EOR.
- Parallel Strand Lumber (PSL):
 - shall be 2-1/2" minimum thickness with the following minimum properties:
 - E = 2200 ksi
 - Fb = 2900 psi
 - Fv = 290 psi
 - Fc (parallel) = 2900 psi
 - Fc (perp.) = 625 psi
 - Ft (parallel) = 2300 psi
 - Specific Gravity = 0.50
 - shall be fabricated by an approved manufacturer
 - shall bear a minimum of 3-1/2" on specified supports. Provide full depth solid blocking at all bearing points
 - shall be nailed in accordance with manufacturer's specifications. Unless otherwise approved, nailing shall not be spaced any closer than:
 - Narrow face: 16d @ 6" oc, 10d @ 4" oc, and 8d @ 4" oc
 - Wide Face: 16d @ 8" oc, and 10d & 8d @ 6" oc
 - When nailing must be reduced, stagger rows a minimum of 1/2" apart while maintaining proper edge distances
 - shall not be cut, notched or drilled without specific written approval of the EOR.
- Plywood 1 Joists:
 - type and manufacturer shall be clearly noted on the plans. Substitutions shall not be permitted without prior approval of the Engineer.
 - shall be installed in accordance with applicable code approvals and mfg's spec's.
 - shall bear a minimum of 1-3/4" at all end supports, and 3-1/2" at intermediate supports. Provide full depth solid blocking at all bearing points.
 - shall be installed with intermediate blocking or bridging as specified by the Mfr. Only omit intermediate blocking when specifically allowed by the Mfr.
 - shall not be cut, notched or drilled without specific written approval of the EOR.

WOOD FASTENERS

- All Fasteners:
 - shall be hot-dipped zinc-coated galvanized steel, stainless steel, silicon bronze, or copper when in contact with preservative-treated wood
 - When used in exterior applications, fasteners shall have coating types and weights in accordance with the treated wood or bolt manufacturer's requirements. A min. of ASTM A153, type G185 zinc-coated galvanized steel (or equiv.) shall be used.
 - When used in an interior, dry environment in SBX/DOT or zinc borate preservative-treated wood, plain carbon nails shall be permitted.
- Nails:
 - shall be with "common" nails unless noted otherwise.
 - shall not be driven closer than 1/2 their length nor closer than 1/4 of their length to the edge or end of a member, except for sheathing.
 - shall be installed in pre-drilled lead holes if necessary to avoid splitting.
 - All nailing shall conform to the Governing Building Code, Table 2304.10.2.
- Lag screws:
 - shall be installed into pre-drilled lead holes. Lubricant (or soap) shall be used to facilitate installation and prevent damage to the screws.
- Bolts to Wood Framing:
 - shall conform to ASTM A307, UNO specifically on plans and details.
 - shall be installed in pre-drilled holes a max of 1/16" larger than the specified bolt dia.
 - when installed against wood surfaces, shall have standard washers (ASTM F436) under the heads and nuts.
- Anchor Bolts:
 - shall be installed at all exterior walls and all interior shear and/or bearing walls.
 - shall be 5/8" diameter with 3x3x0.229" steel plate washers at shearwalls.
 - shall be 5/8" diameter with 2x2x3/16" steel plate washers at non-shearwalls.
 - shall have 7" minimum embedment. (Contractor to coordinate length of bolts with sill plate thicknesses).
 - shall conform to ASTM F1554, Grade 36, UNO.
 - shall not be spaced greater than 72" oc Refer to shearwall schedule for specific anchor bolt spacing requirements.
 - shall be placed a maximum of 12" from wall corners, wall ends, and sill plate splices (but not less than 7 dia.), and a min. of two bolts per piece of sill plate is required.
 - shall be secured in place prior to foundation inspection.
 - shall have a minimum edge distance of 1-3/4", UNO per plans and details.
- Anchor Rods:
 - shall be fully threaded, UNO.
 - shall have 12" minimum embedment, UNO. (Contractor to coordinate length of bolts with min. projection above connected parts).
 - shall be heavy hex headed or terminate w/ double nut and washer per details, UNO.
 - shall conform to ASTM F1554, Grade 36, UNO.
 - shall be secured in place prior to foundation inspection.
 - shall have a minimum edge distance of 1-3/4", UNO per plans and details.
- Powder Actuated NUT Pins:
 - shall be installed at all interior non-bearing, non-shearwalls.
 - shall conform to ICC ESR-2138, or equivalent.
 - shall be 0.157x3" with 1.5" diameter steel washers, UNO.
 - shall mechanically galvanized when installed in preservative-treated or fire-retardant-treated wood.
 - shall not be spaced greater than 32" o.c.



ASHLEY & VANCE
ENGINEERING

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Roseville, CA 95661
(916) 790-3181

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CIVIL • STRUCTURAL

ENGINEER OF RECORD:



04/02/2026

Nevada County Homekey + Empire Residence ADU

135 East Empire Street
Grass Valley, CA 95945

REVISION:

04.02.2026	Issued for Permit
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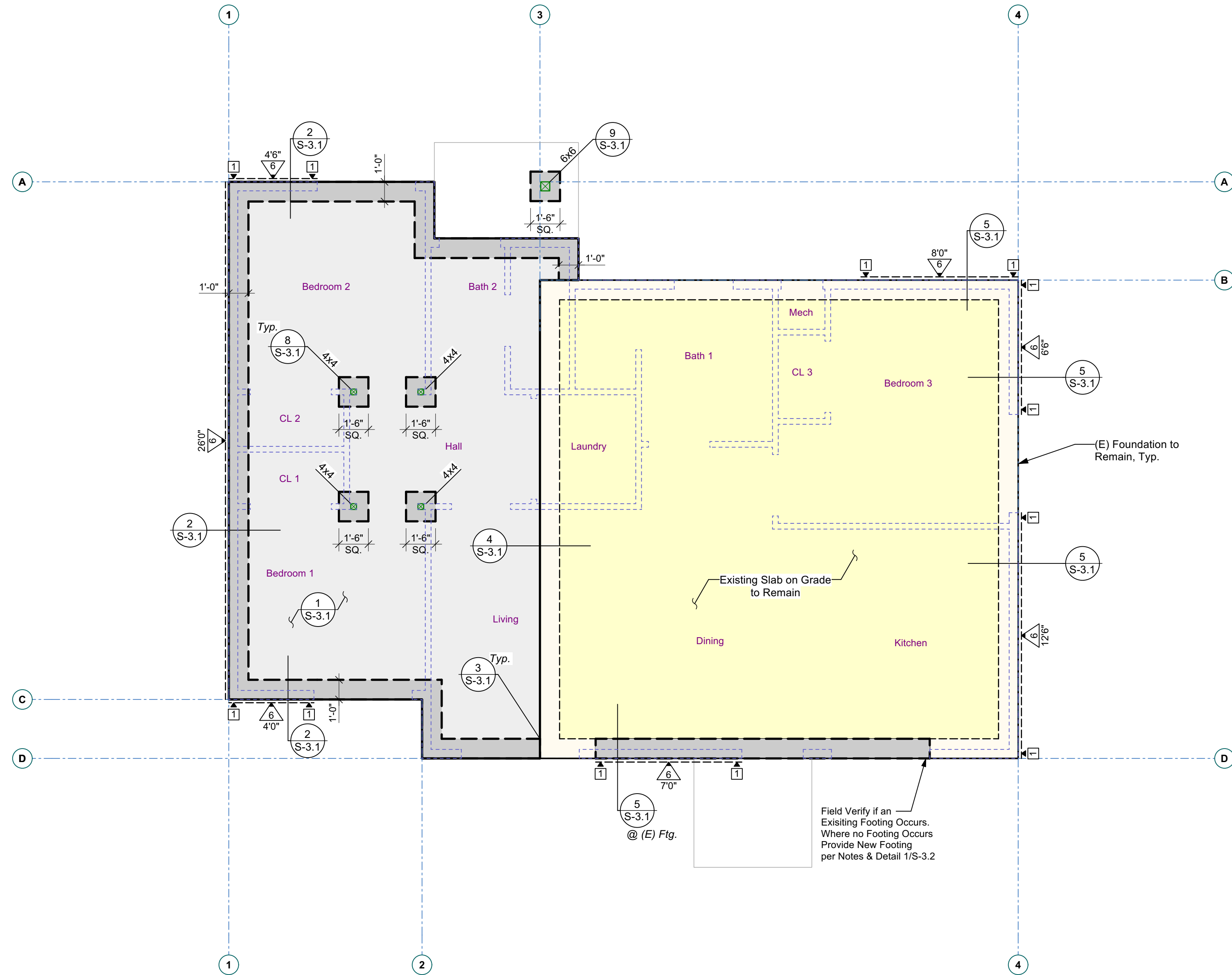
PROJECT ENGINEER:
Arlene Castillo
(916) 790-3181 x217
arlene@ashleyvance.com

DATE: 04/02/2026 SCALE: NTS
AV JOB: 251477 SHEET SIZE: 24"x36"

STRUCTURAL SPECIFICATIONS & SPECIAL INSPECTIONS

S-1.2

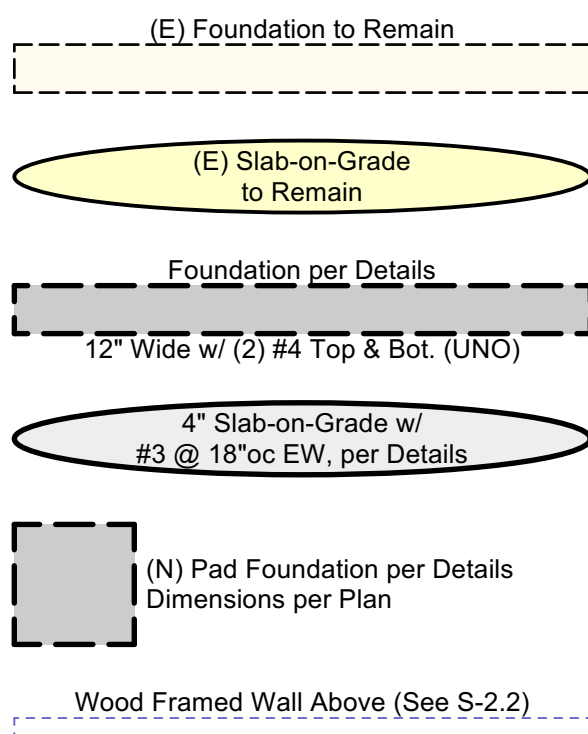
DO NOT SCALE THESE DRAWINGS. REFER TO ARCHITECTURAL PLANS FOR ALL DIMENSIONS



GENERAL FOUNDATION NOTES

Foundations per Governing Building Code, Table 1806.2
At the request of the client (or client's agent), Ashley & Vance Engineering has designed the foundations in conformance with Table 1806.2. If the building official determines that expansive soils are present, or other geologic issues of concern, then they may require that special provisions be made to the foundation design to safeguard against damage due to the expansiveness or due to other geologic issues. If this becomes the situation, all foundation construction must be halted and the client, at their own expense, shall: (a) obtain a soils report prepared by a Soils Engineer licensed in the state of the project; (b) commission Ashley & Vance Engineering to revise the foundation plans and details, and framing plans if necessary, to reflect the recommendations of the soils report; (c) submit the revised plans to the Building Department for approval.

See General Notes & Specifications for additional requirements and material specifications.
All dimensions per Architectural plans
Contractor to VERIFY all dimensions w/ Architectural plans PRIOR to commencement of construction.



SHEARWALL SCHEDULE

DESCRIPTION					NAILING ¹		TRANSFERS ²					
NO.	MATERIALS	DBL SIDED	SILL PLATE	PANEL B'DRY	SIZE	SPC ³	5/8"Ø3 Acrew	SDS4 Screw	SDWS5 Screw	A35, LTP4 or L7.5	RBC	16d ⁴
6	19/32" T-11 Siding (ICC ESR-2586)	N	2x	2x	10d	6"	41"	9"	11"	13"	11"	5"
4	19/32" T-11 Siding (ICC ESR-2586)	N	2x	3x	10d	4"	27"	6"	7"	9"	8"	3"
3	19/32" T-11 Siding (ICC ESR-2586)	N	2x	3x	10d	3"	21"	4 ⁹	5 ⁹	6"	6"	-

- FOOTNOTES:
- All nails to be COMMONS. DO NOT use box type nails. All "field" nailing to be 12"oc. UNO. Penetration shall be 1-1/2" Min. in framing.
 - All transfers to be installed into min. 1-1/2" thick members, UNO. Where clips are spaced less than 6"oc, stagger clips on each side of wall.
 - All shear walls to have 5/8" anchor bolts, embedded 7" into concrete foundations, with 3"x3"x0.229" thick plate washers, minimum. Washers may be slotted (slot length not to exceed 1-3/4") w/ standard cut washer placed between nut and plate washer. Washers shall extend within 1/2" of the edge of the bottom plate on the sheathed side. At walls sheathed on 2 sides, plate washers shall be alternated to each side of plate. (Governing Building Code, Section 2303.3.1) [AF&PA SDPWS 4.3.6.4.3]
 - Simpson SDS 1/4"x5" Screws through 2x sill, or SDS 1/4"x8" Screws through 3x sill or double plates. Install into minimum 1-3/4" thick members (rim and/or blocking). [ICC ESR-2236]
 - Simpson SDWS (Exterior Grade) 0.22"x5" Screws through 2x sill, or SDWS (Exterior Grade) 0.22"x8" Screws through 3x sill or double plates. Install into minimum 1-3/4" thick members (rim and/or blocking). [ICC ES AC233]
 - See details for permitted transfer clip types and locations.
 - Where LTP4 clips are installed over shear wall sheathing, fasten with full length 8d common nails.
 - 16d common nails through the sill plate to rim member or blocking. DO NOT use w/ LVL or LSL Rims.
 - Install screws into 3-1/2" wide continuous member, staggered 1-1/2" apart.
 - Install screws into Glulams or solid sawn member. LSL, LVL, or PSL members are NOT acceptable, UNO.
 - Provide both A36 and LTP4 clips on opposite sides of shearwall in order to achieve nail spacing requirement.



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ENGINEER OF RECORD:



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Empire Residence ADU
135 East Empire Street
Grass Valley, CA 95945

REVISION:

04.02.2026	Issued for Permit

PROJECT ENGINEER:
Arlene Castillo
(916) 790-3181 x217
arlene@ashleyvance.com

DATE: 04/02/2026 SCALE: 1/4"=1'-0"
AV JOB: 251477 SHEET SIZE: 24"x36"

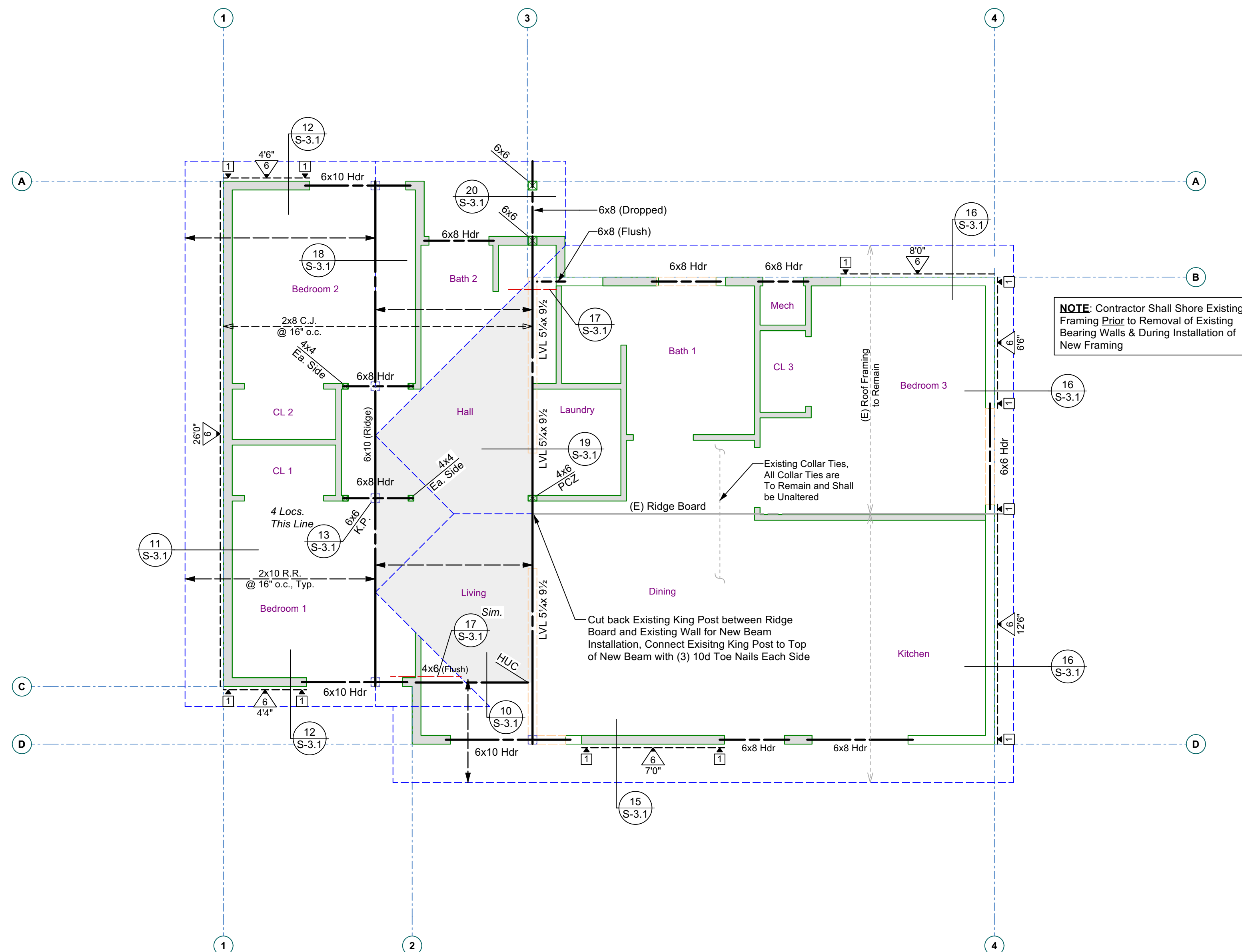
FOUNDATION PLAN

S-2.1



**Nevada County Homekey+
Empire Residence ADU**

S-2.2



Denotes Approximate Areas of Overbuild. Overbuild Framing Consists of 2x8 Ridge, 2x6 Rafters, with 2x Vertical Supports @ 48" o.c., Staggered. Per Detail 14/S-3.1

HOLDOWN SCHEDULE				
TYPE	HOLDOWN ^{1,2}	MIN. POST	ANCHOR / EMBEDMENT	DETAILS
1	HDUE5	(2) 2x	SABR 5/8x24 / 18" Min.	@ (N) Fdn: 6/S-3 @ (E) Fdn: 7/S-3
2	HDUE7	(2) 2x	SABR 5/8x24 / 18" Min.	

FOOTNOTES:

- Shared holdowns to be installed per detail **10/S-1.1, Typical Shearwall Intersections**, (UNO)
- All holdowns shown shall be continued down to the foundation with the same size bar/holdowns and post.

FOOTNOTES:

1. Shared holdowns to be installed per detail **10/S-1.1**, *Typical Shearwall Intersections*, (UNO)
2. All holdowns shown shall be continued down to the foundation with the same size holdowns and post. (UNO)

SHEARWALL SCHEDULE												
DESCRIPTION					NAILING¹		TRANSFERS²					
NO.	MATERIALS	DBL SIDED	SILL PLATE	PANEL B'DRY	SIZE	SPC'G	5/8"Ø³ AB	SDS⁴ Screw	SDWS⁵ Screw	A35, LTP⁴,6,7 or LTP⁵	RBC	16d⁸
6	19/32" T1-11 Siding (ICC ESR-2586)	N	2x	2x	10d	6"	41"	9"	11"	13"	11"	5"
4	19/32" T1-11 Siding (ICC ESR-2586)	N	2x	3x	10d	4"	27"	6"	7"	9"	8"	3"
3	19/32" T1-11 Siding (ICC ESR-2586)	N	2x	3x	10d	3"	21"	4"⁹	5"⁹	6"	6"	-

FOOTNOTES:

1. All nails to be **COMMONS**. **DO NOT** use box type nails. All "field" nailing to be 12" OC. UNO. Penetration shall be 1-1/2" Min. in framing to be installed into min. 1-1/2" thick members. UNOs. Where clips are spaced less than 6" OC, stagger clips on each side of wall.
2. All shear walls to have #8 anchor bolts, embedded 7" into concrete foundations, with 3"x3"x0.295" thick plate washers. Minimum members shall extend 12" beyond bolts to be secured. All plates shall be anchor placed below and above the wall. Washer shall extend within 1/2" of the edge of the bottom plate on the sheathed side. At walls sheathed 2, 4 & 6, plates shall be staggered at each side of plate. [Governing Building Code, Section 2308.3.1] [AF&PA SDPWs 3.2.3.4.3 Simpson SD 4425 3"x3"x0.295" thick member SD 4425 1"x4" or 1"x6" shear clips or double plates. Install into minimum 3/4" thick members (rim and/or anchor).] [ICC ESR 2326]
3. Simpson SD455 (Exterior Grade) 0.2248" SDPWs on 2x6s, or SDWS (Exterior Grade) 0.2248" SDPWs on 3x4s or double plates. [ICC ESR 2326]
4. See details for permitted transfer clip types and locations.
5. Where LTP4 clips are installed over shear wall sheathing, fasten with full length 24d common nails. 16d common nails install the sill plate to rim joist. **DO NOT** install LVL or LSL Rims.
6. Install screws into 3/12-1/2 wide continuous member, staggered 1-1/2" apart.
7. Install screws into 3/12-1/2 wide continuous member, LVL, LVL, or LSL Rims. LVL or LSL Rims are NOT acceptable. UNO.
8. Provide both LTP4 and LTP4 clips at opposite sides of wall in order to achieve net shear capacity requirement.

GENERAL FRAMING NOTES

Beams (per Call-out)
In Simpson HU/HUC Hangers (UNO)

All Lumber 4x6, 6x6 and Smaller to be DF #2 UNO
All Lumber 4x8, 6x8 and Larger to be DF #1 UNO

All Beams to Bear on Plates w/ Indicated
Post or Doubler Below UNO

All Hangers Shall be Installed w/ Max. Nailing per Mr. &
Sized for Full Width Depth of Supported Members, UNO

Roof sheathing to be 1/2" plywood or OSB, PI 24/0,
nailed w/ 10d commons at 6", 6", 12"

(N) Roof Rafter ~ 2x10 DF #2 @ 16" oc
in Simpson LUS Hangers, Typ. (UNO)

(N) Ceiling Joists ~ 2x8 DF #2 @ 16" oc
in Simpson LUS Hangers. (UNO)

(E) Roof Framing (to Remain)

Waterproofing, flashing, & finish details per Architecturals.

See General Notes & Specifications for additional
requirements and material specifications.

All dimensions per Architectural plans
PRIOR to commencement of construction.

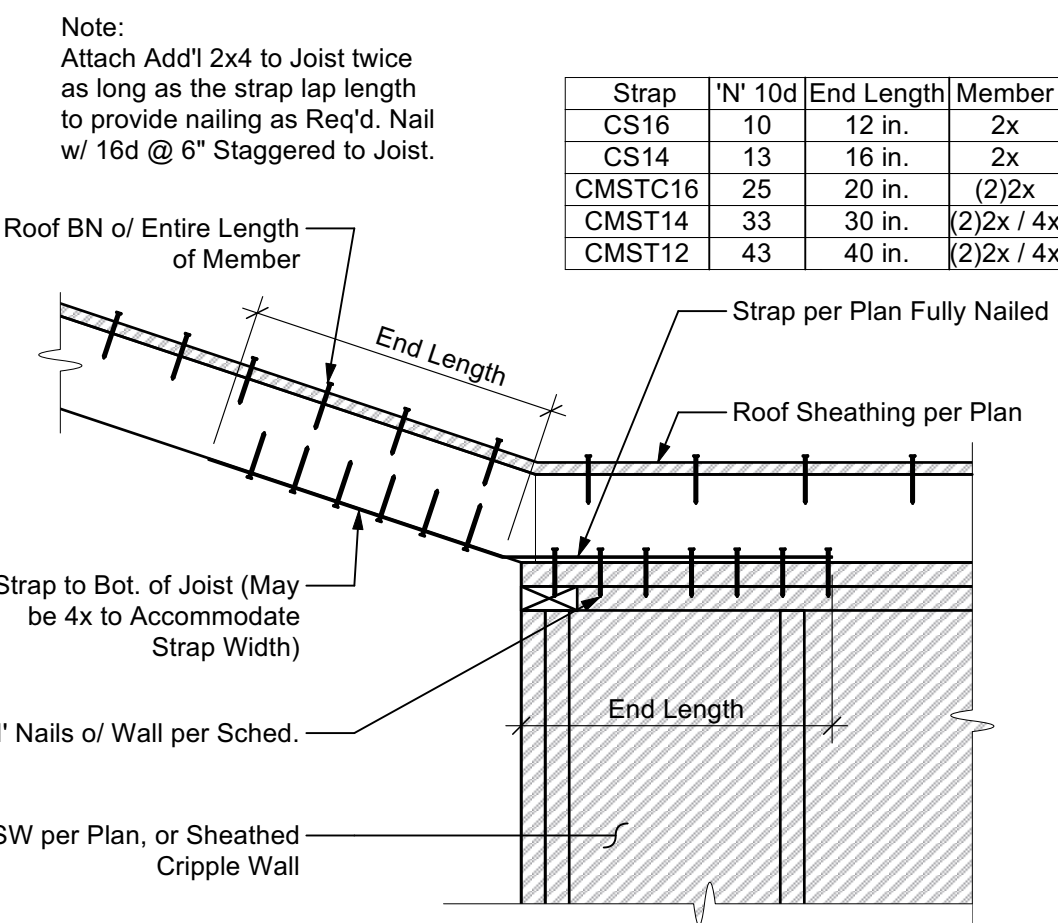
WALL SCHEDULE

Stud wall locations per Architecturals

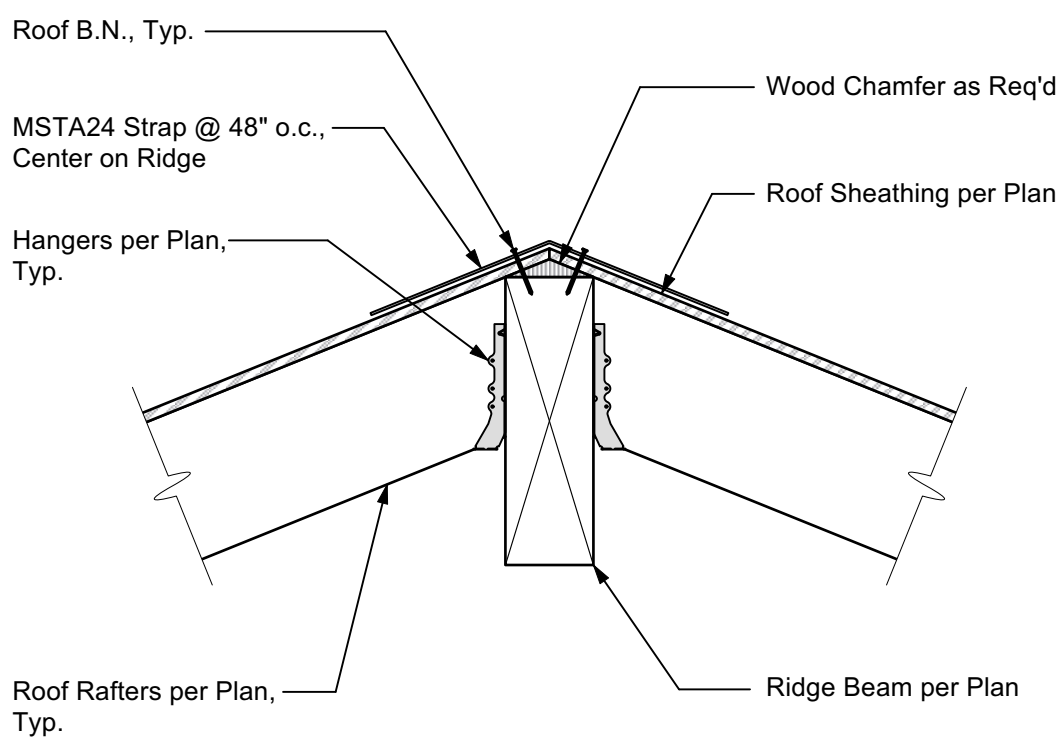
(See Arch.)

(N) Wood-Framed Wall, Thk. per Arch.

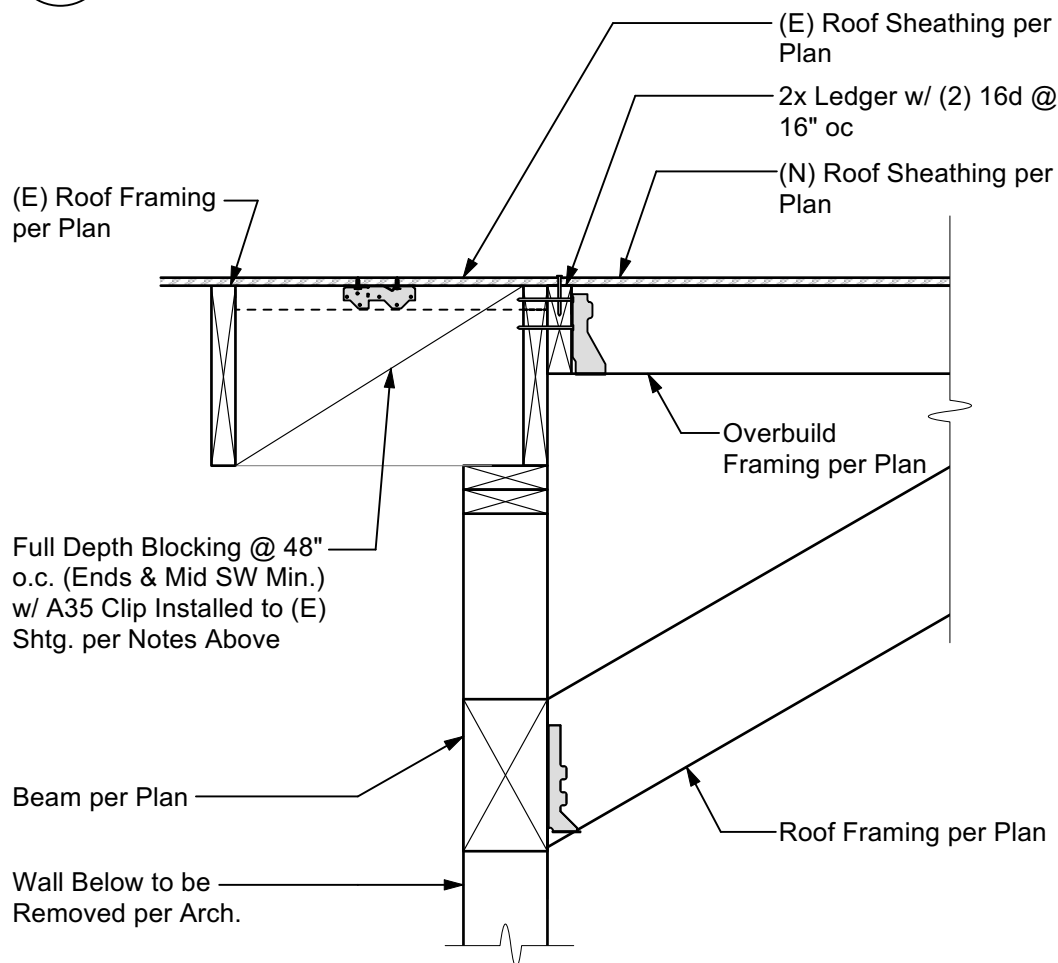
All Walls to have Continuous Double Top Plates
All Splices to be per Detail 7/S-1.1



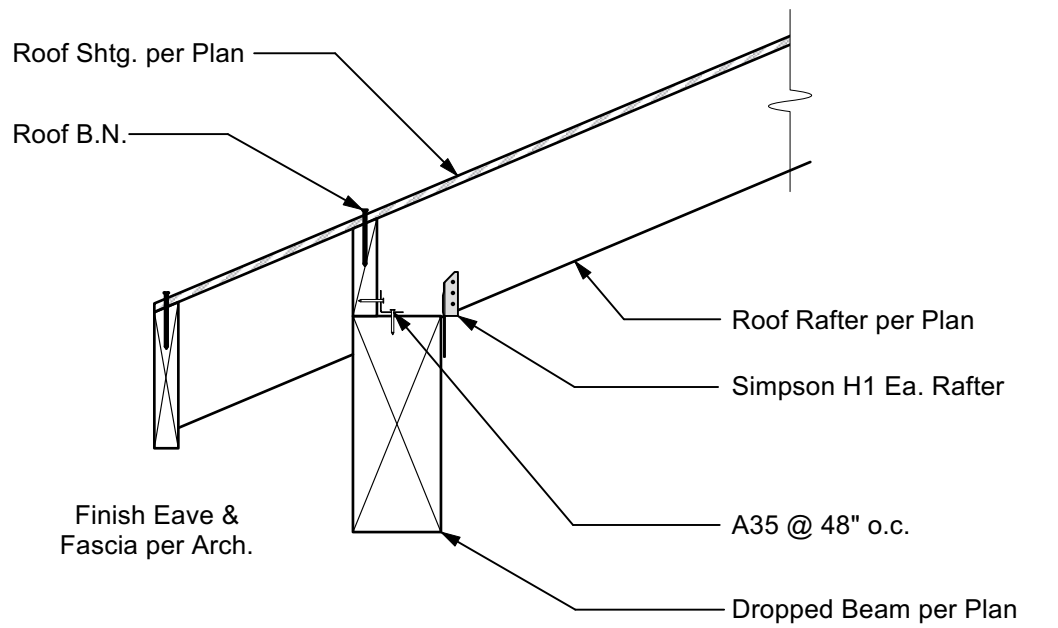
17 DRAG TO ROOF JOIST



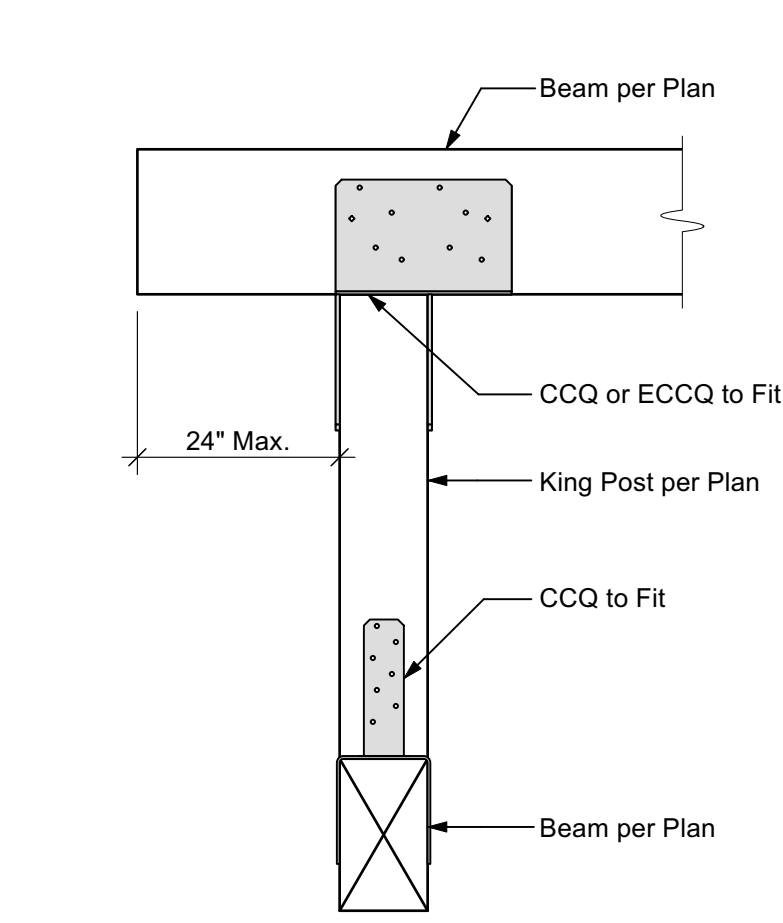
18 RAFTERS TO RIDGE BEAM



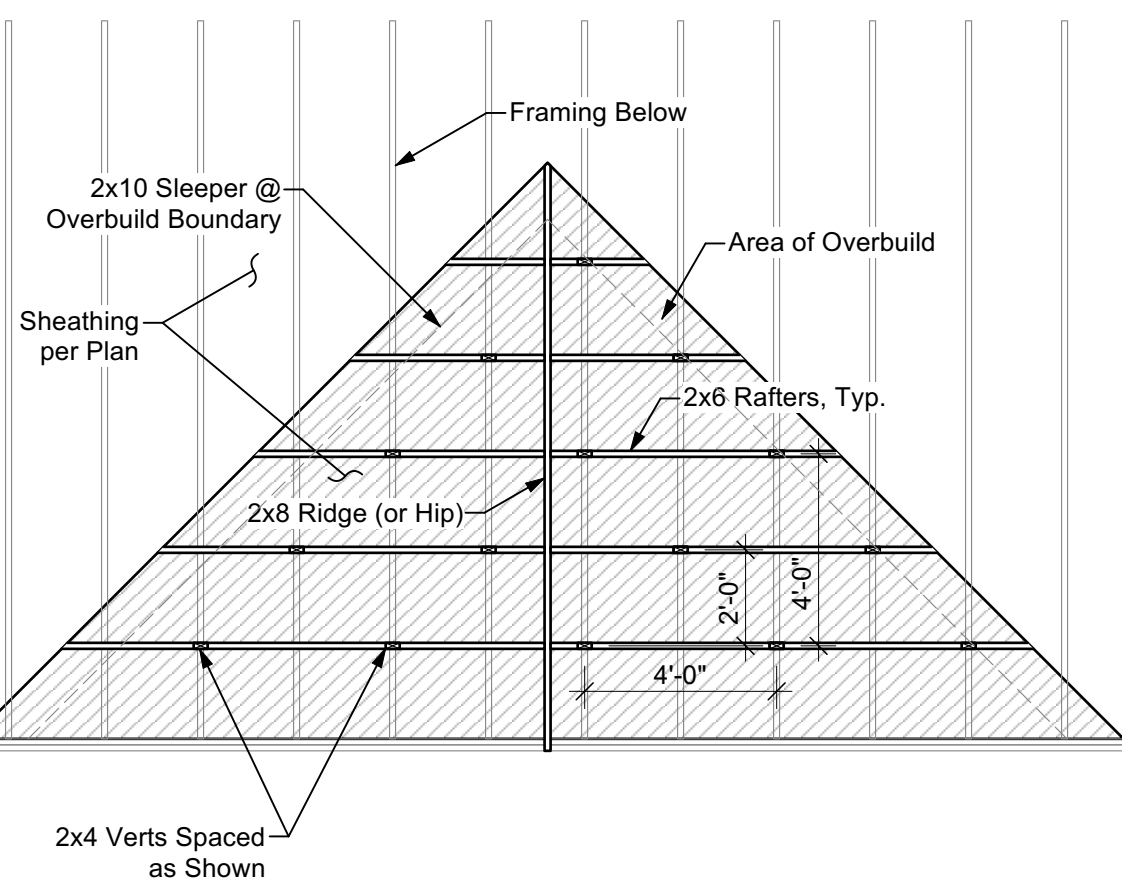
19 SHEAR TRANSFER AT EXISTING ROOF



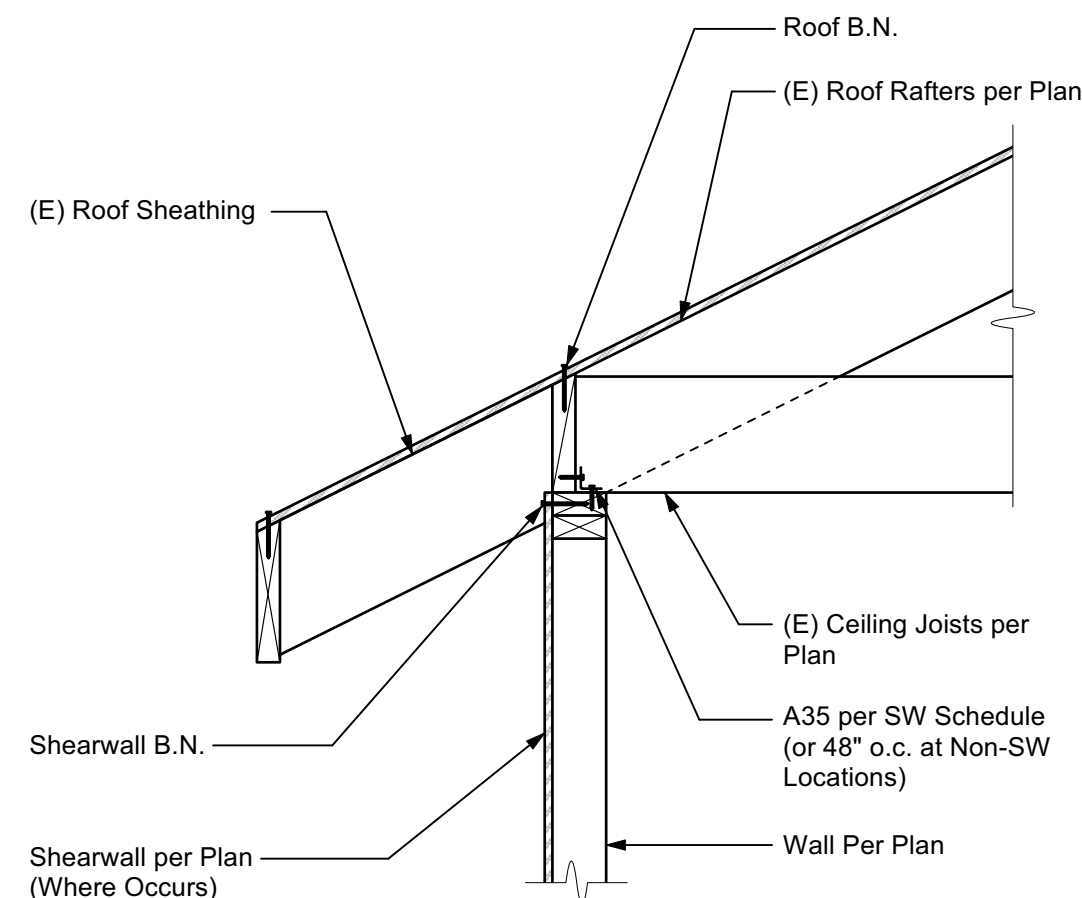
20 RAFTERS TO DROPPED BEAM



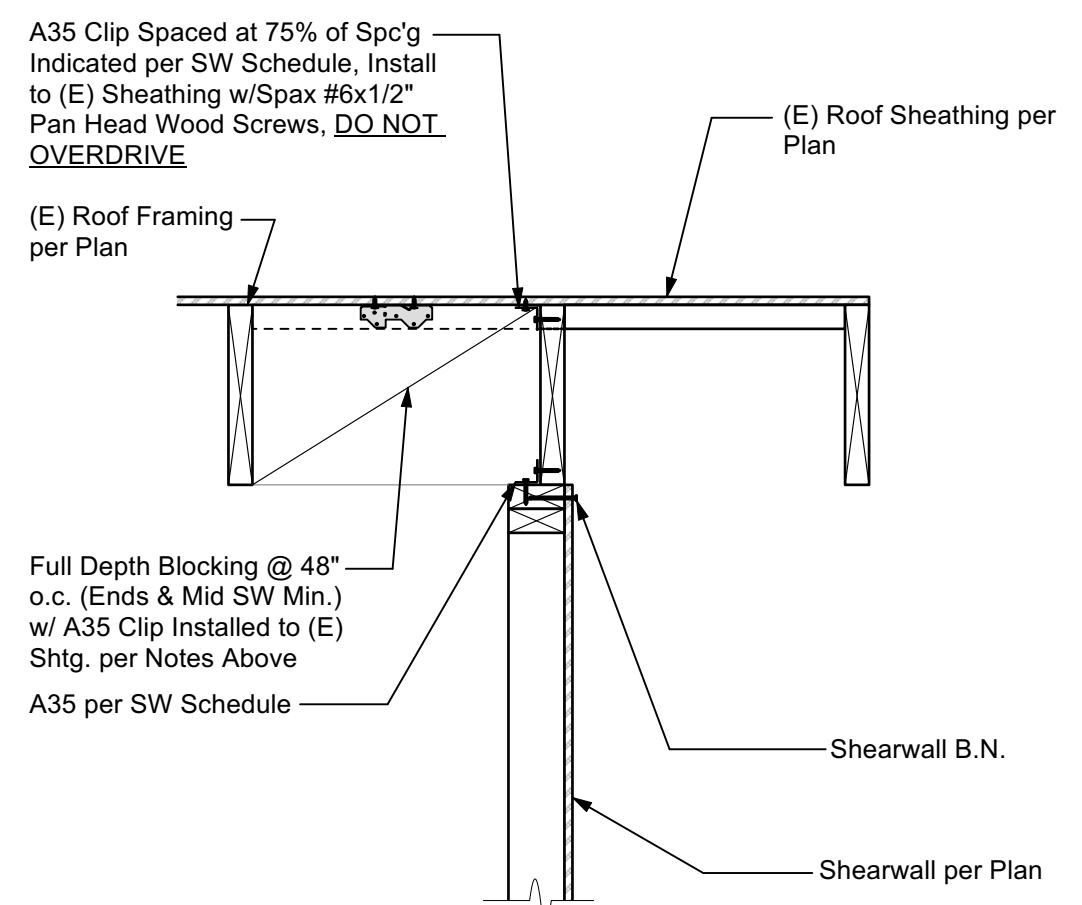
13 KING POST TO BEAM



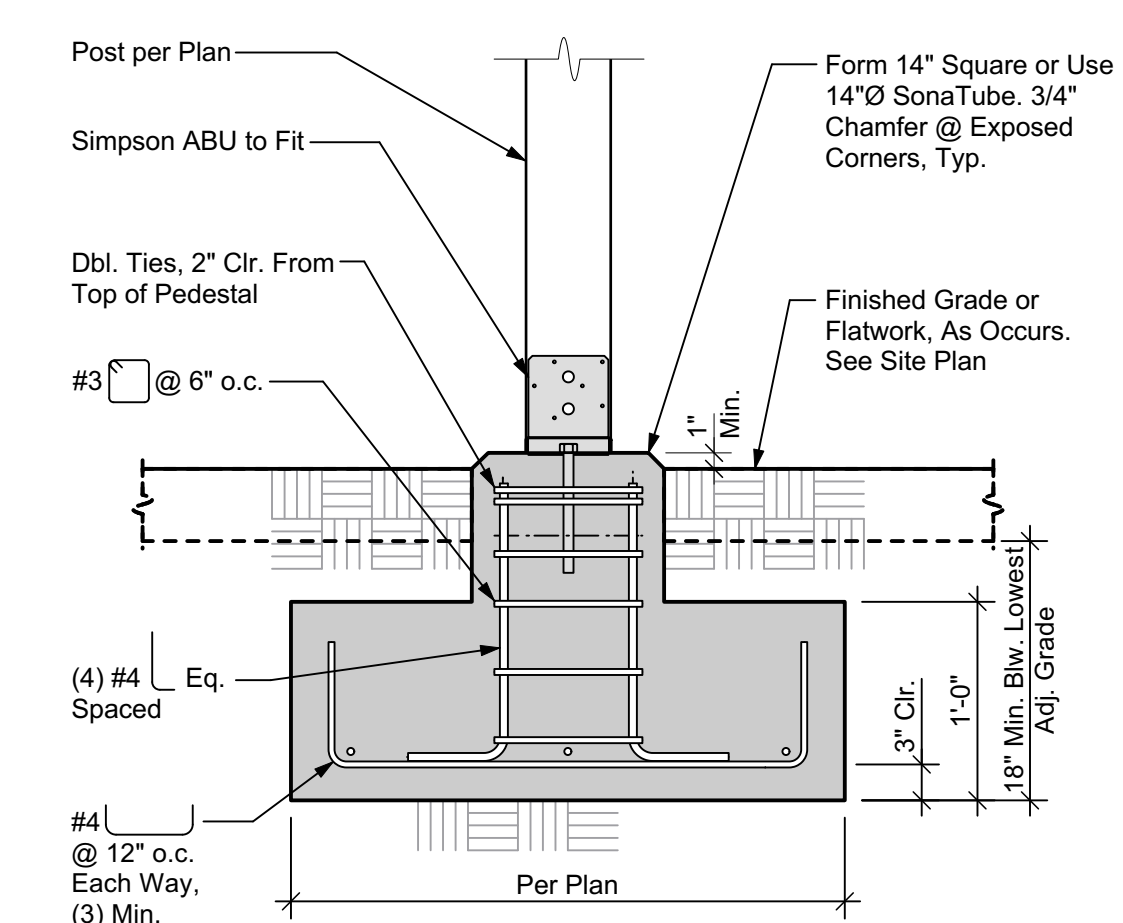
14 TYP. OVERBUILD FRAMING



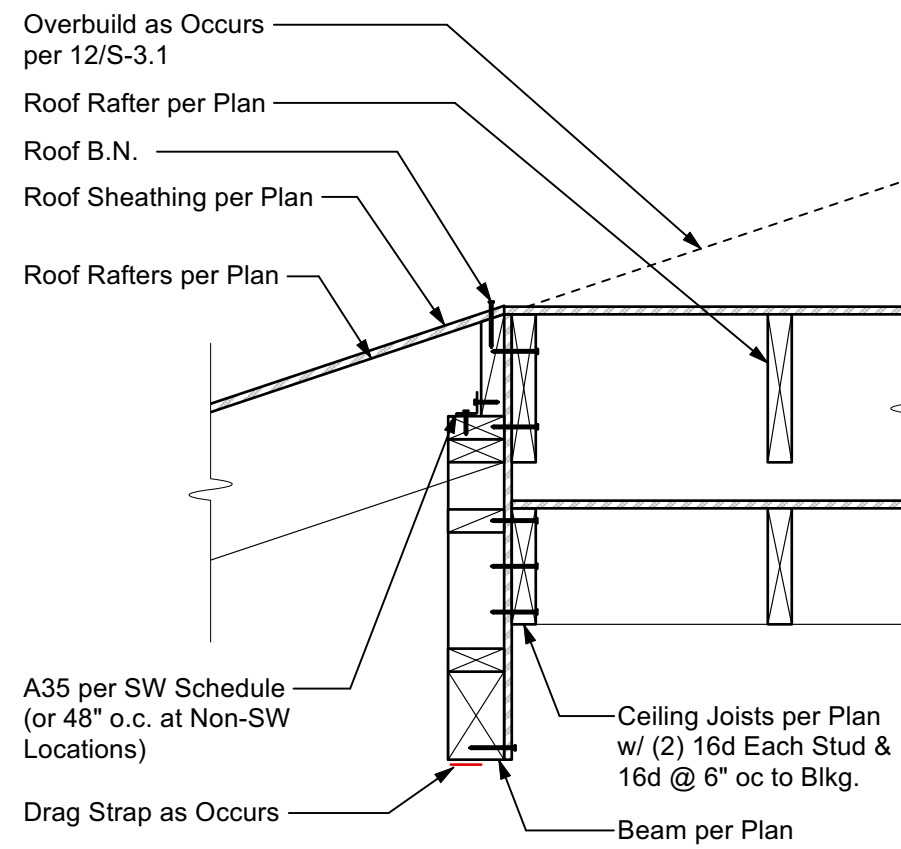
15 SHEAR TRANSFER AT EXISTING ROOF RAFTERS



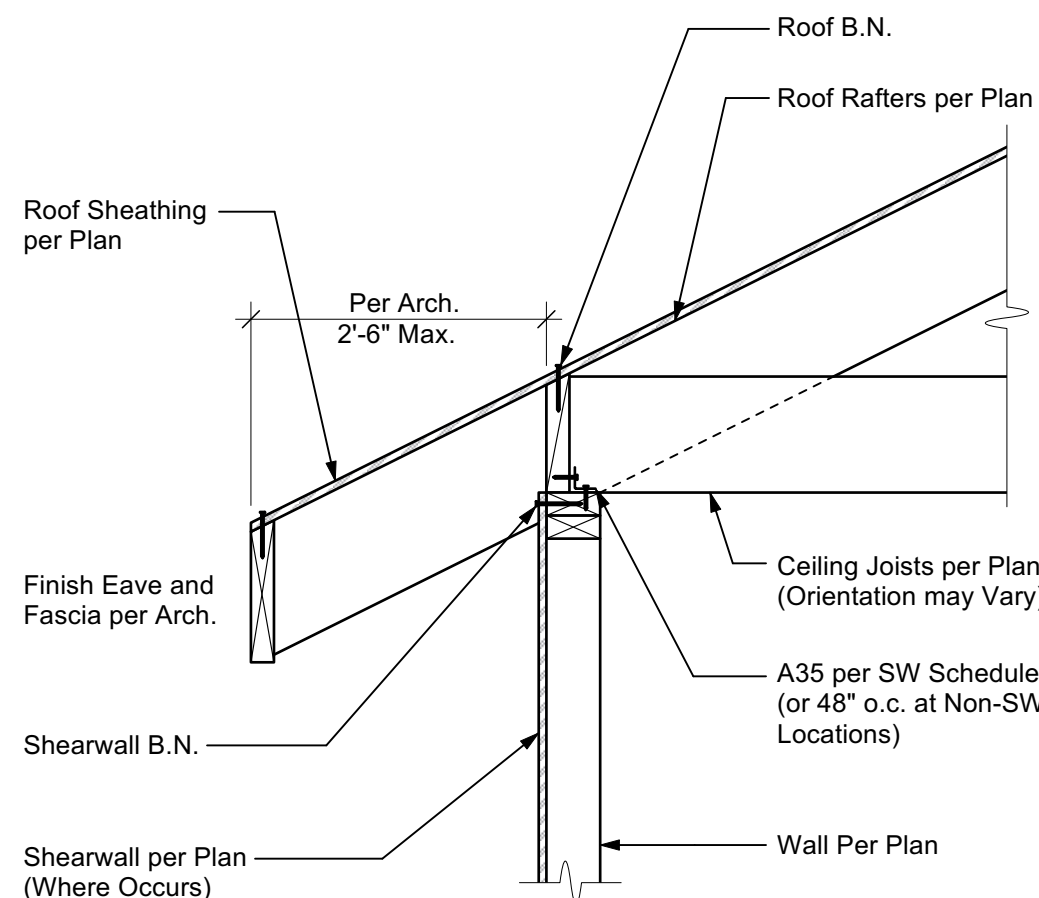
16 SHEAR TRANSFER AT EXISTING ROOF



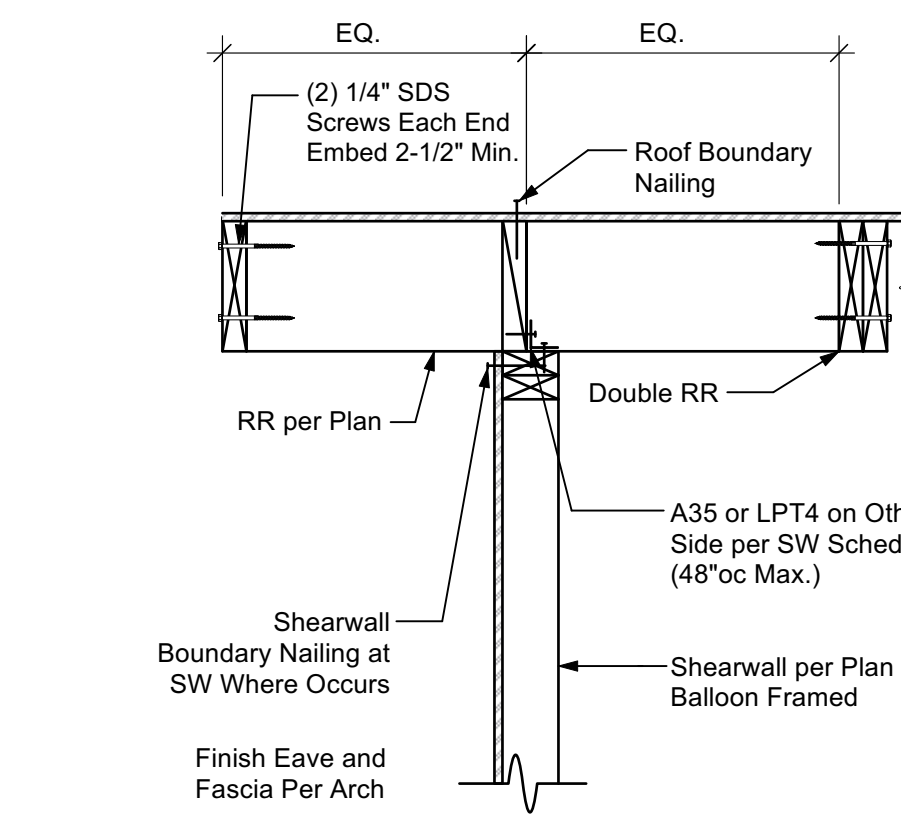
9 TYPICAL EXTERIOR PAD FOOTING



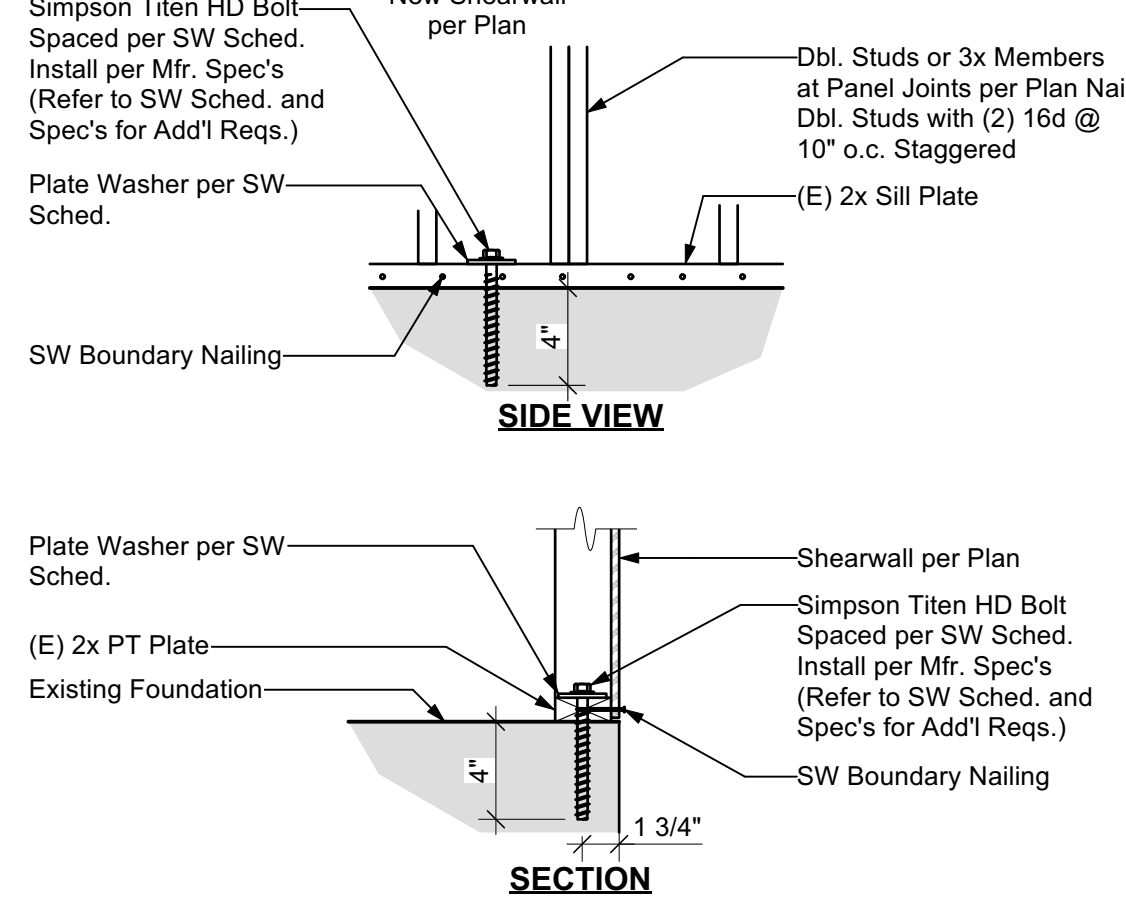
10 FLUSH BEAM AT ROOF



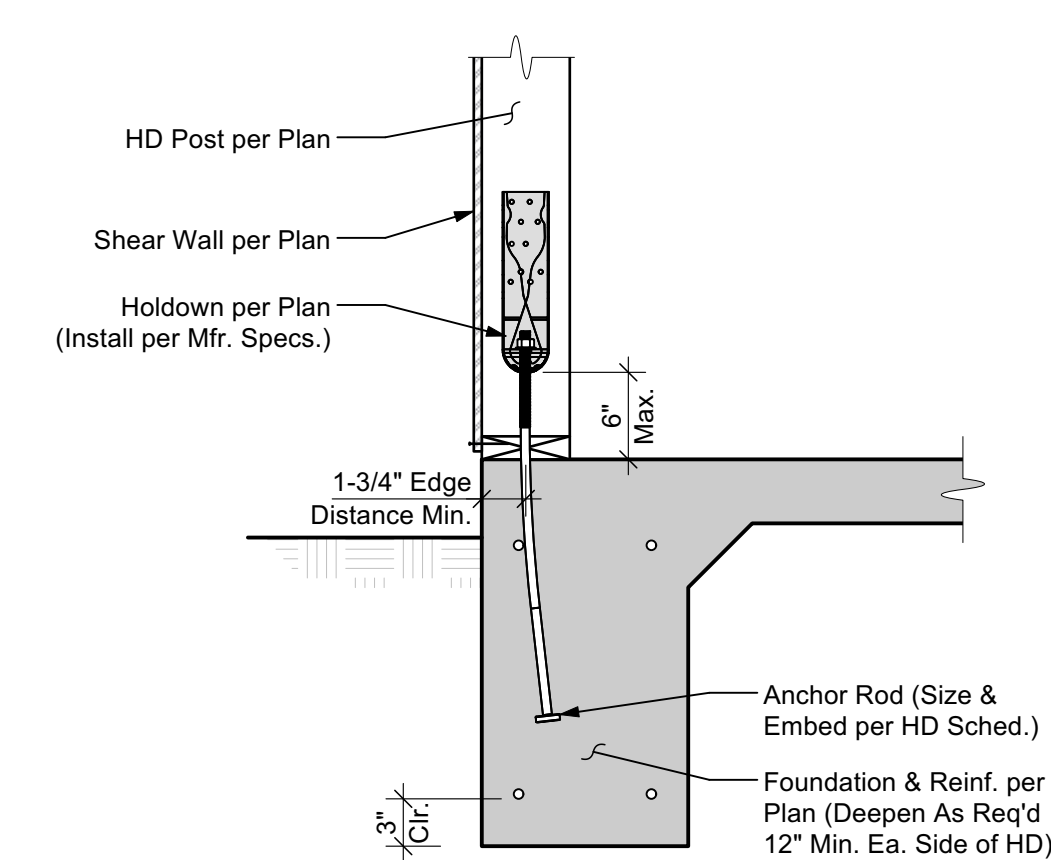
11 SHEAR TRANSFER TO ROOF RAFTERS



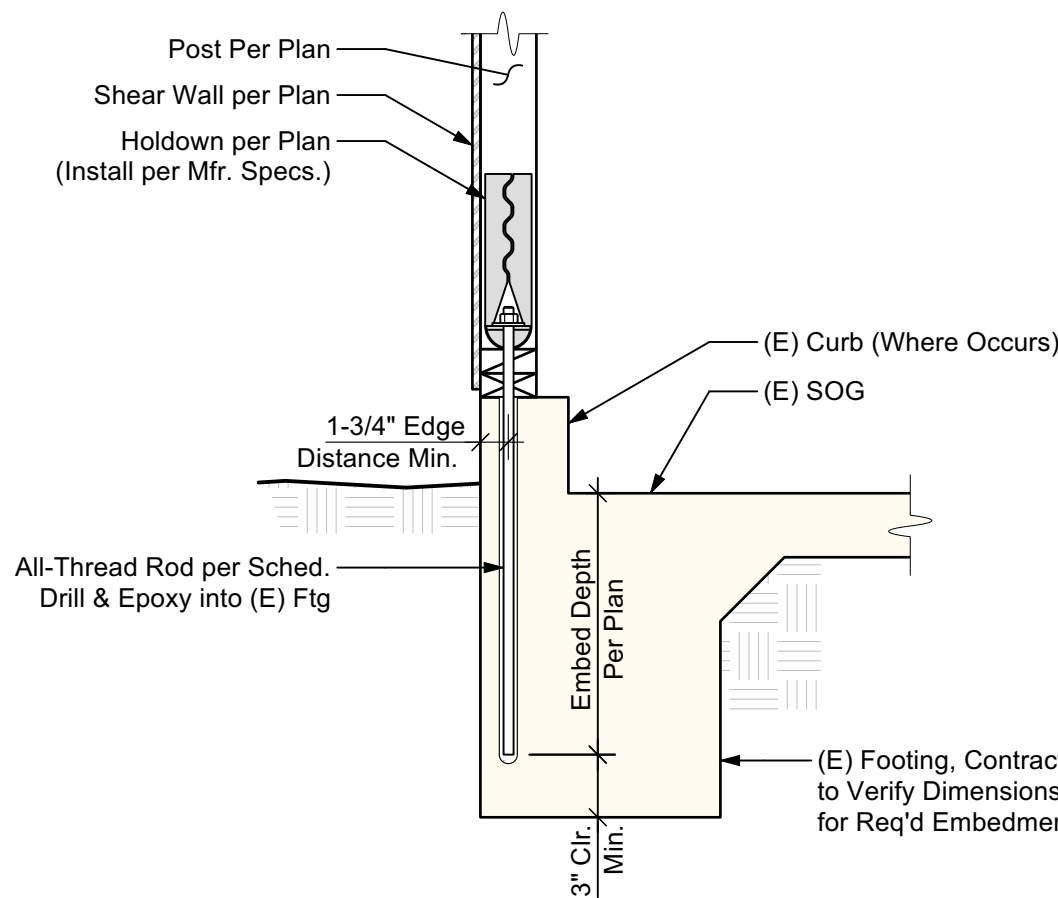
12 SHEAR TRANSFER AT GABLE END



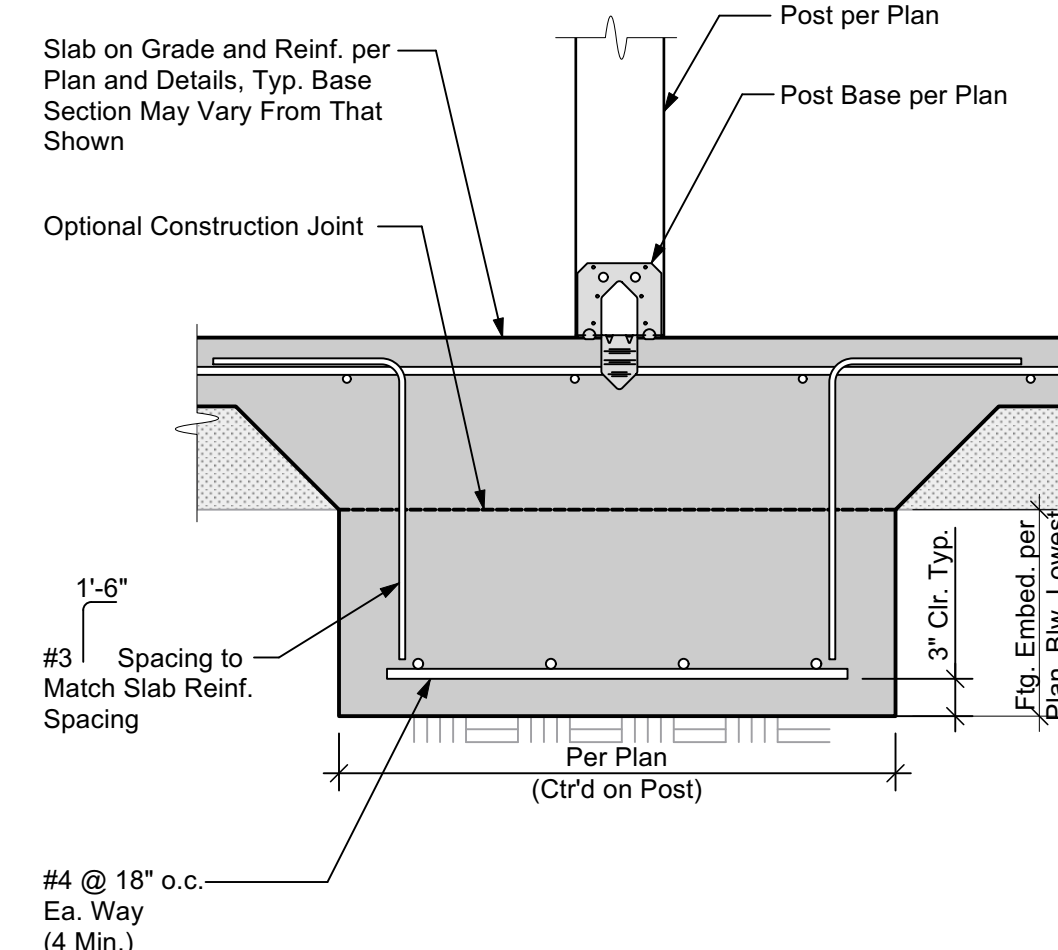
5 SHEAR TO EXISTING SILL PLATE



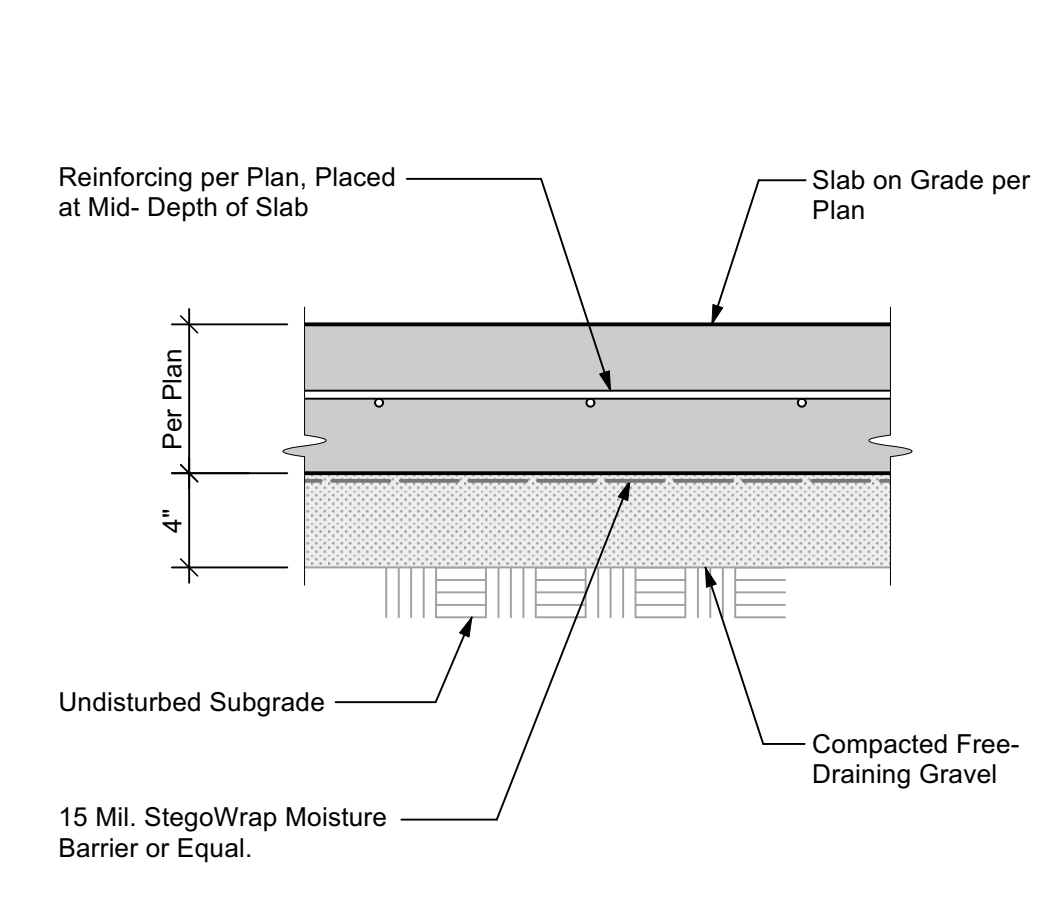
6 HOLDOWN TO FOUNDATION



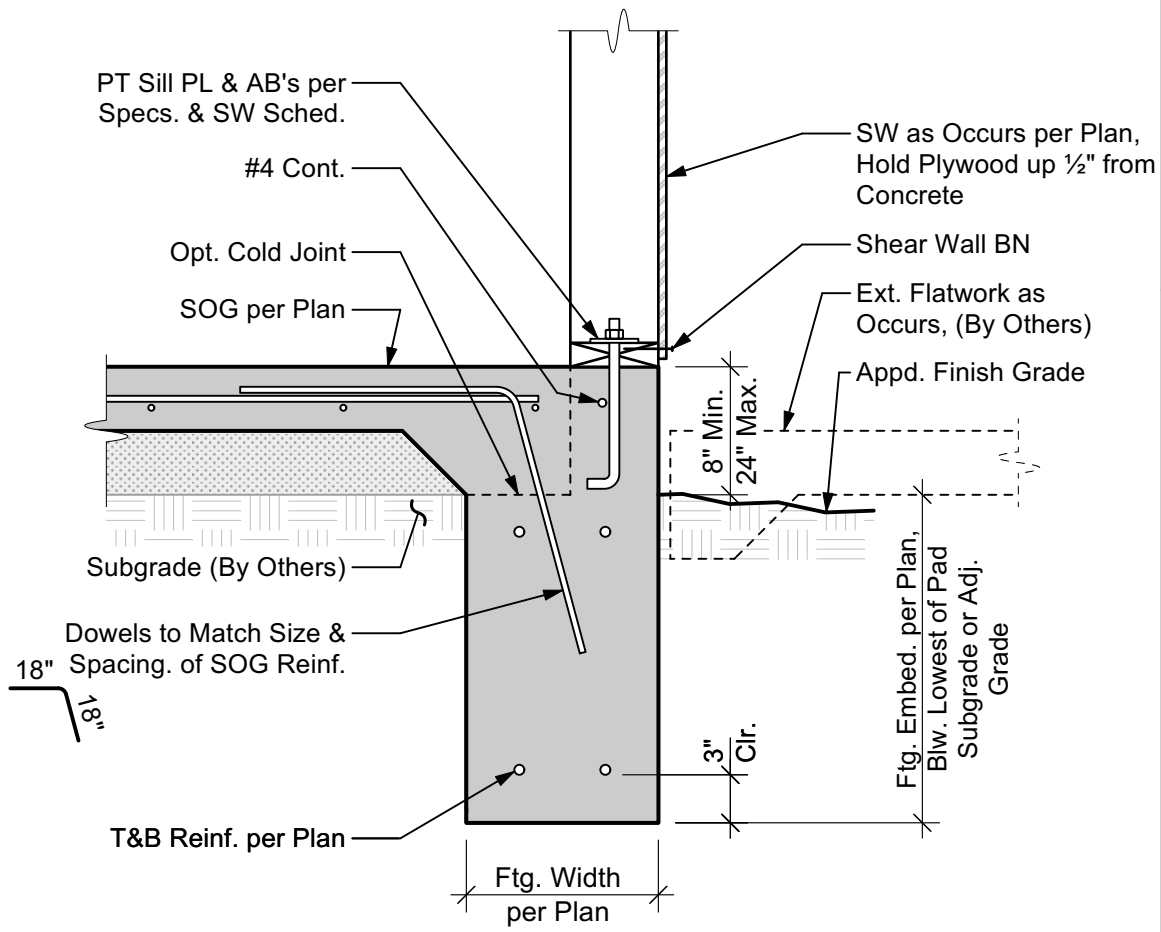
7 HOLDOWN AT EXISTING FOOTING



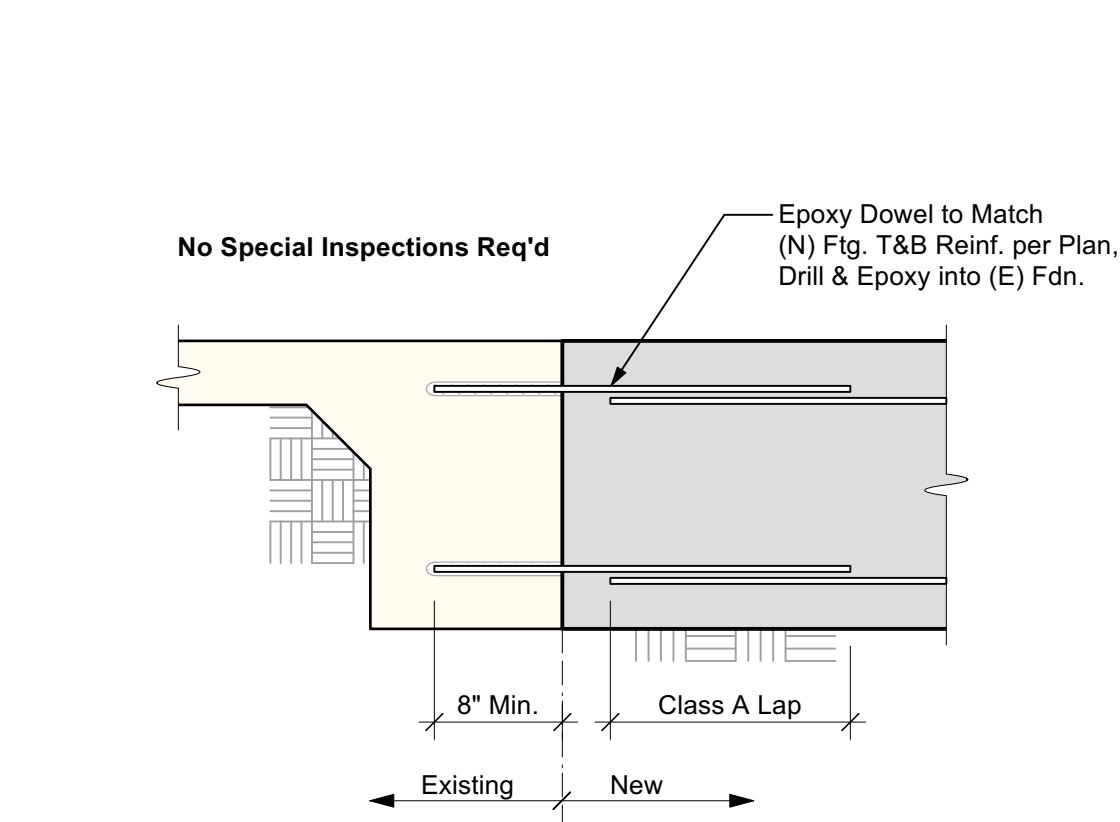
8 TYPICAL INTERIOR PAD FOOTING



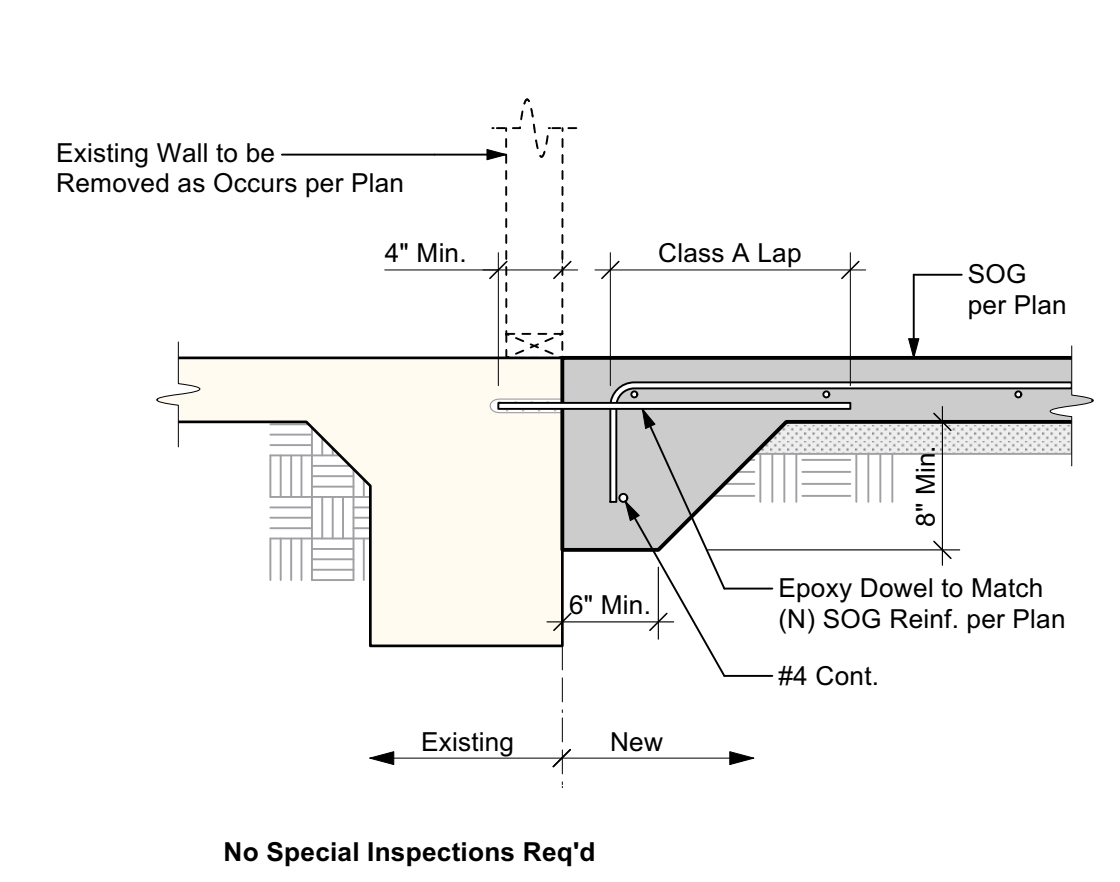
1 TYPICAL SLAB ON GRADE



2 TYPICAL EXTERIOR FOUNDATION



3 NEW FDN. TO EXISTING FDN.



4 NEW SLAB TO EXISTING FDN.

Apr 2, 2026
10:58:03 AM

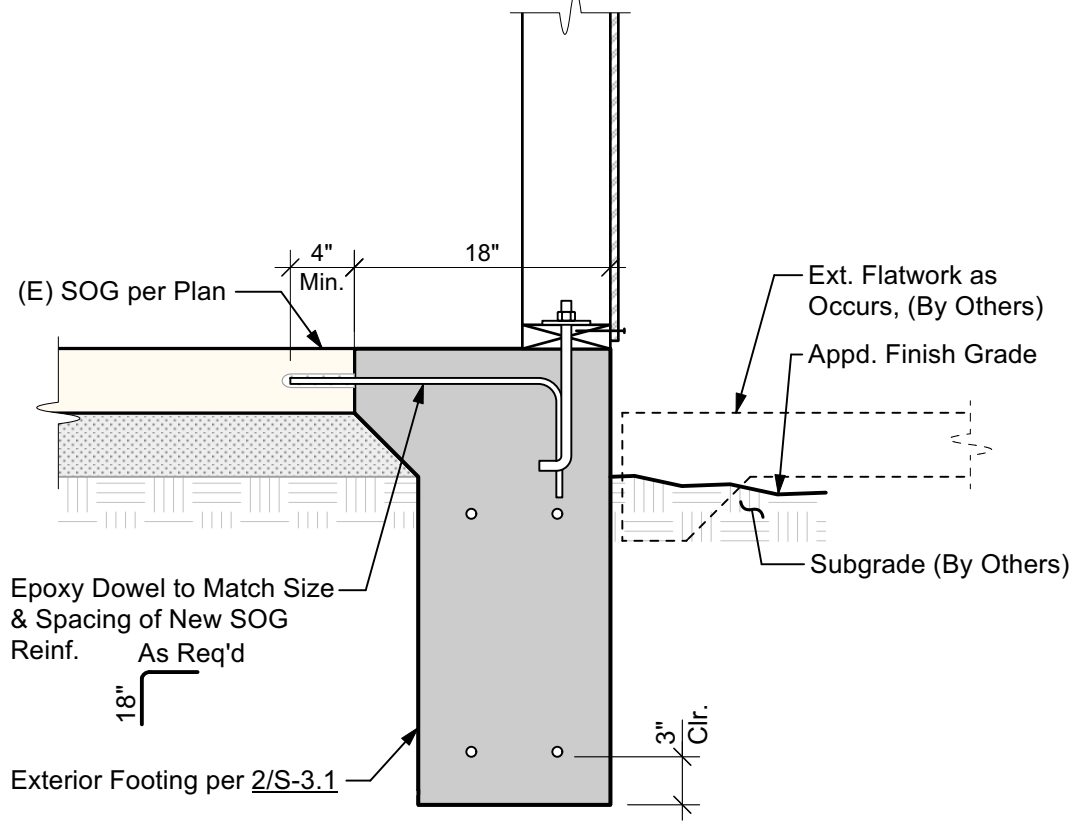
17 NOT USED

13 NOT USED

9 NOT USED

5 NOT USED

1 NEW EXTERIOR FDN. TO EXISTING SLAB



18 NOT USED

14 NOT USED

10 NOT USED

6 NOT USED

2 NOT USED

19 NOT USED

15 NOT USED

11 NOT USED

7 NOT USED

3 NOT USED

20 NOT USED

16 NOT USED

12 NOT USED

8 NOT USED

4 NOT USED



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PROJECT ENGINEER:
Arlene Castillo
(916) 790-3181 x217
arlene@ashleyvance.com

DATE: 04/02/2026	SCALE: NTS
AV JOB: 251477	SHEET SIZE: 24"x36"

STRUCTURAL
DETAILS

S-3.2

DO NOT SCALE THESE DRAWINGS. REFER TO ARCHITECTURAL PLANS FOR ALL DIMENSIONS.

THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF ASHLEY & VANCE ENGINEERING INC. AND ARE RESTRICTED FOR USE ON THE ORIGINAL SITE FOR WHICH THEY WERE PREPARED. REPRODUCTION OR PUBLICATION IN ANY FORM, WHOLE OR IN PART, IS PROHIBITED. VISUAL CONTACT WITH THESE DOCUMENTS CONSTITUTES ACCEPTANCE OF THESE RESTRICTIONS.

RESIDENTIAL CALGREEN PLUMBING NOTES	
1)	ENHANCED DURABILITY AND REDUCED MAINTENANCE: 4.406.1 ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS OR OTHER OPENINGS IN PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY OR SIMILAR METHOD ACCEPTABLE TO THE ENFORCING AGENCY.
2)	BUILDING MAINTENANCE AND OPERATION: 4.410.1 AN OPERATION AND MAINTENANCE MANUAL SHALL BE PROVIDED TO THE BUILDING OCCUPANT OR OWNER.
3)	INDOOR WATER USE A) PLUMBING FIXTURES (WATER CLOSETS AND URINALS) AND FITTINGS (FAUCETS AND SHOWERHEADS) INSTALLED IN RESIDENTIAL BUILDINGS SHALL COMPLY WITH THE PRESCRIPTIVE REQUIREMENTS OF SECTIONS 4.303.1.1 THROUGH 4.303.1.4.4 B) PLUMBING FIXTURES AND FITTINGS REQUIRED IN SECTION 4.303.1 SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE, AND SHALL MEET THE APPLICABLE REFERENCED STANDARDS.

PIPING SCHEDULE			
TYPE	SIZE	JOINING METHOD	NOTES
SANITARY WASTE BELOW GRADE	ALL	SOLVENT	ABS
SANITARY WASTE ABOVE GRADE	ALL	SOLVENT	ABS
SANITARY VENT	ALL	SOLVENT	ABS
CONDENSATE PIPING	ALL	SOLVENT	PVC/CPVC
CONDENSATE PIPING EXPOSED	ALL	SOLVENT	PVC/CPVC (PROTECTED WITH WATER-BASED LATEX PAINT)
DOMESTIC WATER	ALL	95/5 SOLDER	TYPE "L" OR "K" COPPER W/SEISMIC BRACING
SANITARY WASTE/VENT	BELOW GRADE	SERVICE WEIGHT CAST IRON	NO-HUB COUPLING
	ABOVE GRADE	SERVICE WEIGHT CAST IRON	NO-HUB COUPLING

PLUMBING FIXTURE CONNECTION SCHEDULE						
FIXTURE TAG	FIXTURE TYPE	TRAP SIZE	WASTE SIZE	VENT SIZE	CW SIZE	HW SIZE
CW-1	CLOTHES WASHER	2"	2"	1-1/2"	1/2"	1/2"
DW-1	DISHWASHER	1-1/2"	2"	1-1/2"	-	1/2"
SK-1	KITCHEN SINK	1-1/2"	2"	1-1/2"	1/2"	1/2"
HB-1	HOSE BIBB	-	-	-	1/2"	-
LAV-1	LAVATORY	1-1/4"	1-1/2"	1-1/4"	1/2"	1/2"
SH-1	SHOWER	2"	2"	1-1/2"	1/2"	1/2"
WC-1	WATER CLOSET - GRAVITY	INTEGRAL	3"	2"	1/2"	-

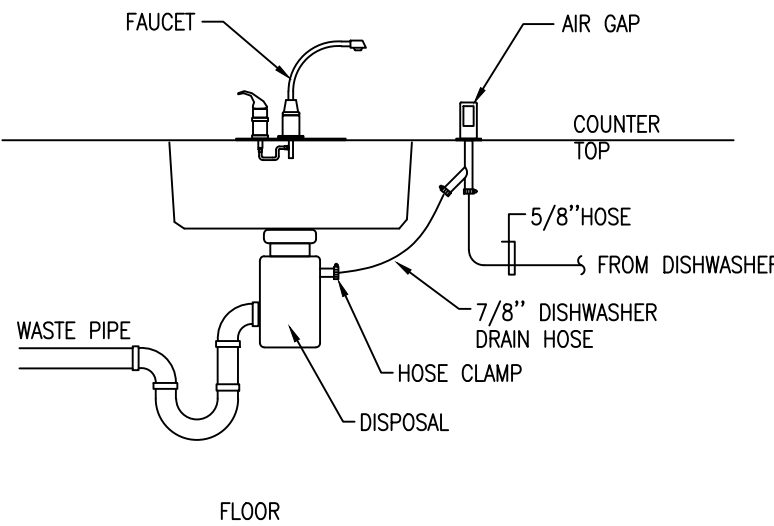
PIPE INSULATION SCHEDULE				
TYPE	DIAMETER SIZE (INCHES)	FLUID TEMP RANGE (°F)	INSULATION CONDUCTIVITY (BTU*INCH/HR*FT²*F)	INSULATION THICKNESS (INCHES)
DOMESTIC HOT WATER	<1	105-140	0.22-0.28	1
DOMESTIC HOT WATER	1 OR LARGER	105-140	0.22-0.28	1-1/2

HEAT PUMP TANK WATER HEATER SCHEDULE												
SYMBOL	MANU.	MODEL NO.	LOCATION	SERVES	CAPACITY (GAL)	FIRST HOUR RATING (GPH)	INPUT MBH (KW)	ELECTRICAL			WEIGHT (LBS)	REMARKS
								HP	VOLTAGE	AMPS		
WH-1	RHEEM	XE80T10HS45U1	INTERIOR CLOSET	RESIDENCE	72	87	(5.5)	-	230-1Ø-60Hz	-	306	INSTALL TMW-1 TO ENSURE 120°F SETPOINT

PLUMBING FIXTURE SCHEDULE																
TAG	FIXTURE	TYPE	MOUNTING	MANU.	MODEL NO.	WATER SUPPLY			DRAIN		PIPE SIZES					REMARKS
						MANU.	MODEL NO.	MAX GPM/GPF	TYPE	SIZE	WASTE	VENT	CW	HW		
BT-1	BATHTUB/SHOWER	—	FLOOR	COORDINATE MODEL SELECTION WITH OWNER	COORDINATE MODEL SELECTION WITH OWNER	—	—	—	P-TRAP	1-1/2"	1-1/2"	1-1/4"	1/2"	1/2"		
CW-1	CLOTHES WASHER	—	FLOOR	COORDINATE MODEL SELECTION WITH OWNER	COORDINATE MODEL SELECTION WITH OWNER	—	—	—	P-TRAP	2"	2"	1-1/2"	1/2"	1/2"		
DW-1	DISHWASHER	RESIDENTIAL	UNDER COUNTER	COORDINATE MODEL SELECTION WITH OWNER	COORDINATE MODEL SELECTION WITH OWNER	—	—	—	INDIRECT	1-1/2"	2"	1-1/2"	—	1/2"	SHALL COMPLY WITH UL 749	
HB-1	HOSE BIBB	—	WALL	WOODFORD	26	—	—	—	—	—	—	—	1/2"	—	BACKFLOW PROTECTED, ASSE STANDARD 1052	
LAV-1	LAVATORY (1X FAUCET MOUNTING HOLES)	METERED	UNDER COUNTER	COORDINATE MODEL SELECTION WITH OWNER	MOEN	WSL84733	1.2	P-TRAP	1-1/4"	1-1/2"	1-1/4"	1/2"	1/2"		OR EQUIVALENT, ADA COMPLIANT, BATTERY POWERED SENSOR ACTIVATED	
	LAVATORY (3X FAUCET MOUNTING HOLES-CENTERSET)	METERED	UNDER COUNTER	COORDINATE MODEL SELECTION WITH OWNER	MOEN	WS84633SRN	1.2	P-TRAP	1-1/4"	1-1/2"	1-1/4"	1/2"	1/2"		OR EQUIVALENT, ADA COMPLIANT, BATTERY POWERED SENSOR ACTIVATED, PROVIDE 4" CENTERSET HOLES	
SH-1	SHOWER	—	—	COORDINATE MODEL SELECTION WITH OWNER	DELTA ARVO	142840-SP-1	1.8	P-TRAP	2"	2"	1-1/2"	1/2"	1/2"		OR EQUIVALENT, ADA COMPLIANT	
SK-1	SINK (1X FAUCET MOUNTING HOLES)	SINGLE COMPARTMENT	DROP-IN	COORDINATE MODEL SELECTION WITH OWNER	MOEN	7423	2.0	P-TRAP	1-1/2"	2"	1-1/2"	1/2"	1/2"		OR EQUIVALENT, INSTALL 3/4 HP COMPACT GARBAGE DISPOSAL	
	SINK (3X FAUCET MOUNTING HOLES-WIDESPREAD)	SINGLE COMPARTMENT	DROP-IN	COORDINATE MODEL SELECTION WITH OWNER	MOEN	7425	2.0	P-TRAP	1-1/2"	2"	1-1/2"	1/2"	1/2"		OR EQUIVALENT, INSTALL 3/4 HP COMPACT GARBAGE DISPOSAL	
TMV-1	THERMOSTATIC MIXING VALVE	—	—	WATTS	LFMMV-M1	—	—	—	—	—	—	—	1/2"	1/2"	ASSE STANDARD 1017, 1069, AND 1070 LISTED, 0.5-12 GPM FLOW RATING	
WC-1	WATER CLOSET	GRAVITY	FLOOR	AMERICAN STANDARD	3378AB.128	—	—	1.28	INTEGRAL P-TRAP	—	3"	2"	1/2"	—	OR EQUIVALENT, ADA COMPLIANT, ELONGATED OPEN FRONT SEAT	
NOTES: COORDINATE ALL TRIM AND ACCESSORY OPTIONS WITH OWNER EQUIVALENT FIXTURES ACCEPTABLE CONTINGENT ON OWNER APPROVAL																

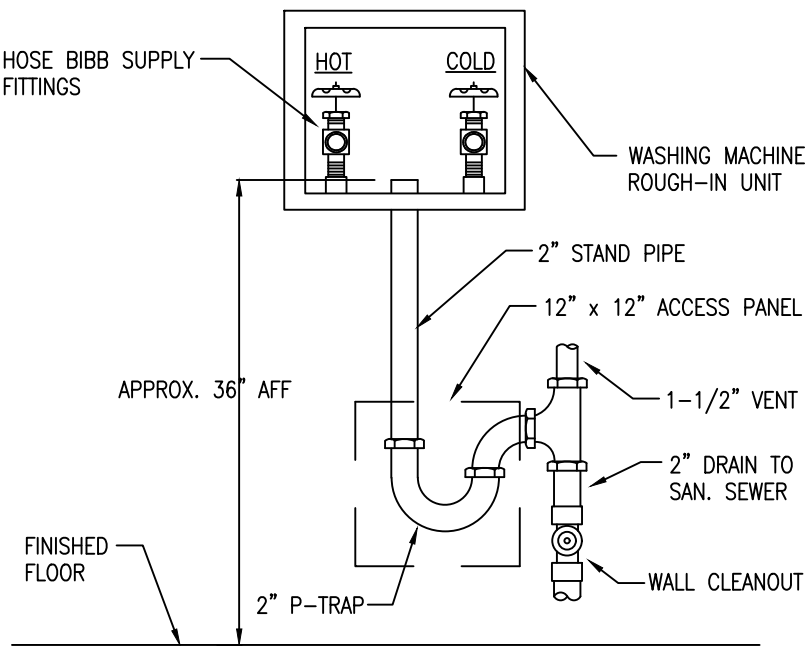
NOTES: COORDINATE ALL TRIM AND ACCESSORY OPTIONS WITH OWNER
EQUIVALENT FIXTURES ACCEPTABLE CONTINGENT ON OWNER APPROVAL

WATER AND SEWER SERVICE CALCULATION									
FIXTURE TYPE	NO.	SEWER		COLD WATER		HOT WATER		TOTAL WATER	
		FU	TOTAL	FU	TOTAL	FU	TOTAL	FU	TOTAL
BATH TUB/SHOWER	1	2	2	4	4	3	3	4	4
CLOTHES WASHER	1	3	3	4	4	3	3	4	4
DISHWASHER	1	2	2	0	0	1.5	1.5	1.5	1.5
HOSE BIBB (FIRST)	1	0	0	2.5	2.5	0	0	2.5	2.5
HOSE BIBB (ADDITIONAL)	1	0	0	1	1	0	0	1	1
KITCHEN SINK (DOMESTIC)	1	2	2	1.5	1.5	1.125	1.125	1.5	1.5
LAVATORY	2	1	2	1	2	0.75	1.5	2	2
SHOWER	1	2	2	2	2	1.5	1.5	2	2
WATER CLOSET - GRAVITY	2	3	6	2.5	5	0	0	5	5
MISC. EQUIP (ICE, SODA, COFFEE)	1	1	1	0.5	0.5	0	0	0.5	0.5
EXISTING DEMAND	1	29	29	30	30	15.375	15.375	31.5	31.5
TOTAL FU			49.0		52.5		27.0		55.5
EQUIVALENT COLD WATER FLOWRATE (GPM): 30									
PRESSURE AVAILABLE AT MAIN (PSI): 50									
MINIMUM REQUIRED FIXTURE PRESSURE (PSI): 8									
ELEVATION LOSS (PSI): 1.3								# OF FLOORS: 1	
METER LOSS (PSI): 6.2								SIZE (INCHES): 1	
BACKFLOW PREVENTER LOSS (PSI): 10									
EQUIVALENT PIPE LENGTH FROM METER TO MOST REMOTE FIXTURE (FT): 150									
FRICTION LOSS PRESSURE AVAILABLE (PSI): 24.50									
MAXIMUM ALLOWABLE FRICTION LOSS (PSI/100 FT): 13.07									
MINIMUM REQUIRED "WATER" PIPE SIZE (INCHES): 1.25									
MINIMUM REQUIRED "SEWER" PIPE SIZE (INCHES): 4									
SIZE: TYPE L COPPER									
NOMINAL DIAMETER (INCHES)	INTERNAL DIAMETER	CW MAX FLOW		CW FIXTURE UNIT		HW MAX FLOW		HW FIXTURE UNIT	
		GPM	FPS	FLUSH TANK		GPM	FPS		
0.5	0.545	3.9	5.3	4		3.6	5.0	4	
0.75	0.785	10.1	6.7	13		7.5	5.0	10	
1	1.025	20.4	7.9	30		12.9	5.0	18	
1.25	1.265	31.3	8.0	56		19.6	5.0	30	
(CALCULATIONS PER CPC APPENDIX A)									



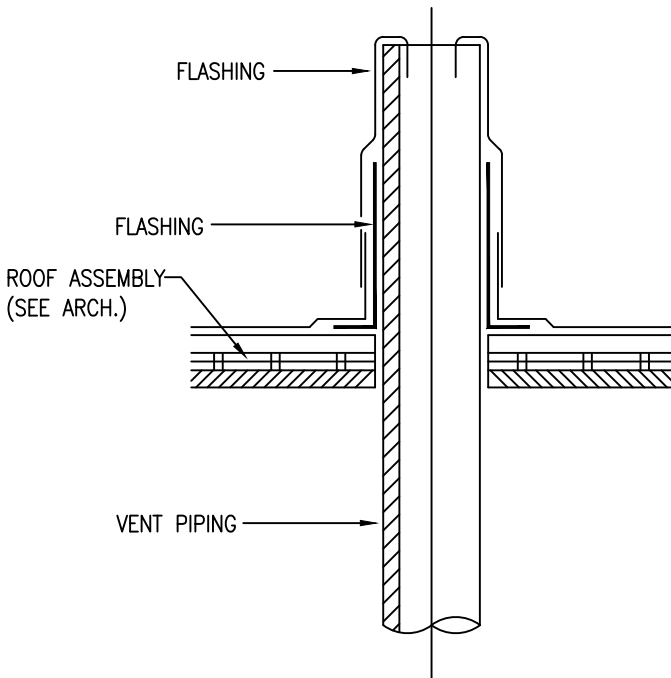
DISHWASHING MACHINE DRAIN

1



WASHING MACHINE HOOK-UP

2



VENT THROUGH ROOF

3

PLUMBING SHEET INDEX	
P0	PLUMBING SCHEDULES, CALCULATIONS, & GENERAL NOTES
P1	PLUMBING PLAN – WATER
P2	PLUMBING PLAN – SEWER & VENT
P3	PLUMBING DETAILS

PLUMBING SCOPE OF WORK	
1)	INSTALLATION OF NEW WATER AND SEWER SERVICE FOR (N) ADU TO BE COORDINATED WITH THE LOCAL UTILITY PROVIDER
2)	INSTALLATION OF ALL COLD AND HOT WATER PIPING AND FITTINGS FOR NEW FIXTURES FOR (N) ADU
3)	INSTALLATION OF ALL SEWER AND VENT PIPING AND FITTINGS FOR NEW FIXTURES FOR (N) ADU
4)	INSTALLATION OF ALL GAS PIPING AND FITTINGS FOR NEW HVAC UNITS AND WATER HEATERS FOR (N) ADU

PLUMBING LEGEND	
—CW—	COLD WATER
—HW—	HOT WATER
—NG—	NATURAL GAS
SS	SANITARY SEWER
SSV	SANITARY SEWER VENT
VTR	VENT THRU ROOF
AFF	ABOVE FINISHED FLOOR
BF	BELOW FLOOR
FA, TB	FROM ABOVE, TO BELOW
FB, TA	FROM BELOW, TO ABOVE
FU	FIXTURE UNITS
GPM	GALLONS PER MINUTE
TMV	THERMOSTATIC MIXING VALVE
POC	POC – POINT OF CONNECTION
POC	GAS POC
POC	COLD WATER POC
POC	CONDENSATE POC
POC	CLEANOUT
POC	HOSE BIBB
POC	SHUT-OFF VALVE
POC	PUMP

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REGISTERED PROFESSIONAL ENGINEER

DAVID M. BATIST

No. M36994

EXP. 09-30-2026

STATE OF CALIFORNIA

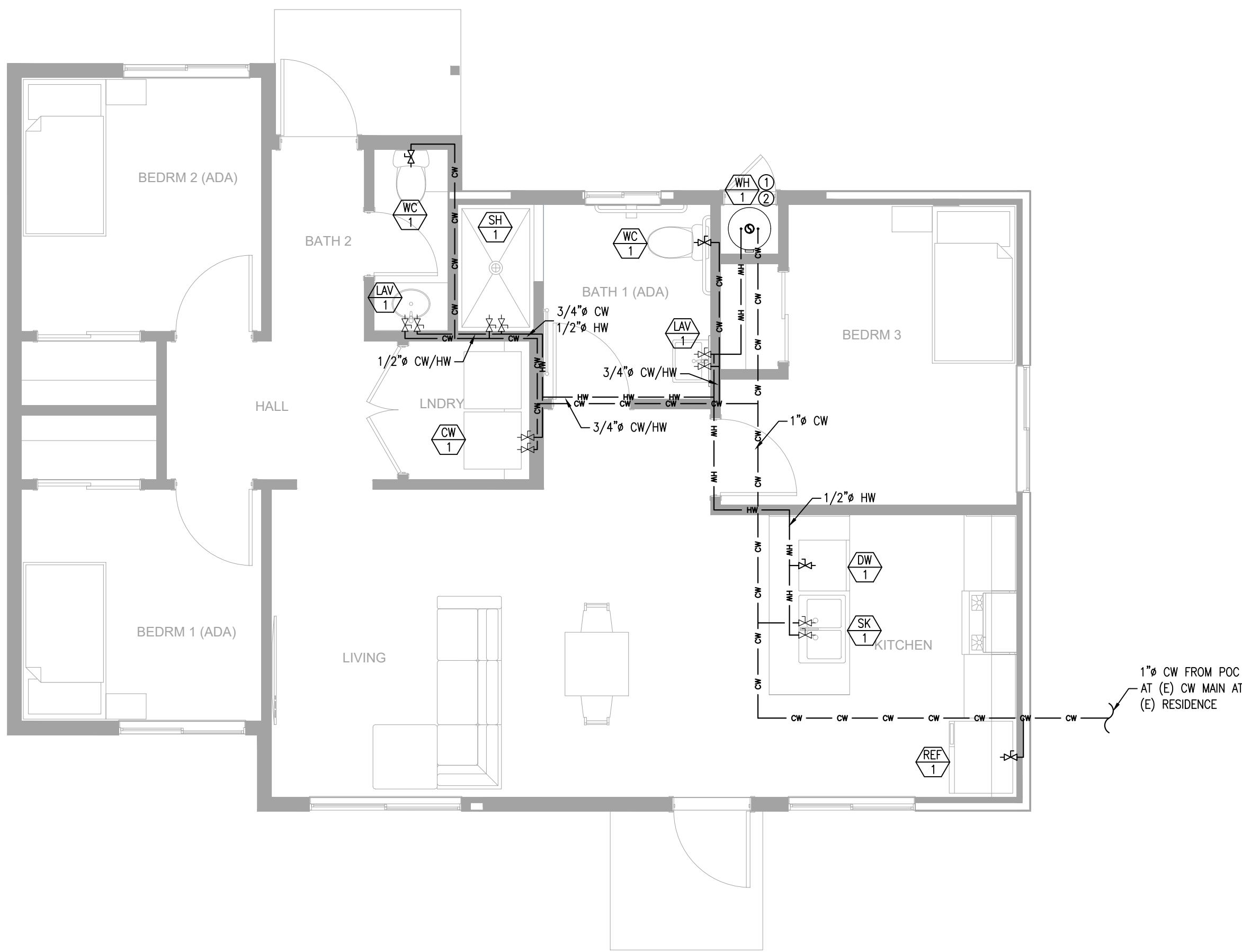
DATE SIGNED: 05-01-26

EAST EMPIRE RESIDENCE

135 EAST EMPIRE STREET

GRASS VALLEY, CA. 95945

ISSUED FOR	DATE
PERMIT	04-02-26
PLAN CHECK #1	05-01-26
PROJECT NUMBER	25341
SHEET TITLE	PLUMBING GENERAL NOTES, CALCS, DETAILS, & GAS ISOMETRIC
SHEET NO.	P0



A PLUMBING PLAN - WATER
SCALE: 1/4"=1'-0"



SHEET NOTES:

- (E) EXISTING
(N) NEW
- ALL EQUIPMENT, FITTINGS, FIXTURES, AND PIPING ARE (N) U.O.N.
- ALL PLUMBING FIXTURE FLOW RATES SHALL COMPLY WITH CGBC 4.303.1
- ALL DOMESTIC HOT WATER POTABLE PIPING SYSTEMS SHALL BE INSULATED, AND THE INSULATION THICKNESS SHALL BE BASED ON THE CONDUCTIVITY RANGE IN TABLE 120.3-A. REFERENCE THE 2025 CALIFORNIA ENERGY CODE SECTION 150.0 (J).
- NEW WATER PIPING SHALL NOT BE INSTALLED IN OR UNDER A CONCRETE SLAB RESTING ON GRADE AND NEW SLABS SHALL NOT BE INSTALLED OVER EXISTING WATER PIPING. EXCEPTION: SHORT BRANCHES THAT SERVE ONLY AN ISOLATED ISLAND TYPE FIXTURE.
- ENSURE INSTALLATION OF BACKFLOW PREVENTION DEVICE
- CONTROL VALVES AND SHOWER HEADS SHALL BE LOCATED ON THE SIDEWALL OF SHOWER COMPARTMENT OR OTHERWISE ARRANGED SO THAT THE SHOWERHEAD DOES NOT DISCHARGE DIRECTLY AT THE ENTRANCE TO THE COMPARTMENT AND THE BATHER CAN ADJUST THE VALVES PRIOR TO STEPPING INTO THE SHOWER SPRAY PER CPC 408.10
- ENSURE ALL HOSE BIBBS HAVE APPROVED ANTI-SIPHON DEVICE PER CPC 603.3
- PROTECT ALL PLASTIC AND COPPER PIPING RUNNING THROUGH FRAMING MEMBERS WITHIN 1" OF EXPOSED FRAMING WITH MIN. 18 GAUGE STEEL NAIL PLATES
- LOW FLOW PLUMBING FIXTURE FLOW RATES:
RESIDENTIAL LAVATORY FAUCETS:
THE MAXIMUM FLOW RATE OF RESIDENTIAL LAVATORY FAUCETS SHALL NOT EXCEED 1.2 GPM AT 60 PSI. THE MINIMUM FLOW RATE OF RESIDENTIAL LAVATORY FAUCETS SHALL NOT BE LESS THAN 0.8 GPM AT 20 PSI PER CPC 407.2.2
SINGLE SHOWERHEAD (TUB/SHOWER COMBO):
SHOWERHEADS SHALL HAVE A MAXIMUM FLOW RATE OF NOT MORE THAN 1.8 GPM AT 80 PSI. SHOWERHEADS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE SPECIFICATION FOR SHOWERHEADS IN COMPLIANCE WITH CHAPTER 5, DIVISION 5.3, OF THE CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN) PER CPC 408.2.1
WATER CLOSETS:
THE EFFECTIVE FLUSH VOLUME OF ALL WATER CLOSETS SHALL NOT EXCEED 1.28 GALLONS PER FLUSH.
TANK-TYPE WATER CLOSETS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE SPECIFICATION FOR TANK-TYPE TOILETS IN COMPLIANCE WITH CHAPTER 5, DIVISION 5.3, OF THE CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN) PER CPC 411.2.4
- ENSURE REGULAR INSPECTION OF SEPTIC TANK AND PUMPING AS REQUIRED TO ENSURE PROLONGED SYSTEM LIFE
- ENSURE HOUSEHOLD WATER USE REMAINS WITHIN THE SEPTIC SYSTEM'S DESIGNED CAPACITY BY ENSURING A FLOW METER IS INSTALLED ON EACH WELL

KEY NOTES:

- INSTALL TMV-1 TO ENSURE TEMPERATURE NO GREATER THAN 120°F. PROVIDE ISOLATION VALVES WITH HOSE BIBBS TO ALLOW FOR FLUSHING
- 1" CW / 3/4" HW CONNECTIONS AT WATER HEATER



DATE SIGNED 05-01-26

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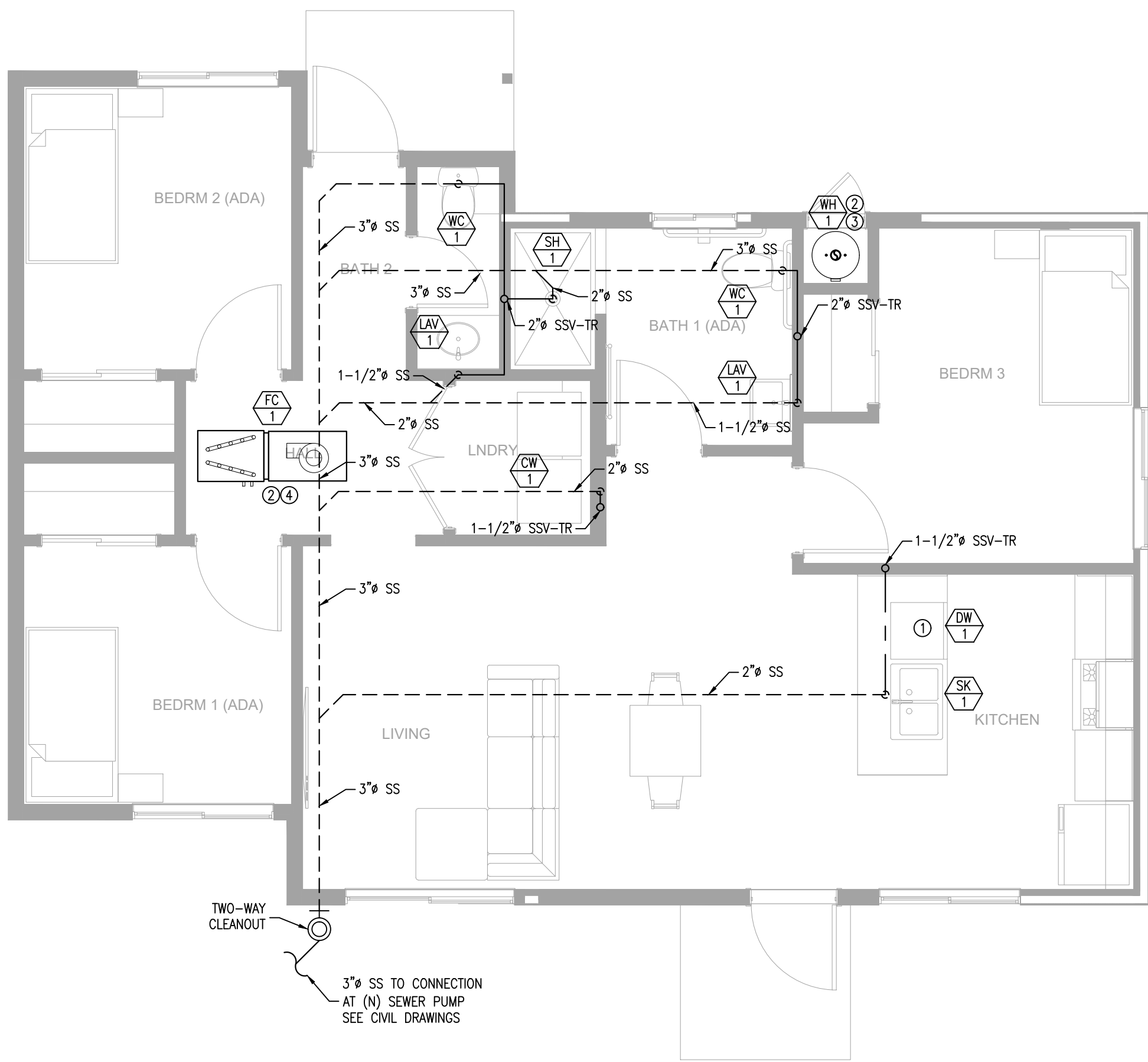
PROJECT NUMBER 25341

SHEET TITLE

PLUMBING PLAN -
WATER

SHEET NO.

P1



PLUMBING PLAN - SEWER & VENT
SCALE: 1/4"=1'-0"



- SHEET NOTES:**
1. (E) EXISTING
(N) NEW
 2. ALL EQUIPMENT, FITTINGS, FIXTURES, AND PIPING ARE (N) U.O.N.
 3. ENSURE 1/4" PER 1 FT. SLOPE FOR SANITARY SEWER PIPING
 4. ENSURE MINIMUM 1/8" PER FOOT SLOPE FOR ALL CONDENSATE PIPING AND INSTALL PER CPC 814. ALL CONDENSATE PIPING SHALL BE 3/4" U.O.N. OR LARGER IF RECOMMENDED BY THE MANUFACTURER
 5. ENSURE CLEANOUT TO GRADE EXISTS
 6. PROVIDE WALL CLEANOUTS AT ALL LAVATORIES AND HAND SINKS
 7. NO UNDER-FLOOR CLEANOUT SHALL BE LOCATED MORE THAN 5 FEET FROM AN ACCESS DOOR, TRAP DOOR, OR CRAWL HOLE. CPC 707.9

- KEY NOTES:**
- ① DISHWASHER TO DRAIN TO GARBAGE DISPOSAL IN SINK
 - ② PVC CONDENSATE TO DRAIN TO APPROVED RECEPTOR
 - ③ RELIEF VALVE TO DRAIN TO APPROVED LOCATION
 - ④ SECONDARY CONDENSATE FROM SECONDARY CONTAINMENT PAN, DRAIN TO VISIBLE LOCATION PER CMC 310.2(2)



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GRASS VALLEY, CA. 95945

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PROJECT NUMBER 25341

SHEET TITLE

PLUMBING PLAN - SEWER & VENT

SHEET NO.

P2



GENERAL NOTES

- 1) CONTRACTOR TO EXAMINE THE PROPOSED WORK SITE AND BECOME FAMILIAR WITH ALL JOB CONDITIONS AFFECTING THE WORK SHOWN. CONTRACTOR(S) SHALL FIELD-VERIFY SITE CONDITIONS INCLUDING LOCATIONS AND SIZES OF EXISTING PIPING, VALVES, CLEANOUTS, WASTE MAINS, GAS METERS, ETC., AND BIDS SHALL BE BASED ON ACTUAL FIELD CONDITIONS. NO ADDITIONAL ALLOWANCE WILL BE GRANTED DUE TO LACK OF KNOWLEDGE OF SITE CONDITIONS. ACCEPT SOLE AND COMPLETE RESPONSIBILITY FOR CONDITIONS OF THE JOBSITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK.
- 2) DRAWINGS INDICATE DIAGRAMMATICALLY THE ARRANGEMENT OF PRINCIPAL APPARATUS, PIPING, DUCTWORK, AND OTHER MATERIAL. FOLLOW DRAWING AS CLOSELY AS POSSIBLE IN ORDER TO ACHIEVE A NEAT INSTALLATION WHILE STILL WORKING AROUND ANY OBSTRUCTIONS. INSPECT SITE CONDITIONS AFFECTING THE WORK AND PROVIDE FITTINGS AND ACCESSORIES AS REQUIRED TO MEET CONDITIONS WHETHER SHOWN OR NOT.
- 3) IT IS NOT THE INTENTION OF THE PLANS AND SPECIFICATIONS TO COVER ALL INCIDENTALS REQUIRED TO PROVIDE COMPLETE AND FULLY-OPERATIONAL SYSTEMS. THE CONTRACTOR IS TO FURNISH ALL LABOR, MATERIALS, TRANSPORTATION, EQUIPMENT, MISCELLANEOUS SERVICES, ETC., REQUIRED TO ACCOMPLISH THIS RESULT. ANYTHING WHICH MAY BE REASONABLY CONSTRUED AS A NECESSARY PART OF THE INSTALLATION SHALL BE INCLUDED, WHETHER SPECIFICALLY SHOWN OR MENTIONED OR NOT. ENGINEER WILL PROVIDE INTERPRETATIONS UPON REQUEST.
- 4) ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS AMENDED AND ADOPTED BY THE AUTHORITY(ES) HAVING JURISDICTION: 2025 CALIFORNIA BUILDING CODE, 2025 CALIFORNIA MECHANICAL CODE, 2025 CALIFORNIA PLUMBING CODE, 2025 CALIFORNIA ELECTRICAL CODE, 2025 CALIFORNIA ENERGY CODE (TITLE 24), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA), AND ANY OTHER LOCAL CODES, ORDINANCES, REGULATIONS, OR AUTHORITIES HAVING JURISDICTION. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR OTHER CODES AND REGULATIONS APPLICABLE TO THIS PROJECT. THESE CODES SHALL DETERMINE MINIMUM REQUIREMENTS FOR MATERIALS, METHODS, AND LABOR PRACTICES NOT OTHERWISE DEFINED IN THESE SPECIFICATIONS.
- 5) DEFINITIONS:

a. WORK: LABOR AND MATERIALS OF THE CONTRACTOR AND/OR SUBCONTRACTOR.

b. FURNISH: OBTAIN, COORDINATE, SUBMIT THE NECESSARY DRAWINGS, DELIVER TO THE JOBSITE IN NEW CONDITION AND GUARANTEE.

c. PROVIDE: FURNISH AND INSTALL.

d. CONNECT: BRING SERVICE TO THE EQUIPMENT AND MAKE FINAL ATTACHMENTS INCLUDING NECESSARY PIPE FITTINGS, DUCTWORK, TRANSITIONS, ETC.

e. CONCEALED: HIDDEN FROM SIGHT IN CHASES, FURRED SPACES, SHAFTS, ABOVE CEILING, EMBEDDED IN CONSTRUCTION, IN CRAML SPACES, OR BURIED.

f. EXPOSED: NOT INSTALLED UNDERGROUND OR CONCEALED AS DEFINED ABOVE.

g. PERFORMANCE: CONTRACTOR SHALL PERFORM ALL WORK SPECIFIED, INDICATED, AND REQUIRED UNLESS OTHERWISE NOTED, INCLUDING FINAL CONNECTIONS, IN A WORKMANLIKE MANNER USING WORKERS SKILLED AND EXPERIENCED IN THE TRADE. PIPES, FIXTURES, EQUIPMENT, GRILLES, REGISTERS, ETC. TO BE INSTALLED LEVEL, SQUARE, OR CENTERED, ETC. TO GIVE A NEAT APPEARANCE.

h. FULL FUNCTION: PROVIDE ALL MINOR ITEMS NECESSARY FOR A COMPLETE AND FULLY FUNCTIONAL INSTALLATION.
- 6) CONTRACTOR SHALL CONFIRM ALL SITE VOLTAGES BEFORE BIDDING AND ORDERING EQUIPMENT. REIMBURSE ELECTRICAL CONTRACTOR, AT NO CHARGE TO CLIENT, FOR ELECTRICAL CONTRACTOR'S COST INCURRED DUE TO SUBSTITUTION OF MECHANICAL EQUIPMENT HAVING ELECTRICAL REQUIREMENTS DIFFERING FROM SITE CONDITIONS.
- 7) CONTRACTOR SHALL PROVIDE THE OWNER WITH COPIES OF OPERATION, MAINTENANCE, AND PREVENTATIVE MAINTENANCE MANUALS FOR EACH MODEL AND TYPE OF PLUMBING AND MECHANICAL EQUIPMENT.
- 8) CONTRACTOR SHALL PROVIDE EVIDENCE OF LICENSING, BONDING, AND INSURANCE, AND PROVIDE OTHER NECESSARY ADMINSTRATIVE FUNCTIONS FOR CONTRACTOR'S WORK.
- 9) CONTRACTOR SHALL PROCURE AND PAY FOR ALL REQUIRED PERMITS AND SERVICE CHARGES.
- 10) COORDINATION: CONFORM TO GENERAL CONSTRUCTION CONTRACT DOCUMENTS EXCEPT AS MODIFIED HEREIN. REFER ALSO TO STRUCTURAL AND ELECTRICAL CONTRACT DOCUMENTS. COORDINATE ALL WORK WITH OTHER TRADES.
- 11) CUTTING AND PATCHING: CUT AND PATCH AS REQUIRED. CUT OR WELD STRUCTURAL MEMBERS ONLY WITH APPROVAL OF A STRUCTURAL ENGINEER. PATCHING SUBJECT TO ACCEPTANCE BY OWNER.
- 12) SAW CUT TRENCHES IN SLAB SHALL BE FULLY RESTORED AND REINFORCED TO PREVENT SAGGING. ROUGHEN SAW CUT EDGES PRIOR TO RE-POURING CONCRETE.
- 13) COORDINATE ALL WORK WITH OTHER TRADES TO PROVIDE A COMPLETE INSTALLATION. CONNECT ALL EQUIPMENT FURNISHED BY OTHERS AS REQUIRED. INSTALL ALL WORK TO CLEAR ARCHITECTURAL AND STRUCTURAL MEMBERS. INSTALL ALL ABOVE GRADE (OVERHEAD) PIPING AS HIGH AS PRACTICAL.
- 14) RESTORE ALL DAMAGE RESULTING FROM YOUR WORK AND LEAVE PREMISES IN CLEAN CONDITION WHEN FINISHED WITH WORK. ADJUST, CLEAN, REPAIR, OR REPLACE PRODUCTS, WHICH HAVE BEEN DAMAGED.
- 15) GUARANTEE ALL WORK AND MATERIALS FOR ONE YEAR MINIMUM FROM DATE OF FILING NOTICE OF COMPLETION.
- 16) PROVIDE FLASHING AND COUNTER FLASHING FOR ALL WALL AND ROOF PENETRATIONS.
- 17) ADJUSTMENTS: MAKE MINOR ADJUSTMENTS TO WORK WHERE REQUESTED BY OWNER, WHEN SUCH ADJUSTMENTS ARE NECESSARY TO PROPER OPERATION AND WITHIN THE INTENT OF THE CONTRACT.
- 18) MATERIALS AND EQUIPMENT: PROVIDE NEW, UL-LISTED, COMMERCIAL-GRADE MATERIALS, DEVICES, EQUIPMENT, AND FIXTURES SUITABLE FOR THE ENVIRONMENT WHERE INSTALLED. REUSE EXISTING ONLY WHEN COMPLIANT WITH THE CONTRACT DOCUMENTS, IN GOOD CONDITION, AND APPROVED BY THE ENGINEER.
- 19) INSTALLATION: INSTALL ALL MATERIALS, EQUIPMENT, AND SYSTEMS IN FULL ACCORD WITH MANUFACTURER'S INSTRUCTIONS.
- 20) LAYOUT: INSTALL ALL PIPING AND DUCTWORK TO PRESENT A NEAT AND ORDERLY APPEARANCE. RUN ALL LINES PARALLEL WITH BUILDING CONSTRUCTION AS MUCH AS POSSIBLE. MAINTAIN HEADROOM, EQUIPMENT CLEARANCE, AND GRADIENT WHERE REQUIRED. ALLOW FOR EXPANSION & CONTRACTION.
- 21) ACCESS DOORS: PROVIDE ACCESS DOORS OR PANELS FOR ALL VALVES, CLEANOUTS, DAMPERS, CONTROLS, DEVICES, AND OTHER ITEMS REQUIRING INSPECTION OR MAINTENANCE.
- 22) START-UP: THOROUGHLY TEST AND DEMONSTRATE PROPER OPERATION OF ALL SYSTEMS AND EQUIPMENT MODIFIED, FURNISHED OR INSTALLED UNDER THIS CONTRACT.
- 23) WARRANTY: ALL MATERIALS AND EQUIPMENT INSTALLED UNDER THIS CONTRACT SHALL BE GUARANTEED FREE FROM ALL MECHANICAL, ELECTRICAL, AND WORKMANSHIP DEFECTS FOR A MINIMUM OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO THE PREMISES CAUSED BY LEAKS AND/OR BREAKS IN PIPES AND FIXTURES INSTALLED UNDER THIS CONTRACT, AS WELL AS ANY DAMAGE FROM LEAKS VIA ROOF PENETRATIONS MADE AND SEALED UNDER CONTRACTOR'S SCOPE.
- 24) PATCHING & PAINTING: RESTORE ANY DAMAGE RESULTING FROM THE WORK AND LEAVE PREMISES CLEAN. ADJUST, CLEAN, REPAIR, AND/OR REPLACE ANY ITEMS DAMAGED BY THE WORK. RESTORE WALL AND ROOF PENETRATIONS TO MATCH SURROUNDING WALL OR ROOF, RESPECTIVELY.
- 25) AIR BALANCE: PROVIDE SERVICES NECESSARY TO VERIFY AIR QUANTITIES AND BALANCE FOR ESTABLISHED QUANTITIES AND UNIFORM TEMPERATURE IN THE SPACES SERVED. ADJUST ALL DAMPERS AND ELEMENTS IN GRILLES AND DIFFUSERS FOR PROPER AIR DISTRIBUTION AND TO MINIMIZE DRAFTS. COMPLY WITH SMACNA MANUAL FOR THE BALANCING AND ADJUSTMENT OF AIR DISTRIBUTION SYSTEMS.
- 26) DUCTWORK SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE SMACNA LOW PRESSURE DUCT CONSTRUCTION STANDARD.
- 27) ALL BRANCH DUCTS SHALL HAVE BALANCING DAMPERS WITH ACCESSIBLE LOCKING TYPE QUADRANT.
- 28) HVAC EQUIPMENT SHALL BE CERTIFIED BY THE MANUFACTURER FOR COMPLIANCE WITH CALIFORNIA ENERGY COMMISSION STANDARDS.
- 29) DUCT SHALL MEET UL 181, CLASS I AND NFPA 90A AND 90B. DUCT SHALL BE INSTALLED STRAIGHT AND SUPPORT SPACING SHALL BE IN STRICT ACCORDANCE WITH "SMACNA HVAC DUCT CONSTRUCTION STANDARDS, METAL AND FLEXIBLE". FLEXIBLE DUCTWORK SHALL BE EXTENDED TO THE FULLEST POSSIBLE LENGTH, IN ORDER TO MINIMIZE PRESSURE DROP IN THE DUCT. EXCESS DUCT LENGTHS SHALL BE SHORTENED TO PREVENT UNNECESSARY CHANGES IN DIRECTIONS. WHERE ABRUPT CHANGES IN DIRECTION ARE UNAVOIDABLE USE ADJUSTABLE SHORT RADIUS SHEET METAL ELBOWS TO MAKE DIRECTION CHANGES. CONNECTIONS AT METAL DUCTS OR COLLARS SHALL BE MADE BY DRAW BANDS AND PRESSURE-SENSITIVE TAPE WITH THE DRAW BANDS TIGHTENED AS RECOMMENDED BY THE MANUFACTURER WITH AND ADJUSTABLE TENSIONING TOOL. USING PRESSURE-SENSITIVE TAPE ALONE WITHOUT DRAW BANDS IS NOT ACCEPTABLE. ALL PRESSURE-SENSITIVE TAPES AND MASTICS USED SHALL COMPLY WITH UL 181.
- 30) HVAC EQUIPMENT SHALL NOT BE OPERATED DURING CONSTRUCTION WITHOUT A FILTER INSTALLED TO PROTECT THE EVAPORATOR COIL. AFTER ALL CONSTRUCTION IS COMPLETED, ALL CONSTRUCTION FILTERS SHALL BE REMOVED AND NEW FILTERS SHALL BE INSTALLED.

MECHANICAL SHEET INDEX

- M0MECHANICAL SCHEDULES & GENERAL NOTES
- M1MECHANICAL PLAN – FLOOR
- ENO TITLE 24 ENERGY
- EN1 TITLE 24 ENERGY

MECHANICAL SCOPE OF WORK

- 1)INSTALLATION OF NEW SPLIT UNIT AND ALL ASSOCIATED DUCTWORK, DAMPERS, GRILLES, AND PIPING FOR (N) ADU
- 2)INSTALLATION OF NEW KITCHEN EXHAUST SYSTEM AND ALL ASSOCIATED DUCTWORK, DAMPERS, AND GRILLES FOR (N) ADU
- 3)INSTALLATION OF NEW BATHROOM EXHAUST SYSTEM AND ALL ASSOCIATED DUCTWORK, DAMPERS, AND GRILLES FOR (N) ADU

MECHANICAL LEGEND

- ⓘAC-1

THERMOSTAT
- CONDENSATE POC
- ⇄

ELECTRICAL POC
- ✕

GAS POC
- ✕

WATER POC
- ▮▮▮

CEILING DIFFUSER (HARDLID)
- ▮▮▮

CEILING RETURN (HARDLID)
- ▮▮▮

SIDEWALL SUPPLY/RETURN
- ⊙

POC – POINT OF CONNECTION
- ◀

TRANSITION
- └

DAMPER
- ⌂

50 CFM (4") AND 100 CFM (6") CEILING EXHAUST FANS
- ø

DIAMETER
- CFM

CUBIC FEET PER MINUTE
- FATB

FROM ABOVE, TO BELOW
- FB,TA

FROM BELOW, TO ABOVE
- RA

RETURN AIR
- SA

SUPPLY AIR



EAST EMPIRE RESIDENCE
135 EAST EMPIRE STREET
GRASS VALLEY, CA. 95945

ISSUED FOR	DATE
PERMIT	04-02-26
PLAN CHECK #1	05-01-26

PROJECT NUMBER	25341
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SHEET TITLE
MECHANICAL GENERAL
NOTES, SCHEDULES,
& DETAILS

SHEET NO.
M0

SPLIT HEAT PUMP CONDENSER SCHEDULE - OUTDOOR UNIT

TAG	MANU.	MODEL	LOCATION	SERVES	TONS	REF.	FACTORY REF. CHARGE (OZ.)	SUCTION TEMP.	COOLING					HEATING MBH		CONDENSER		COMPRESSOR		ELECTRICAL			SEER2 (EER2)	HSPF2	WEIGHT (LBS.)	REMARKS
									TOTAL MBH	SENSIBLE MBH	EDB	EWB	AMB	OUTPUT Ø47°F	OUTPUT Ø17°F	QTY.	FLA (EA.)	QTY.	RLA (EA.)	VOLTAGE	MCA	MOCp				
HP-1	GOODMAN	GLZS4BA2410A	OUTSIDE	FC-1	2.0	R-454B	70.0	45°F	22.5	17.33	80°F	67°F	105°F	22.0	13.0	1	0.95	1	8.2	230-1Ø-60Hz	11.2	15	15.2 (12.5)	7.5	150	OR APPROVED EQUIVALENT, MOUNT ON CONCRETE OR FIBER REINFORCED PAD. PROVIDE UNIT WITH R-454B REFRIGERANT (SAFETY GROUP A2L, HIGH PROBABILITY SYSTEM) AND FACTORY INTEGRAL REFRIGERANT LEAK DETECTION SENSOR & CONTROLS

SPLIT HEAT PUMP FAN COIL SCHEDULE - INDOOR UNIT

TAG	MANU.	MODEL	LOCATION	SERVES	TONS	CFM	BLOWER FAN HP	ELECTRICAL				ELEC. STRIP HEAT (KW)	WEIGHT (LBS.)	REMARKS
								VOLTAGE	FLA	MCA	MOCp			
FC-1	GOODMAN	AMV24BP1300A	ATTIC	RESIDENCE	2.0	800	1/2	230-1Ø-60Hz	3.9	20.5	25	3.0	117	OR APPROVED EQUIVALENT, INSTALL WITH MINIMUM MERV 13 FILTER, INSTALL WITH 3.0 KW HEATER KIT

RESIDENTIAL CALGREEN MECHANICAL NOTES

- 1) ENHANCED DURABILITY AND REDUCED MAINTENANCE:

4.406.1 ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS OR OTHER OPENINGS IN PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY OR SIMILAR METHOD ACCEPTABLE TO THE ENFORCING AGENCY.
- 2) BUILDING MAINTENANCE AND OPERATION:

4.410.1 AN OPERATION AND MAINTENANCE MANUAL SHALL BE PROVIDED TO THE BUILDING OCCUPANT OR OWNER
- 3) ENVIRONMENTAL QUALITY:

A) 4.503.1 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.

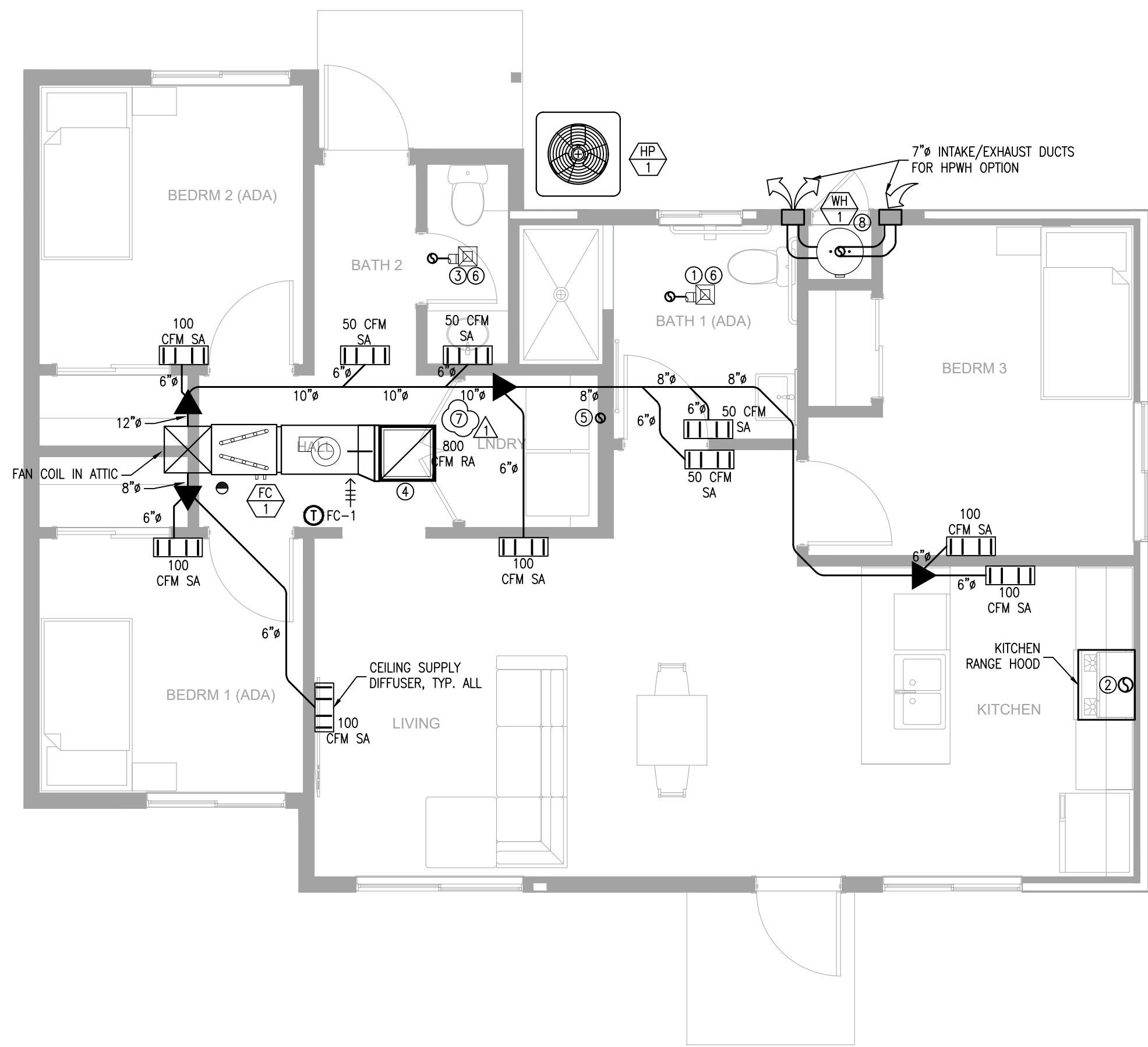
B) 4.504.1 DUCT OPENINGS AND OTHER RELATED AIR DISTRIBUTION COMPONENT OPENINGS SHALL BE COVERED DURING CONSTRUCTION

C) 4.504.2.1 ADHESIVES, SEALANTS AND CAULKS SHALL BE COMPLIANT WITH VOC AND OTHER TOXIC COMPOUND LIMITS
- 4) INSTALLER AND SPECIAL INSPECTOR QUALIFICATIONS:

A) 702.1 HVAC SYSTEM INSTALLERS ARE TRAINED AND CERTIFIED IN THE PROPER INSTALLATION OF HVAC SYSTEMS

B) 702.2 SPECIAL INSPECTORS EMPLOYED BY THE ENFORCING AGENCY MUST BE QUALIFIED AND ABLE TO DEMONSTRATE COMPETENCE IN THE DISCIPLINE THEY ARE INSPECTING

C) VERIFICATION OF COMPLIANCE WITH THIS CODE MAY INCLUDE CONSTRUCTION DOCUMENTS, PLANS, SPECIFICATIONS BUILDER OR INSTALLER CERTIFICATION, INSPECTION REPORTS, OR OTHER METHODS ACCEPTABLE TO THE ENFORCING AGENCY WHICH SHOW SUBSTANTIAL CONFORMANCE



A MECHANICAL PLAN
SCALE: 1/4"=1'-0"



SHEET NOTES:

- (E) EXISTING
(N) NEW
- ALL EQUIPMENT/CONTROLS AND DUCTWORK/FITTINGS SHOWN ARE (N) U.O.N.
- HVAC EQUIPMENT SHALL BE PERMANENTLY IDENTIFIED AS TO THE AREA OR SPACE SERVED BY THE EQUIPMENT PER CMC 303.6
- CONTRACTOR SHALL VERIFY ALL A2L REFRIGERANT-CONTAINING SYSTEMS MEET THE REQUIREMENTS OF ASHRAE 15, INCLUDING ALL REFRIGERANT LEAK DETECTION SENSORS, SAFETY SHUT-OFF VALVES, AND VENTILATION, AS REQUIRED
- PROVIDE NAMEPLATE FOR EACH SELF-CONTAINED REFRIGERATION SYSTEM PER CMC 1115.5, WHICH INCLUDES A SYMBOL INDICATING THAT A FLAMMABLE REFRIGERANT IS BEING USED PER CMC 1104.6.2.1. PROVIDE LABEL ADJACENT TO SERVICE PORTS AND OTHER LOCATIONS WHERE SERVICE INVOLVING COMPONENTS CONTAINING REFRIGERANT IS PERFORMED PER CMC 1104.6.2.2
- THERMOSTATS TO BE INSTALLED AT 48" A.F.F. (TOP OF THERMOSTAT). DO NOT INSTALL THERMOSTATS OVER CASEWORK OR SHELVING OVER 24" IN DEPTH AND 34" IN HEIGHT. COORDINATE EXACT LOCATION WITH OWNER.
- ALL DUCTWORK PENETRATIONS TO THE EXTERIOR OF BUILDING SHALL BE CORROSION-RESISTANT AND PROTECTED FROM INTRUSION BY WATER, INSECTS, ETC.
- SPLIT SYSTEM HVAC UNITS AND HORIZONTAL DISCHARGE PACKAGED HVAC UNITS SHALL BE INSTALLED WITH FLEX CONNECTORS FROM UNIT TO DUCTWORK
- EQUIPMENT IN ATTICS AND UNDER-FLOOR SPACES SHALL BE PROVIDED WITH AN ACCESS OPENING LARGE ENOUGH TO REMOVE THE LARGEST PIECE OF EQUIPMENT BUT NO LESS THAN 22"x30" PER CMC 304.4
- PROVIDE FIRE STOPPING ASSEMBLY PROTECTION FOR DUCT PENETRATIONS OF RATED ASSEMBLIES. FIRE STOP RATING SHALL MATCH RATED ASSEMBLY BEING PENETRATED
- ALL CONCEALED DUCTWORK TO BE INSULATED WITH MINIMUM R-8, AND PERMITTED TO BE FLEX DUCT
- COORDINATE FINAL GRILLE LOCATIONS WITH OWNER
- ENSURE MIN. 3" CLEARANCE FROM EXHAUST OUTLETS TO OPERABLE WINDOWS PER CMC 407.2.2
- SUPPLY REGISTERS WILL BE SIZED IN THE FOLLOWING MANNER:
65-130 CFM = 8x4
130-200 CFM = 10x6
200-250 CFM = 12x8
250-300 CFM = 14x8
- ALL CLOTHES DRYER MOISTURE EXHAUST DUCTS SHALL COMPLY WITH CMC 504.3. DUCTS SHALL TERMINATE ON THE OUTSIDE OF THE BUILDING; NOT LESS THAN 3 FEET FROM OPENINGS INTO THE BUILDING.
-DUCTS SHALL BE EQUIPPED WITH A BACKDRAFT DAMPER
-SCREENS SHALL NOT BE INSTALLED AT THE DUCT TERMINATION
-DUCTS SHALL NOT BE CONNECTED OR INSTALLED WITH SHEET METAL SCREWS OR OTHER FASTENERS THAT WILL OBSTRUCT THE FLOW
-DUCTS SHALL BE OF METAL AND HAVE SMOOTH INTERIOR SURFACE
-VERIFY WITH OWNER IF ACCESSIBLE LINT TRAP IS DESIRED

KEY NOTES:

- EXHAUST FAN TO RUN CONTINUOUSLY AT 59 CFM PER CMC 160.2(B)(2)(IV) AND ASHRAE 62.2 REQUIREMENTS FOR WHOLE HOUSE VENTILATION, PROVIDE WITH SIGN NEXT TO FAN SWITCH INFORMING OWNER FAN IS TO RUN CONTINUOUSLY. MAX 1.0 SONE.
- KITCHEN HOOD TO PROVIDE MINIMUM 130 CFM OF EXHAUST AIR PER CMC TABLE 160.2-G. HOOD TO BE INSTALLED PER CMC 160.2(B)(2)(A)(VI) AND MANUFACTURER'S RECOMMENDATIONS. MAX 3.0 SONES
- BATHROOM EXHAUST FAN TO PROVIDE MINIMUM OF 50 CFM OF EXHAUST AIR PER CMC TABLE 160.2-E AND CMC 405.3.1. MAX 1.0 SONE. FAN TO OPERATE WITH HUMIDISTAT CONTROL AT SWITCH TO PROVIDE HI-LEVEL AIRFLOW FOR REQUIRED HUMIDITY CONTROL PER CGBC 4.506.1(2).
- RETURN AIR GRILLE WITH FILTER FRAME
- 4" DRYER VENT TO ROOF, VENT PER MANUFACTURER INSTRUCTIONS PER CMC 504.4.2.1. VERIFY VENT LENGTH DOES NOT EXCEED 14'. PROVIDE ACCESSIBLE BOOSTER FAN AS REQUIRED
- 4" EXHAUST VENT TO ROOF
- ENSURE INSTALLATION OF (1) 16"x14" LOUVER IN DOOR TO PROVIDE DRYER MAKEUP AIR PER CMC 504.4.1
- PROVIDE INTAKE/EXHAUST VENTING TO EXTERIOR FOR HEAT PUMP WATER HEATER, PER MANUFACTURER'S REQUIREMENTS



DATE SIGNED 05-01-26

EAST EMPIRE RESIDENCE

135 EAST EMPIRE STREET
GRASS VALLEY, CA. 95945

ISSUED FOR	DATE
PERMIT	04-02-26
PLAN CHECK #1	05-01-26
PROJECT NUMBER	25341

SHEET TITLE

MECHANICAL PLAN

SHEET NO.

M1

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD														
Project Name: EAST EMPIRE ADU					Calculation Date/Time: 2026-04-29T11:20:29-07:00									
Calculation Description: Title 24 Analysis					Input File Name: 25341 Rosalr Davidson East Empire ADU - NEW.rpt25x									
General Information														
03	Project Name		EAST EMPIRE ADU											
03	Run Title		Title 24 Analysis											
03	Project Location		135 East Empire St.											
04	City		Grass Valley		05	Standards Version		2025						
04	Zip code		95945		07	Software Version		EnergyPro 10.1						
08	Climate Zone		11		09	Front Orientation (deg. Cardinal)		180						
12	Building Type		Single family		13	Number of Dwelling Units		6						
08	Project Scope		Newly Constructed Addition											
14	Addition Cond. Floor Area (ft ²)		10316		15	Number of Stories		1						
14	Existing Cond. Floor Area (ft ²)		1886		17	Fenestration Average U-factor		0.29						
18	Total Cond. Floor Area (ft ²)		2882		19	Glazing Percentage (%)		11.42%						
20	ADU Bedrooms Count		3		21	ADU Conditioned Floor Area		10316						
22	Fuel Type		All electric		23	No Dwelling Units		No						
Addition ALINE - Project Analysis Parameters														
01			03			05			06					
Existing Area (incl. new addition) (ft ²)			Total Area (ft ²)			Existing Bedrooms			Total Bedrooms					
1866			2882			3			6					
ADDITION ALINE - ACCESSORY DWELLING UNIT (ADU) PROJECT ANALYSIS PARAMETERS														
01			03			05			06					
Zone Name			Total Area (ft ²)			Existing Bedrooms			Attached vs. Detached					
New			2882			3			Detached					

Registration Number: 426-PD010173384-000-000-000000-0000	Registration Date/Time: 04/30/2026 11:00	ECC Provider: CHEERS
RATCITY Energy Rating Services (CHEERS) issuing information updated by third parties not affiliated with or related to CHEERS. Therefore, CHEERS is not responsible for, and cannot guarantee, the accuracy or completeness of the information contained in this document.	Report Version: 2025.0.000	Report Generated: 2026-04-29 11:20:34
CA Building Energy Efficiency Standards - 2025 Single-Family Compliance	Schema Version: rev 20250101	

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: EAST EMPIRE ADU Calculation Description: Title 24 Analysis Calculation Date/Time: 2026-04-29T11:20:25-07:00 Input File Name: ZS41_Report_Revision East Empire_ADU_NEW_rbd25x CF18-PHF-01-1 (Page 5 of 10)										
ENERGY USE INTENSITY										
	Standard Design (kBtu/kft ² - yr)		Proposed Design (kBtu/kft ² - yr)		Margin (kBtu/kft ² - yr)		Margin Percentage			
Gross EU ¹	24.15		23.89		0.26		1.08			
Net EU ²	24.15		23.89		0.26		1.08			
Notes: 1. Gross EU is Energy Use Total (including PV) / Total Building Area. 2. Net EU is Energy Use Total (including PV) / Total Building Area.										
ZONE INFORMATION										
Zone Name	03	03	04	04	05	06	07	08	09	
Zone Type	Zone Type	HVAC System	Zone Floor Area (ft ²)	Avg. Ceiling Height	Water Heating System 1		Status			
New	Conditioned	HVAC1	1016	8	DHW Spl 1		New			
OPAQUE SURFACES SUMMARY										
01	02	03	04	05	06	07	08	09	10	
Name	Zone	Type	Construction	Admittance	Orientation	Gross Area (ft ²)	Window and Door Area (ft ²)	Tin (deg)	Wall Exceptions	Status
N	New	R-21 Wall (Stucco)	0	Back	231	32	90	n/a	none	New
E	New	R-21 Wall (Stucco)	90	Right	235	29	90	n/a <td>none</td> <td>New</td>	none	New
S	New	R-21 Wall (Stucco)	180	Front	321	84	90	n/a <td>none</td> <td>New</td>	none	New
W	New	R-21 Wall (Stucco)	270	Left	235	0	90	n/a <td>none</td> <td>New</td>	none	New
Roof	New	R-38 w/R-13	n/a	n/a	1073	n/a	n/a	n/a	n/a	New
ATTIC										
01	02	03	04	05	06	07	08	09	10	
Name	Construction	Type	Roof Rise (x in 12)	CRS Rated Roof Reflectance	CRBC Rated Roof Reflectance	Radiant Barrier	Above Roof Deck Air Gap			
Attic New	Attic: Roof Ventilated	4	0.1	0.85	No	No	No			
Registration Number: 428-PHF-0172356-200-0000000-2000 Registration Date/Time: 2025-03-08T10:11:00 EEC Provider: CH2ERS NOTICE: This document has been generated by California Energy Efficiency Rating Service (CH2ERS) using information submitted by third parties not affiliated with or related to CH2ERS. Therefore, CH2ERS, CH2ERS Inc. is not responsible for, and does not warrant, the information or calculations contained in this document. CA Building Energy Efficiency Standards - 2025 Single Family Compliance Report Version: 2025.0.000 Schema Version: net.0020001										

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD													CFR-PRF-01-E		
Project Name: EAST EMPIRE ADU				Calculation Date/Time: 2024-04-29T11:20:25-07:00										(Page 9 of 10)	
Calculation Description: Title 24 Analysis				Input File Name: 23441 Result Davidson East Empire ADU - NEW / RD25x											
WATER HEATING - HEAT PUMP															
01	02	03	04	05	06	07	08	09	10	11	12	13			
Name	# of Units	Tank Vol. (gal)	NEA Heat Pump Brand	NEA Heat Pump Model	Tank Location	Duct Ins. R-Value	Duct Source	Air Source	UF1	JA13 Compliant					
DHW Heater 1	1	80	Rheem	HEB1018D4S1U (80 gal)	Outside	New		New	n/a	☒					
HWAC - HEAT PUMPS															
01	02	03	04	05	06	07	08	09	10	11	12	13			
Name	System Type	Number of Units	Heating Efficiency	HSPF/HSPF2 / COP	Cap 47	Backup	Cooling Efficiency	SEER/SEER2	EER/EER2/COP	Airflow Target	Fan Power (Watt/m3/Cfm)	Variable Speed			
Heat Pump System 1	Central split /split	1	HSPF2	7.5	22000	33000	F1R2/S1R2	15.2	12.5	350	0.45	☐			
HWAC - DISTRIBUTION SYSTEMS															
01	02	03	04	05	06	07									
Name	Type	Design Type	Duct Ins. R-value	Supply Return	Supply	Return									
Air Distribution System 1	Unconditioned attic	Non-Verified	8-8		Attic										
INDOOR AIR QUALITY (IAQ) FACTS															
01	02	03	04	05	06	07									
Dwelling Unit	Airflow (CFM)	Fan Efficiency (W/CFM)	IAQ Fan Type	Includes Heat/Energy Recovery?	IAQ Recovery Effectiveness - ASH2	Includes Exhaust Fan/Intruder Alarm?									
84mm ASU IAQventilator	60	0.35	Exhaust	No	n/a / n/a	No									

Registration Number: 426-P010127339A-000-000-0000000-0000 Registration Date/Time: 04/30/2026 11:00 ECC Provider: CHEERS
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Schema Version: rev 20250101

CERTIFICATE OF COMPLIANCE – RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: EAST EMPIRE ADU Calculation Date/Time: 2026-04-29T13:20:25-07:00 Input File Name: 25341 Russel Davidson East Empire ADU - NEW/IBD25k		CFR-PPF-01-E (Page 2 of 10)
Calculation Description: Title 24 Analysis		
COMPLIANCE RESULTS Building Complies with Computer Performance This building incorporates features that require field testing and/or verification by a certified EEC rater under the supervision of a CEC-approved EEC provider. This building incorporates one or more Special Features shown below:		
REQUIRED SPECIAL FEATURES The following are features that must be installed as a condition for meeting the modeled energy performance for this computer analysis. - Insulation below roof deck - Window overhangs and/or fins - Northeast Energy Efficiency Alliance (NEETA) rated heat pump water heater, specific brand/model, or equivalent, must be installed - One or more hot water pump water heaters have been modeled as demand response compatible		
CEC FEATURE SUMMARY The following is a summary of the features that must be field-verified by a certified EEC Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional details is provided in the building plans below. Registered CCRs and CFRs, are required to be completed in the EEC Registry.		
Quality insulation installation (Q31) Minimum air quality ventilation Kitchen range hood Medium Airtightness Verified EER/EER2 Verified EER/EER2 Verified Refrigerant Charge Low (High) Water/CMA Verified heat pump rated heating capacity Duct leakage testing Low-leakage Air Handling Unit		

Registration Number: 426-P010127384-000-000-000000-0000 NOT: This document has been generated by California Energy Efficiency Rating Services (CHEERS). Using information uploaded by third parties not affiliated with or related to CHEERS. Therefore, CHEERS is not responsible for, and cannot guarantee, the accuracy or completeness of the information contained in this document. CA Building Energy Efficiency Standards - 2025 Single-Family Compliance	Registration Date/Time: 04/30/2026 11:00 Report Version: 2025.0.000 Schema Version: rev 20250101	ECC Provider: CHEERS Report Generated: 2026-04-29 11:20:34
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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: EAST EMPIRE ADOU Calculation Description: Title 24 Analysis										Calculation Date/Time: 2026-04-29T11:20:25-07:00 Input File Name: 23341 Rasoul Devotion East Empire ADOU - NEW.rvt25x	CF3R-PHF-03-E Page 3 of 10
Calculation Description: Title 24 Analysis											
Glazing / (Plazing)											
01	02	03	04	05	06	07	08	09	10	11	
Name	Type	Surface	Orientation	Altitude	Mult.	Area (m²)	U-factor	SHGC	Rating Source	Exception to 150.0 (m²)	
5040 B 04	Window	N	Back	0	1	20	0.29	0.21	NFRC	☐	
3020 A 05	Window	N	Back	0	1	6	0.29	0.21	NFRC	☐	
3020 A 5H 06	Window	N	Back	0	1	6	0.29	0.21	NFRC	☐	
5040 B 07	Window	E	Right	90	1	20	0.29	0.21	NFRC	☐	
5040 B 5H 01	Window	S	Front	180	1	20	0.29	0.21	NFRC	☐	
6040 C 5H 02	Window	S	Front	180	1	24	0.29	0.21	NFRC	☐	
5040 B 01	Window	S	Front	180	1	20	0.29	0.21	NFRC	☐	
*Project includes fenestration not subject to maximum U-factor requirement per Exception 1 / Exception 2 / Exception 3 to Section 150.0(m).											
Total North Facing Fenestration						32					
Total East Facing Fenestration						20					
Total South Facing Fenestration						64					
Total West Facing Fenestration						0					

PROJECT NAME: COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: EAST EMPIRE ADU Calculation Date/Time: 2026-04-29T11:20:25-07:00 Calculation Description: 24 Analysis Input File Name: 23341_Russell Davidson East Empire ADU - NEW.rdbtSX		CFIR-PRF-01-01 Page 10 of 10
DOCUMENTATION AUTHOR'S DECLARATION STATEMENT I, I certify that this Certificate of Compliance Documentation is accurate and complete.		
Documentation Author Name: Jenna Green Company: Optimized Energy and Facilities Consulting, Inc. Address: 45344 Lafayette Blvd Rocklin, CA 95765 City/State/Zip:	Documentation Author Signature:  Issued Date: 04/29/2026 STAMPEATED Certification Identification (if applicable): Phone: 916-626-5518	
RESPONSIBLE PERSON'S DECLARATION STATEMENT I certify the following under penalty of perjury, under the laws of the State of California: 1. The information provided on this Certificate of Compliance is true and correct. 2. I am duly authorized to execute this Certificate of Compliance on behalf of the building owner or system design identified on this Certificate of Compliance (authorized signatory). 3. The energy audits and performance specifications, materials, components, and manufactured devices used for the building design or system design identified on this Certificate of Compliance conform to the applicable California Energy Code, Title 24 of the California Code of Regulations. 4. The building design features or system design features featured on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, and specifications submitted to the enforcement agency for approval with this Certificate of Compliance. 5. I understand that a registered copy of this Certificate of Compliance shall be made available with the building's occupancy for the building and that be made available to the enforcement agency for all future enforcement actions. 6. I understand that a registered copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy. I will take the necessary steps to comply with this requirement.		
Responsible Design Name: Russell Davidson Company: Russell Davidson Architecture + Design Address: 1459 Crown Point Ct, Suite C Grass Valley, CA 95945 City/State/Zip:	Responsible Designer Signature:  Issued Date: 04/30/2026 License: C-16895 Phone: 5309132720	

Digitally signed by California Home Energy Efficiency Rating Services (CHERS). This digital signature is provided in order to secure the content of this registered document, and in no way implies Registration Provider responsibility for the accuracy of the information.

Registration Number: 426-P0101273394-000-000-0000000000 Registration Date/Time: 04/30/2026 11:00 ECC Provider: CHEERS
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CA Building Energy Efficiency Standards - 2025 Single-Family Compliance Report Version: 2025.0.000 Report Generated: 2026-04-29 11:20:34
Schema Version: rev 20250101

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD			Calculation Date/Time: 2026-04-29T11:20:25-07:00		CF18-PRF-01-e		
Project Name: EAST EMPIRE ADU			Input File Name: 25341 Russel Davidson East Empire ADU- NEW-rbdc52		(Page 3 of 10)		
Calculation Description: Title 24 Analysis							
Compliance Summary							
	Long Term System Cost (\$/kWh) ¹		Source Energy Use		Peak Cooling**		
	Efficiency ² (\$/kWh-yr)	Total ³ (\$/kWh-yr)	Efficiency (\$/kWh-yr)	Total (\$/kWh-yr)	Electricity (kWh)		
Standard Design	20.67	n/a	n/a	n/a	n/a		
Proposed Design	20.01	n/a	n/a	n/a	n/a		
Compliance Margins	0.66	n/a	n/a	n/a	n/a		
Pass							
RESULT: Compliant							

Registration Number: 426-P0101273394-000-000-0000000-0000 NOTICE: This document has been prepared for California Energy Efficiency Rating Services (CHEERS) using information uploaded by third parties not affiliated with or related to CHEERS. Therefore, CHEERS is not responsible for, and cannot warrant, the accuracy or completeness of the information contained in this document. CA Building Energy Efficiency Standards - 2025 Single-Family Compliance	Registration Date/Time: 04/30/2026 11:00 Report Version: 2025.0.000 Schema Version: rev 20250101	ECC Provider: CHEERS Report Generated: 2026-04-29 11:20:34
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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD													Calculation Date/Time: 2026-04-29T11:20:25-07:00				CFIR-PFR-01-E	
Project Name: EAST EMPIRE ADO													Input File Name: 25341 Russell Davidson East Empire ADO - NEW.rchD5x				(Page 7 of 10)	
Calculation Description: Title 24 Analysis																		
OVERLAYS AND FINIS																		
Overhang																		
Window	Width (ft)	Height (ft)	Depth	Dist Up	Left Extent	Right Extent	Flag	Left Fin	Top Fin	Dist L	Dist U	Depth	Right Fin	Dist R	Dist D			
3020 A SH OS	3	2	2	1	10	10	0											
5000 B SH OS	5	4	2	1	10	10	0											
6040 C SH OS	6	4	2	1	10	10	0											
Refer to Section 7.6.2 and 7.6.3 of the 2022 CBIRC-Res User manual for explanation of overhang and fin descriptions.																		
SUB FLOORS																		
01	Zone		04		05		06		07									
Project Name	Zone	Area (ft ²)	Perimeter (ft)	Edge Insul. R-value	Edge Insul. Depth	Heated												
Slab-on-Grade	New	1016	139	none	0	No												
OPAQUE SURFACE CONSTRUCTIONS																		
01	03		04		05		06		07									
Construction Name	Surface Type	Construction Type	Finishing	Total Cavity R-value	Interior / Exterior Coefficient R-value	U-factor	Assembly Layers	Non-Std Spray Foam										
R-21 Wall (stucco)	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. C	R-21	None / None	0.069	Insull Brk Gypsum Board Cavity / Frame R-21 2x6 Furred Wall St. Coat Stucco	☐										

Registration Number: 426-P010127350A-000-000-0000000-0000 Registration Date/Time: 04/30/2026 11:00 ECC Provider: CHEERS
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 Schema Version: rev 20250101

CERIFICATION OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD					Calculation Date/Time: 2026-04-29T11:20:25-07:00		CFR19-PRF-01-e (Page 4 of 10)	
Project Name: EAST EMPIRE ADU					Input File Name: 23341 Russel Davidson East Empire ADU- NEW.rbd25x			
Calculation Description: Title 24 Analysis								
SC AND SOURCE ENERGY COMPLIANCE RESULTS FOR PERFORMANCE COMPONENTS								
Energy Use	Standard Design Source Energy (kBtu/ft ² -yr)	Standard Design USC ¹ (5/ft ² -yr)	Proposed Design Source Energy (kBtu/ft ² -yr)	Proposed Design USC ¹ (5/ft ² -yr)	Compliance Margin- Source (kBtu/ft ² -yr)	Compliance Margin- USC ¹ (5/ft ² -yr)		
Space Heating	0	6.33	0	10.51	0	-4.18		
Space Cooling	0	0	3.7	0	0	1.2		
WQ Ventilation	0	1.22	0	1.22	0	0		
Water Heating	0	8.23	0	4.58	0	3.64		
Self Utilization/Flexibility Credit	n/a	n/a	n/a	0	n/a	0		
Efficiency Compliance Total	0	20.67	0	20.01	0	0.66		
Photovoltaics And Battery	n/a	n/a	n/a	0	n/a	n/a		
Flexibility	n/a	n/a	n/a	n/a	n/a	n/a		
Indoor Lighting	0	3.54	0	3.54	n/a	0		
Appl. & Cooking	0	12.01	0	11.99	n/a	0.02		
Plug Loads	0	13.75	0	13.75	n/a	0		
Outdoor Lighting	0	3.18	0	3.18	n/a	0		
TOTAL COMPLIANCE	0	49.15	0	48.47	0	0.68		

Registration Number: 426-P0101273394-000-000-0000000-0000 0273 This document has been generated by California Energy Efficiency Rating Services (CHEERS) using information uploaded by third parties not affiliated with or related to CHEERS. Therefore, CHEERS is not responsible for, and cannot guarantee, the accuracy or completeness of the information contained in this document. CA Building Energy Efficiency Standards - 2025 Single-Family Compliance	Registration Date/Time: 04/30/2026 11:00 Report Version: 2025.0.000 Schema Version: rev 20230101	ECC Provider: CHEERS Report Generated: 2026-04-29 11:20:34
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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD										CP18-PRF-01-e	
Project Name: EAST EMPIRE ADU					Calculation Date/Time: 2025-04-29T11:20:25-07:00					Page 8 of 10	
Calculation Description: Title 24 Analysis					Input File Name: 23341_RuralDwelling East Empire ADU - NEW.rbd25x						
OPaque SURFACE CONSTRUCTIONS											
01	02	03	04	05	06	07	08	09			
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Combined R-value	U-factor	Assembly Layers	Non-Ins Spray Foam			
Attic Roof/awn	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: Jert King Cavity Frame: R-13.0 / 2x4 Around Roof Joists: R-6.0 Insul.		☐		
R-38 w/R-13	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-38	None / None	0.025	Over Ceiling Joists: R-26.3 Insul. Cavity Frame: R-13 / 2x4 Insulate Below: Gypsum Board		☐		

Registration Number: 426-P010127330A-000-000-0000000-0000 Registration Date/Time: 04/30/2026 11:00 ECC Provider: CHEERS
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CA Building Energy Efficiency Standards - 2025 Single-Family Compliance Report Version: 2025.0.000 Report Generated: 2026-04-29 11:20:34
Schema Version: rev 20250101



OPTIMIZED ENERGY™
 & FACILITIES CONSULTING, INC.
 5734 Lonetree Boulevard, Rocklin, CA 95765
 Office: (916) 626 5518 www.oetinc.com

REGISTERED PROFESSIONAL ENGINEER
ALEX M. BATTISTA
No. M36994
EXP. 09-30-2026
MECHANICAL
STATE OF CALIFORNIA

EAST EMPIRE RESIDENCE
135 EAST EMPIRE STREET
GRASS VALLEY, CA. 95945

ISSUED FOR	DATE
PERMIT	04-02-26
 PLAN CHECK #1	05-01-26

PROJECT NUMBER	25341
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SHEET TITLE

TITLE 24
ENERGY

SHEET NO.

ENO

NOTE: Single-family residential buildings subject to the Energy Code must comply with all applicable mandatory measures, regardless of the compliance approach used. Review the respective sections for more information.

Ducts and Fans	
\$10.8(6)(c)	Ducts, insulation installed on an existing space-conditioning duct must comply with §604.9 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must notify the customer, in writing, that the insulation meets this requirement.
\$150.1(5)(d)	CMC Compliance. All distribution system ducts and plenums must meet CMCS §§601-605 and ASHRAE/SMACNA-90-200 HVAC Construction Standards and the following conditions: (1) Ducts located in unconditioned spaces shall have a minimum R-value of supply-side air entering the space or return-side air leaving the space of R-6.0 or higher. Ducts located entirely in conditioned space shall have fire verification and acoustic testing (RATC 13.1.8.3) or better. (2) Ductwork installed; in dwelling units with attics, the ductwork must be located within the ceiling separating occupiable space from the attic. (3) Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic tape. (4) Each outer-dwore system must include airtightness test equipment, or aerosol leakage tests (UL 181), 72% combination of medium or large ducts must be tested by seal openings greater than 1/8", if mastic or tape is used. Building cavities, air handler support

§ 110.10(d)	Documentation. A copy of the construction documents or a comparable document indicating the information from § 110.10(b)-(c) must be provided to the occupant.
§ 110.10(e):	Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps.
§ 110.10(e):	Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

[illegible]

*Exceptions may apply

[illegible]

Ventilation and Indoor Air Quality

Electric and Battery Energy Storage Ready:

§ 150.0)(3): **Battery Energy Storage System (BESS) Ready.** All single-family residences that include one or two dwelling units, which a load serving entity provides with electrical service for the dwelling unit that is greater than 125 amps, shall meet at least one of the following: Either BESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more BESS supplied branch circuits in § 150.0)(2), or a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0)(2), at least four branch circuits must be identified and have their source collected at a single cableboard subpanel to be supplied by the BESS.

with the circuit supplying the refrigerator, one lighting circuit to serve the primary area, and one circuit supplying a lounge or fireplace area. The main panelboard must have a main breaker rating of 225 amperes; sufficient space must be reserved to allow future expansion of the building's electrical equipment. The building must have a dedicated service panel to allow for the installation of a double pole circuit breaker to allow the connection of backup power.

Space Heater Requirements The building must have a dedicated service panel to serve individual dwelling units must include: A dedicated 240V branch circuit wiring consisting of 3/4" of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V", and a reserved main service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For 240V 200 amp."

Electric Load Requirements Systems using gas or propane cooking to serve individual dwelling units must include: A dedicated 240V branch circuit wiring consisting of 3/4" of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V", and a reserved main service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For 240V 200 amp."

Electric Clothes Dryer Electric clothes dryers shall be provided for each of the dwelling units. A dedicated 240V branch circuit wiring consisting of 3/4" of the dryer with circuit conductors rated at least 30 amps with the blank cover identified as "240V", and a reserved main service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For 240V 200 amp."

Lighting:

[illegible][illegible]

ISSUED FOR	DATE
PERMIT	04-02-20
PLAN CHECK #1	05-01-20

ISSUED FOR	DATE
PERMIT	04-02-20
PLAN CHECK #1	05-01-20

HEET TITLE

TITLE 24
ENERGY

EET NO

EN1

ELECTRICAL GENERAL NOTES

- 1) ENTIRE INSTALLATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE 2025 CALIFORNIA ELECTRICAL CODE, NATIONAL ELECTRICAL CODE, AND ALL STATE AND LOCAL CODES, RULES AND ORDINANCES HAVING JURISDICTION.
- 2) ALL CONDUCTORS SHALL BE PER DESIGN SHEETS. ELECTRICAL CODE AND MAXIMUM VOLTAGE DROP OF 3% WILL DEFINE CONDUCTOR SIZING.
- 3) CONDUITS SHALL BE USED IN THE FOLLOWING METHODS:

- POLY VINYL CHLORIDE (PVC) CONDUITS MAY BE USED IN CONCRETE SLABS AND UNDERGROUND PROVIDED ELBOWS AND RISERS ARE RIGID;

- ALL EXPOSED CONDUIT SUBJECT TO WEAR OR COLLISION SHALL BE RIGID GALVANIZED STEEL (RGS) OR INTERMEDIATE METALLIC TUBING (IMT). APPLY BITUMASTIC COATING TO ALL METALLIC CONDUITS IN SLABS OR UNDERGROUND.

- PROVIDE FIRE RETARDANT U.L. APPROVED SEALANT ON ALL RACEWAY PENETRATIONS OF FIRE RATED CEILINGS, PARTITIONS, WALLS AND STRUCTURAL SLABS.
- 4) FOR TELEPHONE SYSTEM: PROVIDE GROUNDING FOR ALL TELEPHONE BACKBOARDS, TERMINAL CABINETS AND EQUIPMENT PER REQUIREMENTS OF NEC 800 AND TELEPHONE COMPANY.
- 5) ALL DISCONNECT SWITCHES SHALL BE SIZED PER NEC TO ACCOMMODATE EQUIPMENT SERVED, INCLUDING REQUIRED FUSES, U.N.O. SWITCHES SHALL BE HORSE POWER RATED, OF HEAVY DUTY TYPE. PROVIDE MEANS FOR PAD LOCKING IN THE OPEN POSITION.
- 6) ALL CIRCUIT BREAKERS SHALL BE INVERSE TIME (THERMAL MAGNETIC) "PERMANENT TRIP" TYPE. TWO AND THREE POLE CIRCUIT BREAKERS SHALL BE COMMON TRIP.
- 7) ALL CONNECTIONS TO GROUND RODS AND GRID, ETC., SHALL BE MADE WITH U.L. APPROVED WELDED CONNECTIONS, UNLESS NOTED OTHERWISE.
- 8) LIGHTING SYSTEMS SHALL COMPLY WITH TITLE 24. ALL LIGHTING FIXTURES, LAMPS, BALLASTS, DIMMER SWITCHES, AND CONTROLS SHALL BE CERTIFIED WITH THE CALIFORNIA ENERGY COMMISSION ("CEC") AS MEETING ALL TITLE 24 REQUIREMENTS AND BE LISTED IN THE APPLICABLE CEC DIRECTORY. ALL SUCH DEVICES AND EQUIPMENT SHALL BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS. LIGHT FIXTURES IN SUSPENDED CEILINGS SHALL BE SUPPORTED IN STRICT ACCORDANCE WITH CALIFORNIA BUILDING CODE (LATEST EDITION) SEISMIC REQUIREMENTS.
- 9) ALL ELECTRICAL EQUIPMENT, DEVICES, WIRE, ETC., SHALL BE LISTED, FOR THE INTENDED USE, WITH UNDERWRITER'S LABORATORIES, INC., (UL), WHERE STANDARDS HAVE BEEN ESTABLISHED. BY UL. ALL EQUIPMENT SHALL BE RAIN TIGHT WHERE EXPOSED TO THE WEATHER. ALL FLEX CONDUITS CONNECTED TO SUCH EQUIPMENT SHALL BE METALLIC LIQUID TIGHT. ALL EQUIPMENT IN HAZARDOUS LOCATIONS, PER NEC, CHAPTER 5, SHALL BE IN ACCORDANCE WITH THE NEC. ALL EQUIPMENT IN CORROSIVE ENVIRONMENTS SHALL BE IN ENCLOSURES (SUCH AS NEMA 4X) RATED FOR THE ENVIRONMENT.
- 10) UTILITY SERVICE AND REQUIREMENTS SHALL BE COORDINATED WITH POWER SERVICE WITH POWER COMPANY; PROVIDE FOR ALL STANDARD POWER COMPANY REQUIREMENTS. FAULT CURRENT RATINGS SHALL BE PROVIDED BY UTILITY.
- 11) THE LAYOUTS OF THE CONTRACT DRAWINGS ARE DIAGRAMMATIC. IT IS NOT INTENDED TO SHOW EVERY OFFSET AND FITTING, NOR EVERY STRUCTURAL DIFFICULTY THAT WILL BE ENCOUNTERED DURING THE INSTALLATION OF THE WORK. ALIGNMENT OF EQUIPMENT AND ROUTING OF RACEWAYS MAY BE VARIED SLIGHTLY TO ACCOMMODATE ARCHITECTURAL CONDITIONS OR TO AVOID THE WORK OF OTHER TRADES. IF ANY CONFLICTS OCCUR NECESSITATING DEPARTURES FROM CONTRACT DRAWINGS, DETAILS OF DEPARTURES AND REASONS THEREFORE SHALL BE SUBMITTED AS SOON AS PRACTICABLE FOR WRITTEN APPROVAL OF THE ENGINEER.
- 12) THE WORD "CONTRACTOR", AS USED IN THE ELECTRICAL CONTRACT DOCUMENTS, SHALL MEAN THE PRIME (I.E. GENERAL) CONTRACTOR AND HIS/HER SUBCONTRACTORS FOR THE APPROPRIATE TRADE. WHERE THE OWNER ACTS AS HIS OWN CONTRACTOR, THE WORD CONTRACTOR APPLIES TO THE OWNER.
- 13) CONTRACTOR SHALL PROVIDE EVIDENCE OF LICENSING, BONDING, AND INSURANCE, AND PROVIDE OTHER NECESSARY ADMINISTRATIVE FUNCTIONS FOR CONTRACTOR'S WORK.
- 14) CONTRACTOR SHALL PROCURE AND PAY FOR ALL REQUIRED PERMITS AND SERVICE CHARGES.
- 15) COORDINATION: CONFORM TO GENERAL CONSTRUCTION CONTRACT DOCUMENTS EXCEPT AS MODIFIED HEREIN. REFER ALSO TO STRUCTURAL AND MECHANICAL CONTRACT DOCUMENTS. COORDINATE ALL WORK WITH OTHER TRADES.
- 16) CUTTING AND PATCHING: ANY CUTTING, ATTACHING, OR WELDING TO BUILDING STRUCTURE SHOULD BE COORDINATED AND APPROVED BY A CALIFORNIA LICENSED STRUCTURAL ENGINEER. PATCHING SUBJECT TO ACCEPTANCE BY OWNER.
- 17) SAW CUT TRENCHES IN SLAB SHALL BE FULLY RESTORED AND REINFORCED TO PREVENT SAGGING. ROUGHEN SAW CUT EDGES PRIOR TO RE-POURING CONCRETE.
- 18) COORDINATE ALL WORK WITH OTHER TRADES TO PROVIDE A COMPLETE INSTALLATION. CONNECT ALL EQUIPMENT FURNISHED BY OTHERS AS REQUIRED. INSTALL ALL WORK TO CLEAR ARCHITECTURAL AND STRUCTURAL MEMBERS. INSTALL ALL ABOVE GRADE (OVERHEAD) PIPING AS HIGH AS PRACTICAL.
- 19) RESTORE ALL DAMAGE RESULTING FROM THE WORK AND LEAVE PREMISES IN CLEAN CONDITION WHEN FINISHED WITH WORK. ADJUST, CLEAN, REPAIR, OR REPLACE PRODUCTS, WHICH HAVE BEEN DAMAGED.
- 20) PROVIDE FLASHING AND COUNTER FLASHING FOR ALL WALL AND ROOF PENETRATIONS.
- 21) WARRANTY: ALL MATERIALS AND EQUIPMENT INSTALLED UNDER THIS CONTRACT SHALL BE GUARANTEED FREE FROM ALL MECHANICAL, ELECTRICAL, AND WORKMANSHIP DEFECTS FOR A MINIMUM OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO THE PREMISES CAUSED BY WORK UNDER THIS CONTRACT, AS WELL AS ANY DAMAGE FROM LEAKS VIA ROOF PENETRATIONS MADE AND SEALED UNDER CONTRACTOR'S SCOPE.

RESIDENTIAL CALGREEN ELECTRICAL NOTES

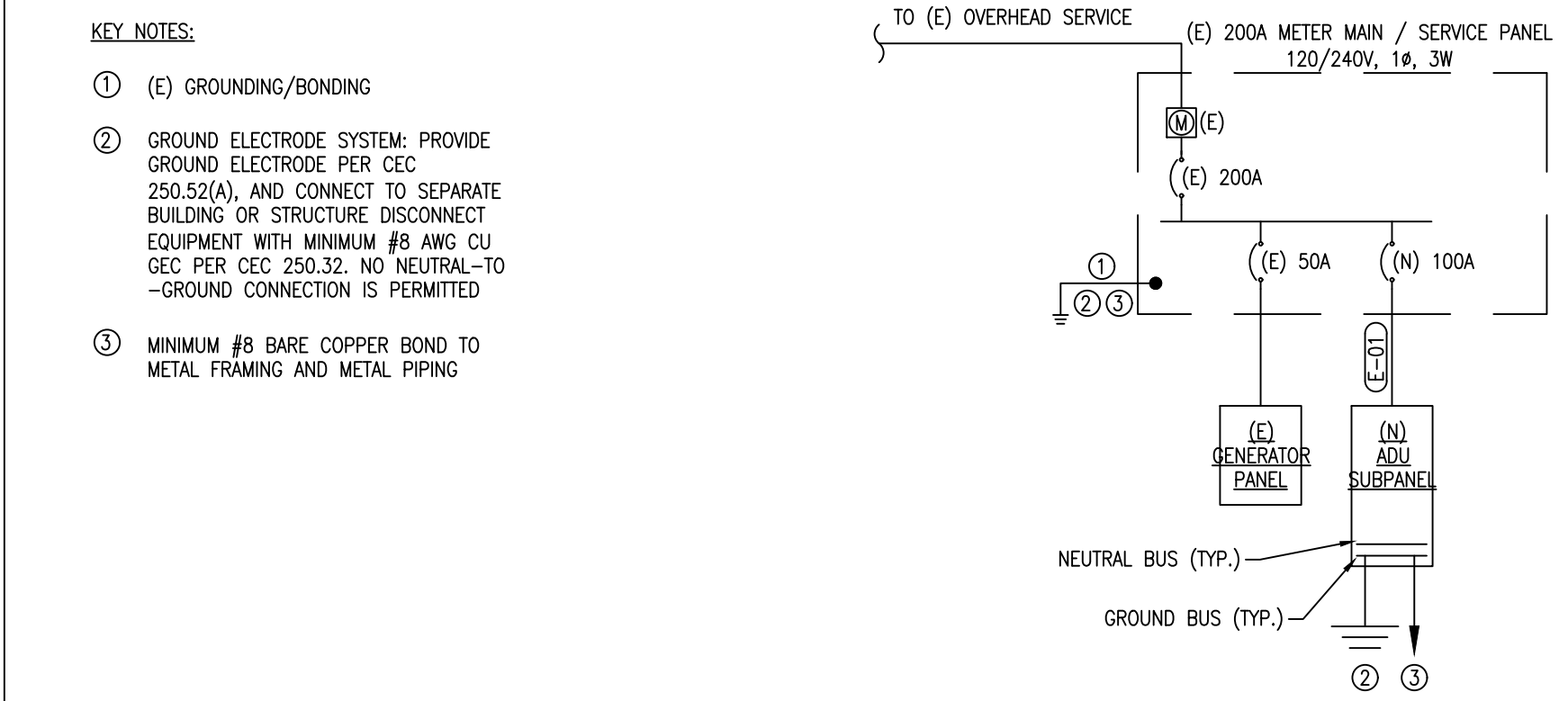
- 1) ENHANCED DURABILITY AND REDUCED MAINTENANCE:

4.406.1 ANNULAR SPACES AROUND PIPES, ELECTRIC CABLES, CONDUITS OR OTHER OPENINGS IN PLATES AT EXTERIOR WALLS SHALL BE PROTECTED AGAINST THE PASSAGE OF RODENTS BY CLOSING SUCH OPENINGS WITH CEMENT MORTAR, CONCRETE MASONRY OR SIMILAR METHOD ACCEPTABLE TO THE ENFORCING AGENCY
- 2) BUILDING MAINTENANCE AND OPERATION:

4.410.1 AN OPERATION AND MAINTENANCE MANUAL SHALL BE PROVIDED TO THE BUILDING OCCUPANT OR OWNER
- 3) SITE DEVELOPMENT:

4.106.4 PROVIDE CAPABILITY FOR ELECTRIC VEHICLE CHARGING IN ONE- AND TWO-FAMILY DWELLINGS AND IN TOWNHOUSES WITH ATTACHED PRIVATE GARAGES; AND 10 PERCENT OF TOTAL PARKING SPACES, AS SPECIFIED, FOR MULTIFAMILY DWELLINGS.

ONE-LINE DIAGRAM



FEEDER SCHEDULE - 1 PHASE

TAG	# OF CU SETS	COPPER CONDUIT (PER SET)	COPPER CONDUCTORS (PER SET)		# OF AL SETS	ALUMINUM CONDUIT (PER SET)	ALUMINUM CONDUCTORS (PER SET)	
			PHASE/NEUTRAL	GROUND			PHASE/NEUTRAL	GROUND
E-01	1	1"ø	(3) #4 AWG CU	(1) #8 AWG CU	1	1-1/4"ø	(3) #2 AWG AL	(1) #6 AWG AL

Panel Name:	A - ADU Subpanel				Bus Rating:	100A			
Voltage & Phase:	120/240V - 1Ø - 3W				AIC Rating:	22kAIC			
Mounting:	Surface				Main Type:	Circuit Breaker			
Enclosure Rating:	NEMA 3R				MCB Rating:	100A			
	Description	BRK	Ckt	PHASE	Ckt	BRK	Description		
	Dryer	30/2	1	A	2	20/1	Bedroom 1 & 2 - Receptacles		
	-	-	3	B	4	20/1	Bedroom 3 - Receptacles		
	Washer	20/1	5	A	6	20/1	Bathroom 1 - Receptacle		
	Range	50/2	7	B	8	20/1	Bathroom 2 - Receptacle		
	-	-	9	A	10	20/1	Hall/Living/Dining - Receptacles		
	Range Hood	20/1	11	B	12	20/1	Small Kitchen Receptacle #1		
	Unit Lighting	20/1	13	A	14	20/1	Small Kitchen Receptacle #2		
	HP-1	30/2	15	B	16	20/1	Disposal		
	-	-	17	A	18	20/1	Dishwasher		
	WH-1	30/2	19	B	20	20/1	Refrigerator		
	-	-	21	A	22	25/2	FC-1		
	HVAC Convenience Recep.	20/1	23	B	24	-			

Residential Electrical Load Calculation in accordance with CEC 220.83					
[135 E. EMPIRE STREET] - (E) Main Residence Service + ADU subpanel					
General Load			Source		
Total square footage of Unit	2826 SF x 3 VA/SF =	8,478 VA	NEC		
20A small appliance @ 1500VA =	4 x 1500 VA =	6,000 VA	NEC		
Laundry circuit @ 1500VA =	2 x 1500 VA =	3,000 VA	NEC		
General Subtotal		17,478 VA			
Appliance Load			Source		
(N) Heat Pump Water Heater-ADU	1 x 4500 VA x 1.00 =	4,500 VA	Cutsheet		
Disposal (Ex. + ADU)	2 x 800 VA x 1.00 =	1,600 VA	NEC		
Dishwasher (Ex. + ADU)	2 x 1300 VA x 1.00 =	2,600 VA	NEC		
Range/Oven (ADU)	1 x 8000 VA x 1.00 =	8,000 VA	NEC		
Washer/Dryer (Ex. + ADU)	2 x 5000 VA x 1.00 =	10,000 VA	NEC		
Appliance Subtotal		26,700 VA			
First 10kVA @ 100%	10,000 VA x 1.0 =	10,000 VA	NEC 220.83		
Remainder @ 40%	34,178 VA x 0.40 =	13,671 VA	NEC 220.83		
General & Appliance Subtotal		23,671 VA			
HVAC Load @ 100%			Source		
Package / Gas Unit	1 x 7866 VA x =	7,866 VA	Cutsheet		
(N) Condenser Unit (ADU)	1 x 2104.5 VA x =	2,105 VA	Cutsheet		
(N) Fan Coil Unit (ADU)	1 x 3897 VA x =	3,897 VA	Cutsheet		
HVAC Subtotal @ 100%		13,868 VA			
Total Load (General + Appliance + HVAC Subtotals)		37,539 VA			
		240 Volts			
		1 Phase			
		156.4 Amps			
		200 AMP Service/Panel			
		2/0 AWG CU Feeder sizes per Table 310.12			
		4/0 AWG AL Feeder sizes per Table 310.12			

ELECTRICAL SHEET INDEX

- E0 ELECTRICAL GENERAL NOTES, CALCS, & SCHEDULES
- E1 ELECTRICAL PLAN

ELECTRICAL SCOPE OF WORK

- 1) INSTALLATION OF NEW SUBPANEL FOR (N) ADU CONNECTED TO (E) ELECTRICAL SERVICE AT MAIN RESIDENCE
- 2) INSTALLATION OF NEW POWER SYSTEMS FOR (N) ADU
- 3) INSTALLATION OF NEW LIGHTING SYSTEMS AND ASSOCIATED POWER AND CONTROLS FOR (N) ADU

LIGHTING LEGEND

- ⊙ DOWNLIGHT
- PENDANT LIGHT
- ⊕ SURFACE MOUNT
- ⎓ TRACK LIGHT
- ⦿ WALL MOUNT FIXTURE
- S_{X,X} WALL MOUNTED SWITCH (D- DIMMER, V- VACANCY SENSOR, 3- 3-WAY

POWER LEGEND

- ⎓ DUPLEX OUTLET - WALL, FLOOR, CEILING MOUNTED
GFI - GROUND FAULT INTERRUPT
WP - WEATHERPROOF
+44" - 44" AFF
- ⊕ FLOOR-MOUNTED DUPLEX OUTLET
- ⊕ QUADRUPEX OUTLET 16IN A.F.F. U.O.N.
- ⊕ FLOOR-MOUNTED QUADRUPEX OUTLET
- ⊕ DEDICATED OUTLET
- ⊕ 20A, 208/240V OUTLET (NEMA 6-20R)
- ⊕ 30A, 208/240V OUTLET (NEMA 6-30R)
- ▶ PHONE-DATA PORT
- ⊙ SMOKE DETECTOR
- ⊙ CARBON MONOXIDE DETECTOR
- ⊙ JUNCTION BOX
- ⊕ TELEVISION
- 3P 50/40 ⎓ DISCONNECT - POLES (CAPACITY/FUSE)
- ⎓ UP-1,3,5 HOME RUN - PANEL-POLE(S)
- POWER PANEL
- T-1 TRANSFORMER

ELECTRICAL LEGEND

- A.F.F. ABOVE FINISHED FLOOR
- +48" HEIGHT (INCHES) AFF
- D DIMMER
- TX TRANSFORMER



DATE SIGNED 05-01-26

EAST EMPIRE RESIDENCE

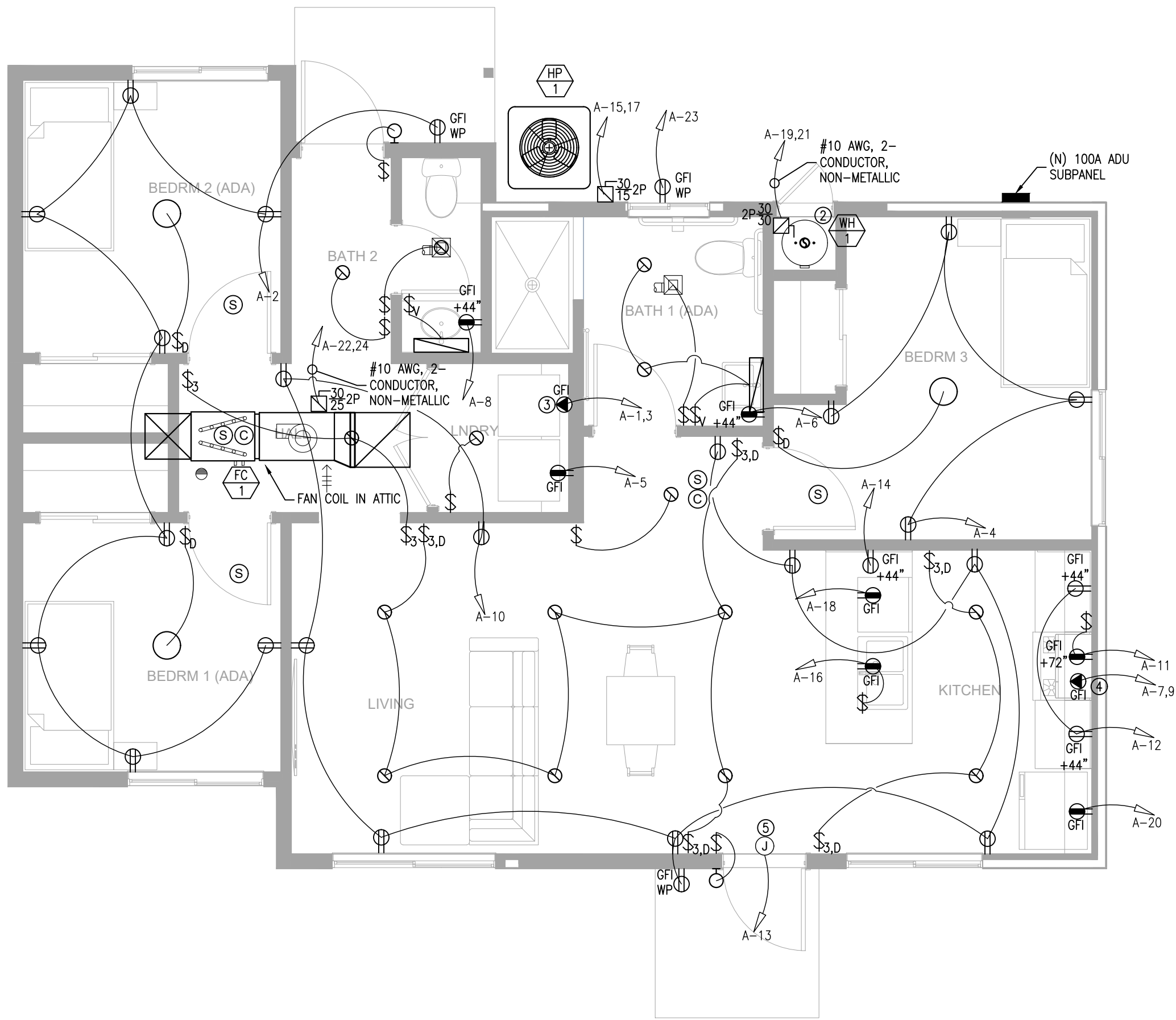
135 EAST EMPIRE STREET
GRASS VALLEY, CA. 95945

ISSUED FOR	DATE
PERMIT	04-02-26
PLAN CHECK #1	05-01-26
PROJECT NUMBER	25341

SHEET TITLE
ELECTRICAL GENERAL
NOTES, CALCS, &
SCHEDULES

SHEET NO.

E0



A ELECTRICAL PLAN
SCALE: 1/4"=1'-0"



- KEY NOTES:**

 - ① HVAC CONVENIENCE RECEPTACLE
 - ② DISCONNECT FOR WATER HEATER
 - ③ PROVIDE NEMA 14-30R RECEPTACLE WITH A #10 AWG, 2-CONDUCTOR, NON-METALLIC WIRE
 - ④ PROVIDE NEMA 14-50R RECEPTACLE WITH A #6 AWG, 2-CONDUCTOR, NON-METALLIC WIRE
 - ⑤ PROVIDE GROUND LEVEL "HEARING AND VISUALLY IMPAIRED" UNITS WITH PROVISIONS FOR VISUAL/STROBE SMOKE & CARBON MONOXIDE DETECTORS AND VISUAL/STROBE DOORBELLS. SEE ARCHITECTURAL SHEETS FOR UNIT LOCATIONS WITH THIS DESIGNATION
- SHEET NOTES:**

 - (E) EXISTING
(N) NEW
 - ALL RECEPTACLES/EQUIPMENT ARE (N) U.O.N.
 - ALL WIRING TO BE #12 AWG U.O.N.
 - ALL INTERIOR WIRING TO BE 2-CONDUCTOR, NON-METALLIC SHEATHED. ALL EXTERIOR WIRING TO BE INSULATED WITH THWN-2. ALL EXTERIOR CONDUIT SHALL BE FLEX CONDUIT ABOVE GROUND, OR PVC IF BELOW GROUND
 - BOND METALLIC GAS PIPE AND WATER PIPES TO SERVICE GROUND
 - SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS ARE TO BE HARDWIRED AND INTERCONNECTED AND HAVE A BATTERY BACKUP. SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS SHALL SOUND AN ALARM AND BE AUDIBLE IN ALL SLEEPING AREAS
 - ALL CEILING FAN BOXES TO BE LISTED AS "FAN RATED"
 - ALL 120-VOLT, SINGLE PHASE, 15- & 20-AMP BRANCH CIRCUITS SUPPLYING OUTLETS INSTALLED IN DWELLING UNIT KITCHENS, DINING ROOMS, FAMILY ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DEKS, BEDROOMS, SUNROOMS, REC ROOMS, CLOSETS, LAUNDRY AREAS, HALLWAYS AND SIMILAR ROOMS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER, COMBINATION TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT PER CEC 210.12
 - NON-METALLIC SHEATHED CABLE SHALL BE SECURED BY STAPLES, CABLE TIES, STRAPS, HANGERS OR SIMILAR AT INTERVALS NOT EXCEEDING 4'-1/2" WITHIN 12" OF EACH CABINET, BOX OR FITTING. FLAT CABLES SHALL NOT BE STAPLED ON EDGE
 - ALL NEW 125-VOLT, 15 AND 20 AMP RECEPTACLES IN THE DWELLING ARE LISTED TAMPER-RESISTANT. CEC 406.12
 - CONTRACTOR TO COORDINATE WITH OWNER TO CONFIRM FINAL LOCATIONS OF CONVENIENCE RECEPTACLES
 - ALL RECEPTACLES LOCATED IN BATHROOMS, GARAGES, OUTDOORS, CRAWLSPACES, UNFINISHED AREAS OF BASEMENTS, KITCHENS, BOATHOUSES, LAUNDRY AREAS, OR WITHIN 6FT OF SINKS, TUBS, OR SHOWERS TO HAVE GFI PROTECTION PER CEC 210.8(A)
 - PROVIDE AT LEAST TWO 20-AMPERE BRANCH CIRCUITS TO SERVE COUNTER TOP RECEPTACLES FOR SMALL KITCHEN APPLIANCES PER CEC 210.52(B)
 - PROVIDE ONE DEDICATED 20-AMPERE BRANCH CIRCUIT FOR THE BATHROOM RECEPTACLE OUTLETS PER CEC 210.11(C)(3).
 - ALL EXTERIOR DISCONNECT SWITCHES SHALL BE NEMA 3R PER CEC TABLE 110.28. PROVIDE LIQUID-TIGHT CONDUIT
 - ALL RECEPTACLES LOCATED OUTSIDE SHALL BE TYPE WEATHER RESISTANT, GFI WITH EXTRA DUTY IN-USE COVER, PER CEC 210.8 AND 406.9(B)
 - RECEPTACLES IN DWELLINGS TO BE LOCATED PER CEC 210.52
 - LIGHTING TO BE ON CIRCUIT A-13
 - * ALL RECEPTACLES, SWITCHES, AND CONTROLS SHALL BE NO MORE THAN 48" (TO TOP OF BOX) NOR LESS THAN 15" (TO BOTTOM OF BOX) ABOVE FINISHED FLOOR
* FOR UNOBSTRUCTED CASES: THE HIGH FORWARD/SIDE REACH AND LOW FORWARD/SIDE REACH SHALL MEET THESE RANGES PER CBC 11B-308.2.1 AND 11B-308.3.1
* FOR OBSTRUCTED CASES: WHEN THE HIGH FORWARD REACH IS OVER AN OBSTRUCTION, THE CLEAR FLOOR SPACE SHALL EXTEND BENEATH THE OBSTRUCTION FOR A DISTANCE NOT LESS THAN THE REACH DEPTH OVER THE OBSTRUCTION PER CBC 11B-308.2.2
* FOR OBSTRUCTED CASES: WHEN THE HIGH SIDE REACH IS OVER AN OBSTRUCTION, THE OBSTRUCTION SHALL BE 34" HIGH AND 24" DEEP MAXIMUM. HIGH SIDE REACH SHALL BE 48" FOR A DEPTH OF 10" MAX, OR WHEN >10" BUT <24", HIGH SIDE REACH SHALL BE 46" PER CBC 11B-308.3.2
 - * PROVIDE DOORBELL IN ONE GANG BOX, ADA APPROVED MARKINGS AND AUDIO VISUAL BELL. PER CBC 11B-809.5.5
* COORDINATE WITH FIRE ALARM CONTRACTOR TO ENSURE PROVISION OF WALL HORN-AND-STROBES IN LIVING ROOMS, BEDROOMS, AND BATHROOMS.
* PROVIDE SMOKE DETECTOR WITH AUDIO VISUAL APPROVED FEATURE PER CBC 11B-809.5.2
* PROVIDE CAPABILITY FOR INTERCONNECTIONS AND INTEGRATION FIRE ALARM WITH THE SMOKE DETECTOR PER CBC 11B-809.5

OPTIMIZEDENERGY™
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DATE SIGNED 05-01-26

EAST EMPIRE RESIDENCE

135 EAST EMPIRE STREET
GRASS VALLEY, CA. 95945

ISSUED FOR	DATE
PERMIT	04-02-26
PLAN CHECK #1	05-01-26
PROJECT NUMBER	25341
SHEET TITLE	ELECTRICAL PLAN
SHEET NO.	E1