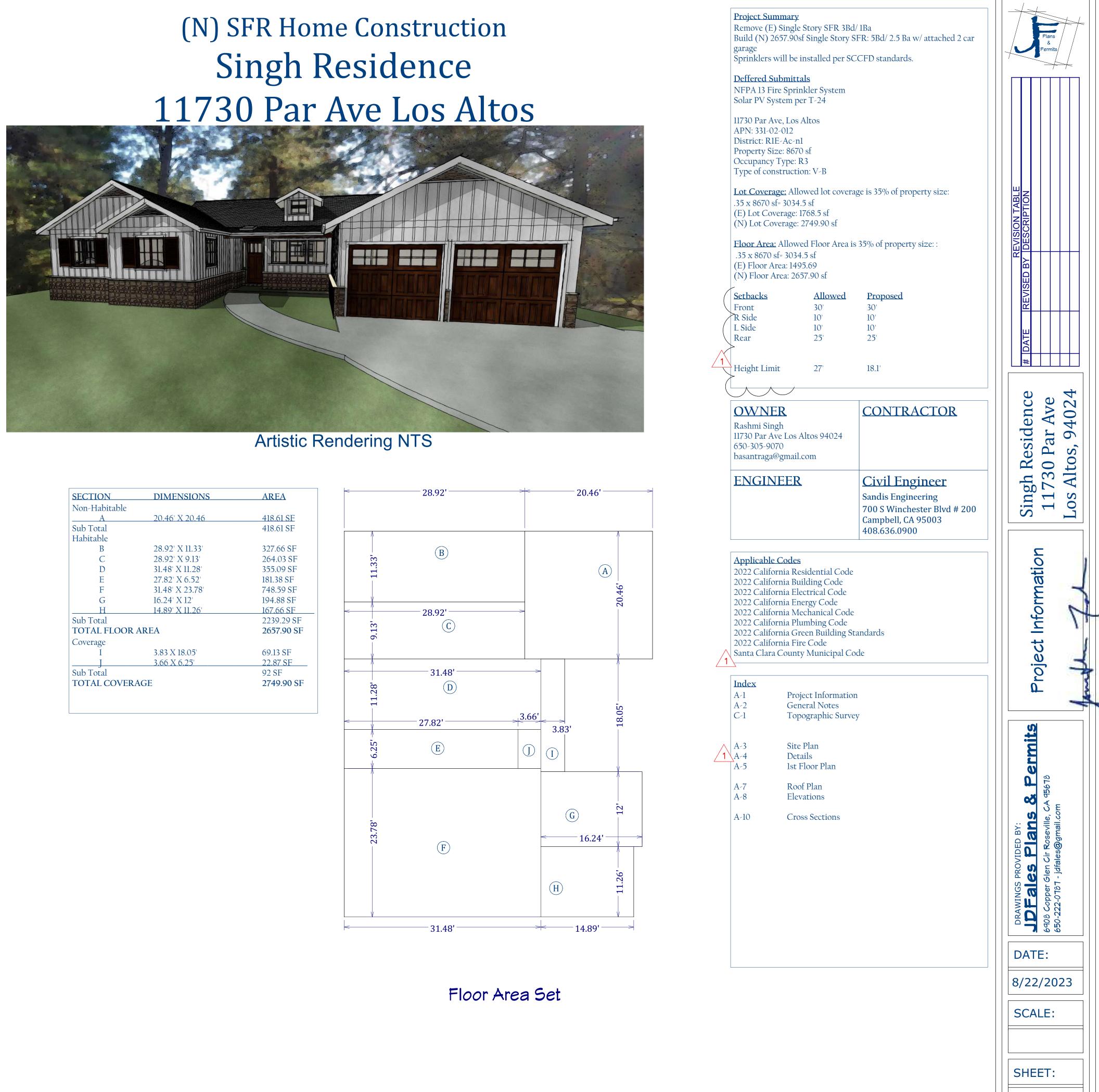


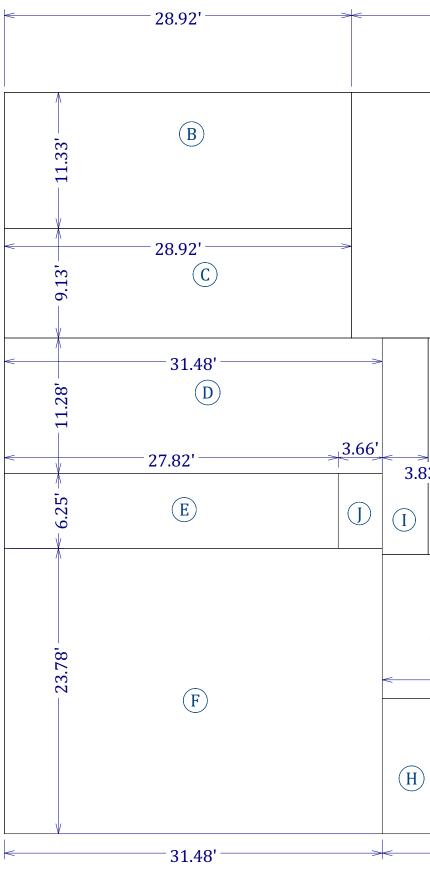
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circumstances without the express written consent of the owner(s) of such plans.

(N) SFR Home Construction Singh Residence



SECTION	DIMENSIONS	AREA
Non-Habitable		
A	20.46' X 20.46	418.61 SF
Sub Total		418.61 SF
Habitable		
В	28.92' X 11.33'	327.66 SF
С	28.92' X 9.13'	264.03 SF
D	31.48' X 11.28'	355.09 SF
E	27.82' X 6.52'	181.38 SF
F	31.48' X 23.78'	748.59 SF
G	16.24' X 12'	194.88 SF
<u> </u>	14.89' X 11.26'	167.66 SF
Sub Total		2239.29 SI
TOTAL FLOOI	R AREA	2657.90 S
Coverage		
I	3.83 X 18.05'	69.13 SF
I	3.66 X 6.25'	22.87 SF
Sub Total		92 SF
TOTAL COVE	RAGE	2749.90 S



A-1

GENERAL

- 1. 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 openable exterior exit door. (CRC R310.2.1 and CRC R310.2.2) Window wells, ladders, and steps shall comply with CRC R310.2.3. Bars, grilles, covers, ands screens shall be releasable or removable from the 1. Garage shall be separated from the dwelling unit & attic area by ½ inch gypsum board applied to the • Outside of each separate sleeping area in the immediate vicinity of bedrooms. inside without the use of a key, tool, special knowledge, or force greater than 15lbs to oper-ate the emergency escape and rescue openings. (CRC R310.4) Photovoltaic panels & modules shall not be below an emergency escape and rescue opening within 36". (R324.6.2.2)
- 2. Each bathroom containing a bathtub, shower or tub/shower combination shall be me-chanically ventilated with Energy Star approved equipment (minimum 50cfm) with an integral humidistat installed. (CRC R303.3.1)
- 3. 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 lim-ited to eaves or cornice vents). As an alternative in Climate Zone 16 (Truckee re-gion), the net area may be reduced to 1/300 when a Class I or II vapor barrier is in-stalled on the warm-in-winter side of the ceiling. Baffles are required at vents for insu-lation. Provide minimum of 1" inch of air space between insulation and roof sheathing. (CRC R806) 4. Enclosed rafter spaces shall have a 1-inch clear cross ventilation. (Properly sized raft-ers for
- insulation) (CRC R806.3)
- 5. 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 R408.3. Un-vented crawl space added option for dehumidification of 70 pints moisture per day per 1,000 sf to requirement for exemption. (R408.3)
- 6. 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 ex-posed to rain, snow or drainage from irrigation shall be provided with cross-ventilation area of at least 1/150. (R317.1.6)
- 8. 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 may have a threshold of 7.75 inches maximum; a landing is not required if a stair with two or few-er risers is located on the exterior side and the door does not swing over the stairway. (CRC R311.3-R311.3.2)
- 9. Mezzanines shall not be greater than 1/3 of the story unless fire sprinklers are installed then the area can be $\frac{1}{2}$ of the story. (R325.3)
- 10. The following windows shall be fully tempered: (CRC R308.4) Sliding/swinging glass doors

• Glazing in walls and enclosures facing hot tubs, spas, whirlpools, saunas, steam rooms, bathtubs, showers and swimming pools where the glazing is less than 60 inch-es above the standing surface within the compartment and within 60 inches horizon-tally of the water's edge (CRC R308.4.5)

• Glazing within a 24" arc of a door that is less than 60 inches above the floor. Safety glazing required on a wall less than 180 degrees from the plane of the door in a closed position and within 24" of hinge side of an 7. Usable spaces underneath enclosed/unenclosed stairways shall be protected by a minimum of $\frac{1}{2}$

in-swing door. (R308.4.2) • Glazing where the exposed area is greater than 9sq.ft, bottom is less than 18 in. and at least 36 in. above

the floor, and adjacent to a walking surface • Within 60in. of the bottom tread of a stairway and less than 36in. above the landing

• Glazing in guards and railings

• Glazing adjacent to stairways, landings, and ramps within 36in. horizontally of the walking surface less than 36in. above the walking surface

- **FOUNDATIONS & CONCRETE SLABS**
- 1. Slope drainage 6" within the first 10ft. from the foundation wall. If physical obstruc-tions 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. Imper-vious surfaces shall also be sloped a minimum of 2 percent for 10ft away from struc-tures 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 mini-mum foundation depth is 18 inches below grade if between 4,000-7,000 foot elevation and 24 inches below grade for 7,000 foot elevation and above. Exception: Interior footings shall be a minimum of 12 inches below grade. (L-V 3.14)
- B. 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) 4. Concrete slabs: 3 ½" 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 capillary break shall be installed when a vapor retard-er is required. 5. Provide an 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 408.4 & CPC 707.9)
- 5. 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 con-struction. Embed bolts 7" minimum. The anchor bolts shall be placed in the middle third of the width of the plate. Locate end bolts not less than 7 bolt diameters, nor more than 12" from ends of sill members. In SDC D0 and above: Provide 3"X3"X0.229 plate washers on each bolt at braced or shear wall locations, standard cut washers shall be permitted for anchor bolts not located in braced/shear wall lines. (CRC R403.1.6.1 & R602.11.1) **CLEARANCES AND TREATMENT FOR WOOD FRAMING**
- 1. Weather exposed glu-lam, beams and posts shall be pressure treated or shall be wood of natural resistance to decay (CRC R317.1.3 & 5)
- 2. Columns exposed to the weather or in basements when supported on concrete pier or metal pedestals shall be pressure treated or natural resistance to decay unless the pier/pedestals project 1" above concrete or 6" above earth and the earth is covered by an approved impervious moisture barrier. (CRC R317.1.4 exc. 1)
- 3. Columns in enclosed crawl spaces or unexcavated areas located within the periphery of the building shall be pressure treated or natural resistance to decay unless the col-umn is supported by a concrete pier or metal pedestal of a height 8" or more and the earth is covered by an impervious moisture barrier. 10. All dwellings must have one exterior outlet at the front and the back of the dwelling. (CEC (CRC R317.1.4 exc. 2)
- 4. Deck posts supported by concrete piers or metal pedestals projecting not less than 1" above a concrete 11. Garage receptacles shall not serve outlets outside the garage. Exception: Garage circuit may serve floor or 6" above exposed earth. (CRC R317.1.4 exc. 3) FLOORS
- 1. Under-floor areas with storage, fuel-fired equipment or electric-powered equipment with less than 2x10 12. At least one wall switched lighting outlet or fixture shall be installed in every habita-ble room, solid joists shall be protected on the underside by half-inch sheet-rock or a sprinkler system. (R302.13 2. Balconies must be designed for a minimum live load of 60lbs per square foot. (CRC T-R301.5)
- WALLS
- 1. Positive connection shall be provided to ensure against uplift and lateral displacement. (CRC R502.9 & CBC 2304.10.7)
- 2. All fasteners used for attachment of siding & into pressure treated lumber shall be of a corrosion resistant type. (CRC R317.3)
- 3. Fire-block in concealed spaces of stud walls/partitions, vertically at ceiling/floor levels, & horizontally at 10ft. intervals. Fire-block at soffits, drop ceilings/similar locations & in concealed spaces at the top/ bottom of stair stringers. (CRC R302.11)
- 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 un-der stucco and 2 layers of 15lb felt (or equivalent) under stone veneer.
- 5. 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 immedi-ately above the flashing. (CRC R703.8.5 and R703.8.6)

ROOF

- 1. Roof sheathing can only cantilever 9 inches beyond a gable end wall unless supported by overhang framing. (R802.5.2.1)
- 2. Provide a 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.
- 3. Roof drains/gutters required to be installed per the California Plumbing Code with leaf/debris protection also installed.

4. Roof construction and coverings shall comply with CRC Chapters 8, 9 and local ordi-nance. All roofing • Outside of each separate sleeping area in the immediate vicinity of bedrooms shall be tested/listed Class A minimum • On every level of a dwelling unit including basements 5. Asphalt shingles with sloped roofs 2/12 to <4/12 shall have two layers of underlay-ment applied per • Alterations, repairs, or additions exceeding 1,000 dollars (May be battery operated) CRC R905.2.2. 19. Smoke alarms shall be installed (CRC (R314):

GARAGE AND CARPORT

- garage side. Garage beneath habitable rooms shall be separat-ed by not less than 5/8" type X gypsum In each story, including basements. board. Structure supporting floor/ceiling assemblies used for required separations shall have ¹/₂" gypsum board installed mini-mum. Door openings from the garage to the dwelling shall be solid When the dwelling and garage has fire sprinklers installed per R309.6 and R313, doors into the dwelling unit from the garage only need to be self-closing and self-latching. (CRC R302.5.1 & T-R302.6)
- 2. Ducts penetrating the garage to dwelling separation shall be a minimum of 26 gauge with no openings into the garage. (CRC R302.5.2)
- 3. Penetrations through the garage to dwelling separation wall (other than ducts as listed above) shal be fire-blocked per CRC section R302.11, item #4. 4. Garage and carport floor surfaces shall be non-combustible material and slope to drain towards the
- garage door opening. (CRC R309.1) Appliances and receptacles installed in garage generating a glow, spark or flame shall be located 18"
- post or other impact barrier from vehicles. (CMC 305.1.1) the floor unless they are protected from vehic-ular impact. (CBC 406.2.9.3)

STAIRWAYS & RAMPS

- 1. Stair landings required every 12'7" of vertical rise. (CRC R311.7.3) 2. Exterior stair stringers must be naturally resistant to decay or pressure treated. (CRC R317.1)
- 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 R311.7)
- 4. 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". See R311.7.8.3 item# 2 for type II handrails with a parameter over 6.25". A minimum clearance of 1.5" shall be maintained from the wall or other surface. Handrails shall be returned, terminate in newel posts, or safe-ty terminals. (CRC R311.7.8.2)
- 5. Guards shall be 42" minimum height (unless acting as a handrail/guard for a stair-way; 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 R312)
- 6. Provide landings at the top/bottom of the stairway the width of the stairway. The depth of the landing shall be 36" minimum. (see CRC R311.7.6 for exceptions).
- gypsum board. (CRC R302.7) 8. 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 of site constraints, ramps shall have a slope of not more than 1 unit vertical in 8 units horizontal (12.5-percent slope) (CRC R311.8.1). Provide 3'X3' landings at the top and bottom of ramps, where doors open onto ramps, and where ramps change directions. (CRC R311.8.2) **DECKS**
- 1. 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 lat-eral forces according to CRC Table 301.5.
- 2. Provide deck lateral load connections at each end of the deck and at deck intersec-tions per CRC points along the deck.
- approved post bases, straps, etc to achieve this per CRC R407.3 4. Joists, girders, structural blocking and support posts shall be wood of nat-ural resistance to decay or and 24" minimum clearance in front. (CPC 402.5)

pressure-treated lumber when exposed to the weather. (CRC R317.1.3) **ELECTRICAL**

- 1. No electrical panels in closets of bathrooms. Maintain a clearance of 36" inches in front of panels, 30" wide or width of equipment and 6'-6" high for headroom. (CEC 110.26)
- 2. Provide a minimum 3 lug intersystem bonding busbar at the main electrical service. (CEC 250.94) 3. 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. (CBC 406.2.1) Urinals: .125gpf 4. 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 • Lavatory Faucets: 1.2gpm @ 60psi
- water pipes to ground. All ground clamps shall be acces-sible and of an approved type. (CEC 250.104)
- (CEC 406.12)
- 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)
- 7. 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)
- 8. 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)) 9. 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)
- 210.52(E))
- 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))
- bathroom, hallways, stairways, attached garages and detached garages with electrical power, equipment spaces (attics, basements, etc). (CEC 210.70)
- 13. Kitchens, dining rooms, pantries, breakfast nooks, and similar areas must have a minimum of two 20A circuits. Kitchen, pantry, breakfast nooks, dining rooms, work surfaces and similar areas within 24" inches of the end of any counter space and not higher than 20" above counter. (CEC 210.52 (C)) Island counter spaces shall have at least 1 receptacle outlet unless a range top or sink is in-stalled than 2 receptacles may be required. 1 receptacle is required for peninsular counter spaces. Receptacles shall be located behind kitchen sinks if the counter area depth behind the sink is more than 12" for straight counters and 18" for corner in-stallations. (CEC Figure 210.52(C)(1))
- 14. Receptacles shall be installed at 12' o.c. maximum in walls starting at 6' maximum from the wall end. Walls longer than two feet shall have a receptacle. Hallway walls longer than 10 ft shall have a receptacle in hallways. (CEC 210.52(A))
- 15. 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)) 16. All lighting/fan fixtures located in wet or damp locations shall be rated for the appli-cation. (CEC
- 410.10) 17. GFCI outlets are required: for all kitchen receptacles that are designed to serve coun-tertop surfaces, dishwashers, bathrooms, in under-floor spaces or below grade level, in unfinished basements, crawl space lighting outlets, in exterior outlets, within 6' of a laundry/utility/wet bar sinks, laundry areas, and in all garage outlets including out-lets dedicated to a single device or
- garage door opener. (CEC 210.8) attached garages (CRC R315):

above floor unless it is listed as flammable vapor ignition resistant. (CMC 305.1) Provide protective

3. Rise shall be maximum 7.75"; Run shall be 10" minimum; headroom 6'-8" minimum; width 36"

3. Posts/columns shall be retrained at the bottom end to prevent lateral displacement; clearly show

6. All branch circuits supplying 15/20 ampere outlets in family rooms, dining rooms, living rooms,

• In each room used for sleeping purposes.

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

wood/steel doors or honeycomb steel doors not less than 1 3/8" thick or a 20-minute rated fire door. 21. Shall not be installed within 20ft horizontally of cooking appliances and no closer Doors shall be self-closing & self-latching. No openings directly into a sleeping room from the garage. 3ft to mechanical registers, ceiling fans and bathroom doors with a bathtub or shower unless this would prevent placement of a smoke detector (314.3(4)).

> 22. Alterations, repairs, or additions exceeding 1,000 dollars. (May be battery operat-ed.) 23. 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) 24. Smoke detectors within 10 feet to 20 feet of the stove shall be ionization type with alarm silencing switch. CRC R314.3.3.

25. 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))

PLUMBING

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

- 6. Appliances in private garages and carports shall be installed with a mini-mum clearance of 6ft above 2. ABS piping shall not be exposed to direct sunlight unless protected by water based synthetic latex paints. (CPC 312.13)
 - 3. 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 9. All high efficacy light fixtures shall be certified as "high-efficacy" light fixtures by the 312.14)
 - 4. Underground water supply lines shall have a 14 awg blue tracer wire. (CPC 604.10.1) 5. The adjacent space next to showers without thresholds shall be considered a "wet location" when using the CRC, CBC, and the CEC. (CPC 408.5)
 - 6. 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. vacancy sensor, or fan speed control. (150(k)1B) The required area and dimensions shall be measured at a height equal to the top of the 12. Provide a gasket/insulation on all interior attic/under-floor accesses. (110.7) threshold and shall be maintained to a point of not less than 70" above the shower 408.5) Showers and tubs with showers require a non-absorbent surface up to 6' above the floor. (CRC R307.2) Minimum shower re-ceptor slope is 1/8" per foot. (408.5)
 - 7. Show location and size of the water heater on plans. Provide pressure relief valve with drain to outside for water heater. (CPC 504.6) Provide seismic strapping in the upper & heater shall be of an instantaneous type or the following shall be provided (new construction only) (CEC 150(n))
 - A 120V receptacles provided within 3ft
 - A category III or IV vent, or a straight (without bends) Type B vent
- Condensate drain that is no more than 2 inches higher than the base of the water heater • Gas supply line with a minimum 200,000 Btu/hr dedicated capacity for the water heater • A dedicated 120/240, 3 wire circuit with 10AWG wire to a receptacle out-let within 3' of the water heater. The unused conductor shall be electri-cally isolated and have a reserved circuit breaker space. Both ends of the conductor shall be labeled "spare" and be units horizontal (12.5-percent slope). Exception: Where it is technically infeasible to comply because electrically isolated. A reserve single-pole circuit breaker space near this circuit labeled "Future 240V Use." (CEC 150.0(n))

8. 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 609.11)

9. A 3-inch gravity 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 R507.9.2. Specify connectors with a minimum allowable stress design capacity of 1,500lbs and install feet in length shall be first approved by the Building Official. (L-V 8.8)

with 24" of the end of the deck. 750lb rated devices are allowed (DTT1Z as example) if located at 4 10. Water heaters located in attics, ceiling assemblies and raised floor assemblies shall show a water-tight corrosion resistant minimum $1 \frac{1}{2}$ " deep pan under the water heater with a minimum ³/₄ inch drain to the exterior of the building. (CPC 507.5) 11. Water closet shall be located in a space not less than 30" in width (15" on each side)

12. 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 408.3)

- 13. Provide anti-siphon valves on all hose bibs. (CPC 603.5.7) 14. Floor drains shall be provided with a trap primer. (CPC 1007)
- 15. Clearly label on the plans the maximum water flow rates per the (CGBSC 4.303.1): • Water Closets: 1.28gpf
- Kitchen Faucets: 1.8gpm @ 60psi

• Showerheads: 1.8gpm **MECHANICAL**

- 5. All 15/20 ampere receptacles installed per CEC 210.52 shall be listed tamper-resistant receptacles. 1. All newly installed gas fireplaces shall be direct vent and sealed-combustion type (CMC 912.2)
 - 2. 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. 3. Top chimney must extend a minimum of 2 ft. above any part of the building within 10 ft. (CMC 802.5.4)
 - 4. Fireplaces shall have closable metal or glass doors, have combustion air intake drawn method approved by the enforcing agency. from the outside and have a readily accessible flue dampener control. Con-tinuous burning pilot lights are prohibited. (CEC 150.0(e))
 - 5. Provide combustion air for all gas fired appliances per CMC Chapter 7. minimum 2" above insulation. (CMC 509.6.2.7)
 - 7. Gas water heater and furnace are not allowed in areas opening into bathrooms, closets or bedrooms unless installed in a closet equipped with a listed gasketed door assembly and a listed self-closing device with all combustion air obtained from the
 - outdoors. (CPC 504) 8. Roof top equipment on roofs with over 4/12 slope shall have a level 30"x30" work-ing (CGBSC 4.303.1.3.2) platform. (CMC 304.2)
 - 9. Exhaust openings terminating to the outdoors shall be covered with a corrosion resistant screen $\frac{1}{4}$ "-1/2" in opening size (not required for clothes dryers). (CMC 502.1)
- counter outlets must be installed in every counter space 12" inches or wider, not greater than 4' o.c., 10. 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 504.4.2)
 - 11. 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 pub-lic way. (CMC 502.2.1)
 - 12. Provide minimum 100 square inches make-up air for clothes dryers installed in closets. (CMC 504.4.1(1)) 13. Heating system is required to maintain 68 degrees at 3 ft. above floor level and 2ft
 - from exterior walls in all habitable rooms. (CRC R303.10) 14. 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 emis-sion standard of less than 7.5 grams per hour for a non-catalytic wood fired appli-ance or 4.1 grams per hour for a catalytic wood fired appliance and is approved in writing by the APCO.

TITLE 24 ENERGY

18. Carbon-monoxide alarms shall be installed in dwelling units with fuel-burning appli-ances or with 1. All ducts in conditioned spaces must include R-4.2 insulation. (150.1(c)9) Mini-

mum heating and cooling filter ratings shall be MRV 13 (150.0(m)12) **ADDITIONAL GREEN BUILDING** 2. Isolation water valves required for instantaneous water heaters 6.8kBTU/hr and above. **<u>A4.106.2.3 - Topsoil Protection</u>** Topsoil must be stockpiled for Valves shall be installed on both cold and hot water lines. Each valve will need a hose bib or reuse in a designated area and covered for protected from erosion. other fitting allowing for flushing the water heater when the valves are closed. (CEC 110.3(c **<u>4.106.3 - Grading and Paving</u>** Surface water shall be directed 3. ALL luminaires must be high efficacy (150.0(k)1A) away from all buildings. The contractor shall ensure the preventio • Luminaries recessed in insulated ceilings must meet five requirements (150.0(k)1C): of water entering the buildings using swales, French drains, or other approved measures the will keep surface water away from • They must be rated for direct insulation contact (IC). buildings. • They must be certified as airtight (AT) construction. They must have a sealed gasket or caulking between the housing and ceiling to prevent flow **<u>A4.106.4 - Water permeable surfaces</u>** The site plan shall show a nan of heated or cooled air out of living areas and into the ceiling cavity. breakdown matrix of the square footage entitled "Water Permeable

• They may not contain a screw base sockets • They shall contain a JA8 compliant light source the paving material is permeable or not (paving for parking, 5. In bathrooms, garages, laundry rooms, and utility rooms, at least on luminaire in each of walking or patio surfaces apply). The matrix must show these spaces shall be controlled by a vacancy sensor or occupant sensor provided the occupant calculations reflecting a minimum of 20% for Tier 2 projects. sensor is initially programmed like a vacancy sen-sor (manual-on operation). (150.0(k)2l) (CGBC A4.106.4) 6. Joint Appendix A (JA8) certified lamps shall be considered high efficacy. JA8 compli-ant light A4.106.5 - Cool Roof The roof plan shall indicate on a note that sources shall be controlled by a vacancy sensor or dimmer. (Exception: <70sf closets and the roof surface area shall meet an Aged Solar Reflectance of \geq . hallway) (150.0(k)2K) 028. or that noted in the Title 24 compliance report, whichever is greater.

7. Under-cabinet lighting shall be switched separately from other lighting systems (150.0(k)2L)

8. All exterior lighting shall be high efficacy, be controlled by a manual on/off switch and have EPA WaterSense Certified one of the following controls (the manual switch shall not override the automatic control 4.303.1.3.1 - Single Showerheads shall not exceed 1.8gpm @80psi and shall be EPA WaterSense Certified device): (150.0(k)3A)

• Photo-control and motion sensor

 Photo-control and automatic time switch control **4.303.2 - Plumbing fixtures and fittings** shall meet the standards • Astronomical time clock control turning lights off during the day referenced in Table 1401.1 of the California Plumbing Code. A4.303.1 - Kitchen faucets shall not exceed 1.5gpm @60psi California Energy Commission. 10. Contractor shall provide the homeowner with a luminaire schedule giving the lamps used **<u>A4.303.3 – Appliances</u>** Water saving dishwasher appliances will in the luminaires installed. (10-103(b)) be used on the project. Install a minimum of one qualified ENERGY 11. The number of blank electrical boxes more than 5 feet above the finished floor shall not STAR appliance with maximum water use as follows: 1. Standard Dishwashers – 4.25 gallons per cycle. greater than the number of bedrooms. These electrical boxes must be served by a dimmer, 2. Compact dishwasher – 3.5 gallons per cycle. 3. Clothes washers – water factor of 6 gallons per cubic feet of 13. Provide verification on the plans how the building will meet the minimum ventilation and drum capacity. **<u>4.406.1 – Rodent Proofing</u>** The contractor shall rodent proof drain outlet. (CPC 408.6) Provide curtain rod or door a minimum of 22" in width. (CPC acceptable indoor air quality requirements per ASHRAE Standard 62.2. Win-dow operation is not a permissible method of providing the whole building ventila-tion airflow required. This is annular spaces around pipes, electric cables, conduits or other subject to HERS testing. The following label must be attached to the fan switch: "To maintain openings in plates at exterior walls by closing such openings with minimum levels of outside air ventilation required for good health, the fan control should be on cement mortar, concrete masonry. at all times when the build-ing is occupied, unless there is severe outdoor air contamination." **4.403.2 – Reduction in cement use**. Not less than a 25% lower third of the water heater a minimum of 4" above controls. (CPC 507.2) The water (California Ener-gy Code 150.0(o)) A minimum 100 CFM indoor air quality fan is required in reduction in cement use. Products commonly used to replace cement in concrete mix designs include but are not limited to: fly the kitchen and shall be HERS verified. WILDLAND URBAN INTERFACE (WUI) ash, slag, silica fume, rice hull ash.

- or fire resistive construction. (CRC R337.7)
- areas and undersides of appendages to comply with ignition resistant con-struction
- requirements. (CRC R337.5-9)
- complying with ASTM D 3909. (CRC R337.5.2)
- perforated cap sheet complying with ASTM D 3909 and at least 36 inches wide running the professional full length. (CRC R337.5.3)
- SFM Standard 12-7A-2. (CRC R337.8.2)
- (R337.8.2.2
- weather-stripping meeting section requirements are permitted. (R337.8.4)
- noncombustible material. (CRC R337.9)

GREEN BUILDING

sensor input. (CGBSC 4.304)

irrigation systems, etc.

(CGBSC 4.504.1)

demolition waste. (CGBSC 4.408.2)

1. Projects which disturb less than one acre of soil and are not part of a larger com-mon plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site (CGBSC 4.106.2):

• Retention basins of sufficient size shall be utilized to retain storm water on site • Where storm water is conveyed to a public drainage system, collection point, gut-ter, or similar disposal method, water shall be filtered by use of a barrier system, wattle or other 2. All new residential construction with attached private garages shall have the follow-ing for electric vehicle (EV) charging stations (CGBSC 4.106.4) 3. Install a minimum 1-inch conduit capable of supplying a 208/240V branch circuit to a 6. Gas vents passing through an insulated assembly shall have a metal insulation shield a suitable box location for EV charging. The other end shall terminate to the main service and/or subpanel.

1. Exterior wall coverings shall be noncombustible, ignition resistant, heavy timber, log wall

2. Exterior wall coverings shall extend from the foundation to the roof and terminate at 2 inch nominal solid blocking between rafters and overhangs. (CRC R337.7.3.2)

4. Spaces created between roof coverings and roof decking shall be fire stopped by approved materials or have one layer of minimum 72lb mineral surfaced non-perforated cap sheet

5. Indicate on the plans where valley flashing is installed, the flashing shall be not less than 26awg and installed over not less than one layer of minimum 72lb mineral surfaced non-

6. Attic gable and eaves above 12ft and under-floor ventilation shall be provided with fully covered metal wire mesh, vents, or other materials that have a minimum 1/16 inch and

9. Exterior doors including garage doors shall be noncombustible, ignition resistant material, minimum 1 3/8 inch solid core, minimum 20 minute fire resistive rating or shall be tested to meet the performance requirements of SFM Standard 12-7A-1. (CRC R337.8.3) 10. Garage door perimeter gap maximum 1/8". Metal flashing, jamb and header overlap, and

11. The walking surface material of decks, porches, balconies and stairs within 10ft of grade level shall be ignition resistant material, exterior fire-retardant treated wood or

4. The main panel and/or subpanel shall be of sufficient size to install a 40-ampere dedicated branch circuit. The dedicated overcurrent protection space shall be la-beled "EV CAPABLE". 5. Multiple shower heads serving a single shower shall have a combined flow rate of 1.8 gpm or the shower shall be designed to allow only one shower outlet to be in operation at a time.

6. Residential projects with an aggregate landscape area equal to or greater than 500 square feet shall comply with either a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Land-scape Ordinance (MWELO), whichever is more stringent. Automatic irrigation sys-tem controllers installed at time of final inspection shall have weather or soil based controllers and/or weather based controllers with rain sensors. Soil moisture based controllers are not required to have rain

7. Recycle and/or reuse a minimum of 65 percent of nonhazardous construction and

8. (Clearly note on the plans) At time of final inspection, a building operation and maintenance manual, compact disc, etc shall be provided containing the following: (CGBSC 4.410) • Directions that manual shall remain onsite for the life of the building

• Operation and maintenance instructions for equipment, appliances, roof/yard drain-age, • Information from local utility, water and waste recovery providers

• Public transportation and carpool options • Material regarding importance of keeping humidity levels between 30-60 percent • Information regarding routine maintenance procedures

• State solar energy incentive program information

• A copy of any required special inspection verifications that were required (if any) 9. The project shall meet minimum pollutant control requirements for adhesives, seal-ants, caulks, paints, carpet, resilient flooring systems, etc. (CGBSC 4.504)

10. Duct openings related to HVAC systems shall be covered with tape, plastic, sheet metal or other methods to reduce the amount of water, dust and debris which may enter the system.

Surface Area" of all site paving elements and individually show if

4.303.1.1 - Water closets shall not exceed 1.28gpf and shall be

4.303.1.4.1 – Lavatory faucets shall not exceed 1.2gpm @60psi A4.303.1.4.4 - Kitchen faucets shall not exceed 1.8gpm @60psi

<u>A4.407.4 – Material Protection.</u> Building materials delivered to the construction site shall be protected from rain and other sources of moisture.

4.505.2 – Concrete slab foundations. Required to have a vapor 3. Open/enclosed roof eaves and soffits, exterior porch ceilings, floor projections, un-der-floor retarder by CBC Chapter 19, or CRR Chapter 5, shall also comply with this section.

> 4.505.2.1 - Capillary break. Shall be installed in compliance with one of the following: (a) $4^{"}$ thick base of $\frac{1}{2}$ " or larger clean aggregate, with a vapor barrier in direct contact with the concrete, and a concrete mix design which will address bleeding, shrinkage, and curling. (b) other equivalent methods approved by the enforcing agency, (c) slab design specified by a licensed design

4.505.3 - Moisture content of wood products. Building material with visible water damage shall not be installed. Wall and Floor framing shall not be enclosed if the moisture content exceeds 19%. maximum 1/8 inch openings, non-combustible and corrosion resistant. All other eave vents The materials shall be tested prior to installation of sheetrock. shall be listed/approved to resist the intrusion of flame and burning embers. (CRC R337.6) **4.506.1 – Bathroom Exhaust Fans.** Bathroom exhaust fans shall 7. Indicate on plans exterior glazing shall have a minimum of one-tempered pane, glass block, be ENERGY STAR compliance and ducted to terminate outside of have a fire resistive rating of 20 minutes or be tested to meet perfor-mance requirements of the building. Fans shall be controlled by a humidity controller. 4.507.2 - Heating and Air Conditioning Design. HVAC Systems 8. Operable skylights shall be protected by a noncombustible mesh screen 1/8" max openings shall be designed in accordance with ACCA Manuals J, D, and S. The contractor shall provide the completed calculations for approval

> prior to ordering and installing any equipment. **A4.506.3 – Direct-vent Appliances.** Direct-vent heating and cooling equipment shall be utilized if the equipment will be located in the conditioned space or install the space heating and water heating equipment in an isolated mechanical room.





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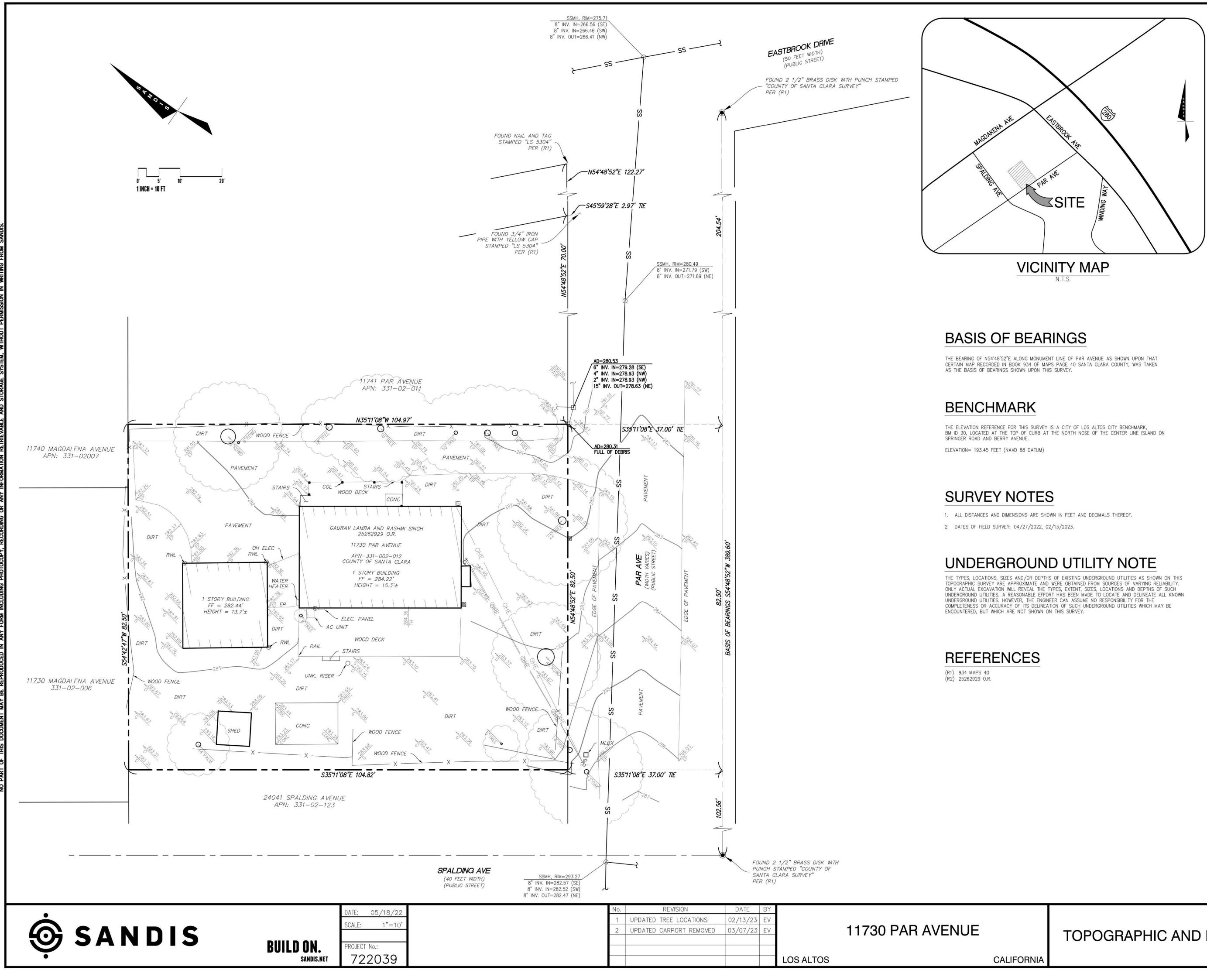
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SYMBOLS & ABBREVIATIONS

		u A
AD		ARI
BLDC		BUI
CNPT	\bigtriangleup	CO
COL		COL
CONC		COL
DCK		DEG
DWY		DRI
EP		EDO
ELEC		ELE
FNC		FEN
G		GR
GM	G	GAS
GUY	Ē	GU
HB	O+	HO
IRR	IRR	IRR
JP	JP 	JOI
MLBX		MA
OAK		OAI
ОН		OVE
OHE		OVE
Р		PA
PALM		PAI
PNL		ELE
RAIL		RAI
RDWD		RED
RWL	8	RAI
SSMH	\bigcirc	SAI
TREE	\bigcirc	TRE
UNK		UNI
WF		WO
WM	\mathbb{W}	WA
(TAV	LAXT	114

REA DRAIN UILDING CORNER ONTROL POINT OLUMN ONCRETE ECK RIVEWAY DGE OF PAVEMENT LECTRICAL ENCE ROUND GAS METER SUY WIRE OR POLE OSE BIBB RIGATION DINT POLE AILBOX DAK TREE VERHANG VERHEAD ELECTRIC AVEMENT ALM TREE LEC PANEL ON TO WALL AILING HAND OR GUARD EDWOOD TREE AIN WATER LATERAL ANITARY MANHOLE REE SYMBOL NKNOWN OOD FENCE ATER METER

LEGEND

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BUILDING FACE

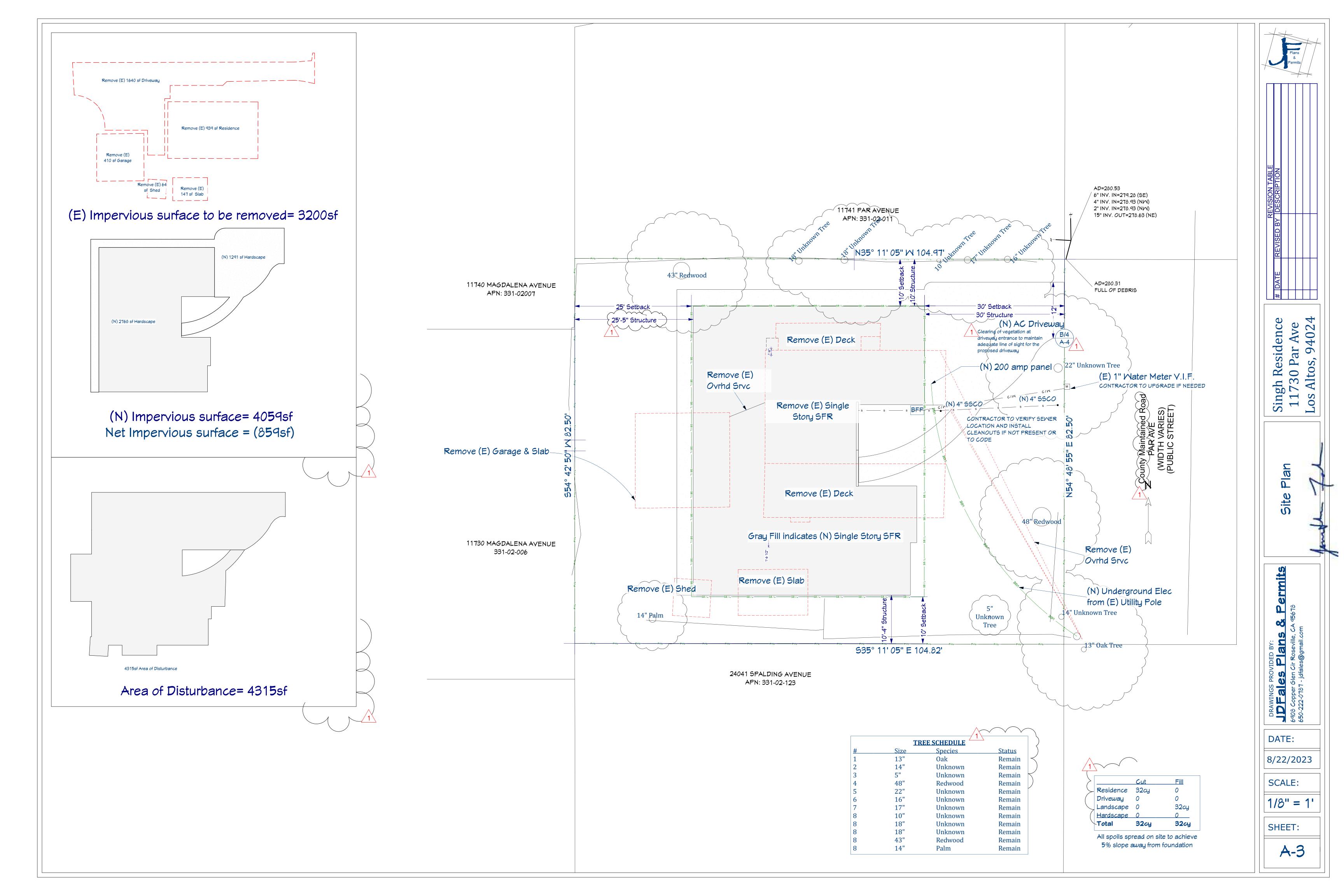
BUILDING OVERHANG EDGE OF PAVEMENT CONTOURS FENCE LINE, TYPE / HEIGHT AS INDICATED STORM DRAIN LINE SANITARY SEWER LINE OVERHEAD ELECTRIC LINE BOUNDARY LINE MONUMENT LINE TIE LINE

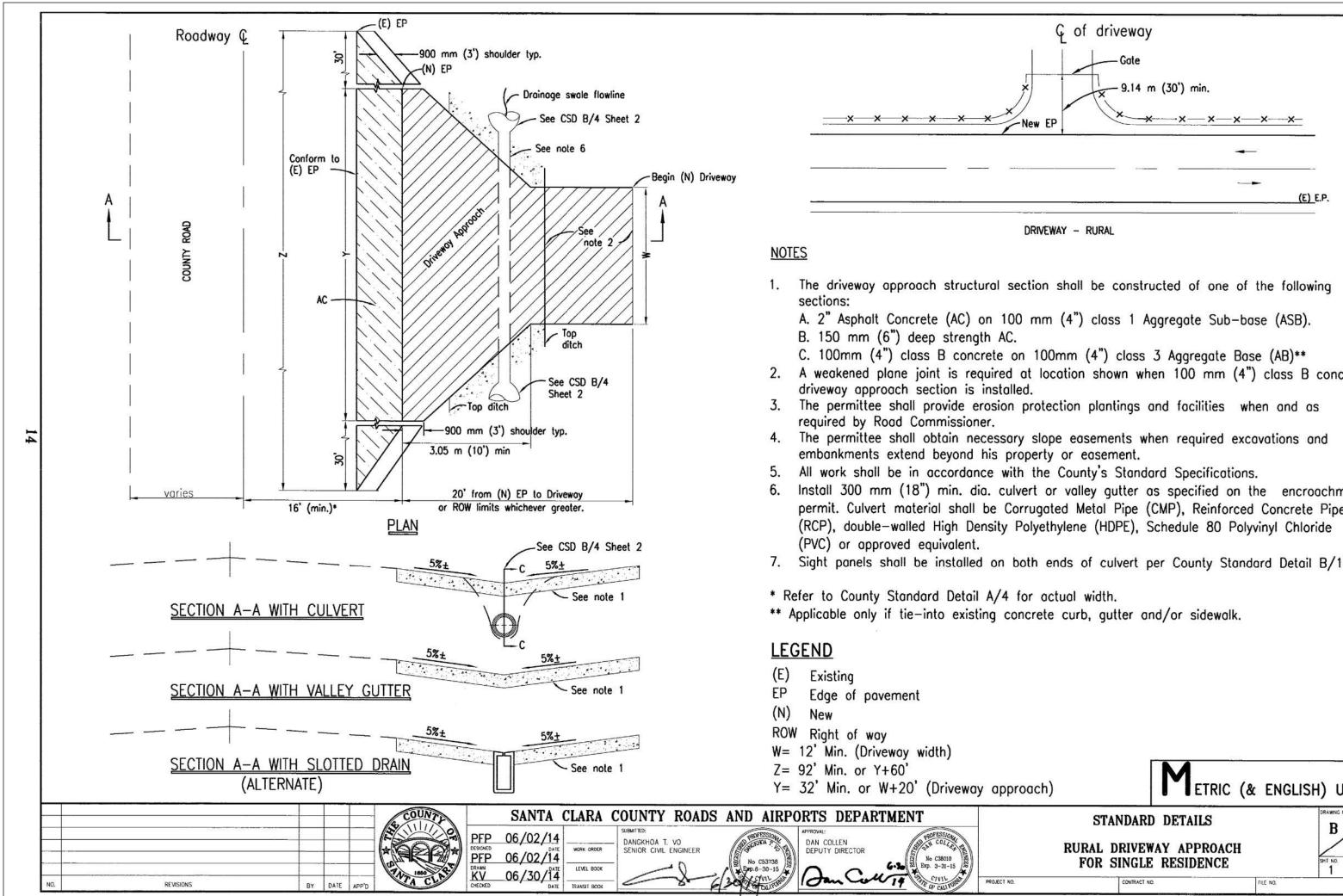
SPOT ELEVATION

TREE WITH DRIPLINE, SIZE AS INDICATED

TOPOGRAPHIC AND BOUNDARY SURVEY

SHEET





Cote X 9.14 m X New EP	(30') min. ××××
	(E) E.P.

1. The driveway approach structural section shall be constructed of one of the following

A. 2" Asphalt Concrete (AC) on 100 mm (4") class 1 Aggregate Sub-base (ASB).

C. 100mm (4") class B concrete on 100mm (4") class 3 Aggregate Base (AB)**
A weakened plane joint is required at location shown when 100 mm (4") class B concrete

driveway approach section is installed. The permittee shall provide erosion protection plantings and facilities when and as required by Road Commissioner.

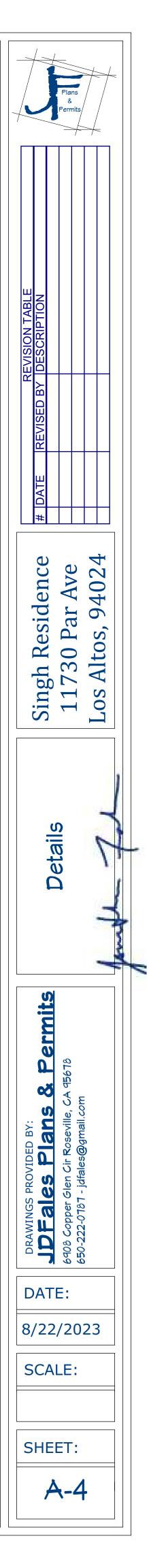
5. All work shall be in accordance with the County's Standard Specifications.

6. Install 300 mm (18") min. dia. culvert or valley gutter as specified on the encroachment permit. Culvert material shall be Corrugated Metal Pipe (CMP), Reinforced Concrete Pipe (RCP), double-walled High Density Polyethylene (HDPE), Schedule 80 Polyvinyl Chloride

7. Sight panels shall be installed on both ends of culvert per County Standard Detail B/16.

** Applicable only if tie-into existing concrete curb, gutter and/or sidewalk.

lth)					
Driveway	y approach)		METRIC	(& ENGL	ISH) UNITS
FESSIONAL COLLEG		STANDAR	D DETAILS	CH	DRAWING NO. B 4
C38010 3-31-15 CTV1L P CALL FORM	PROJECT NO.		E RESIDENCE		SHT NO. 1 OF 2

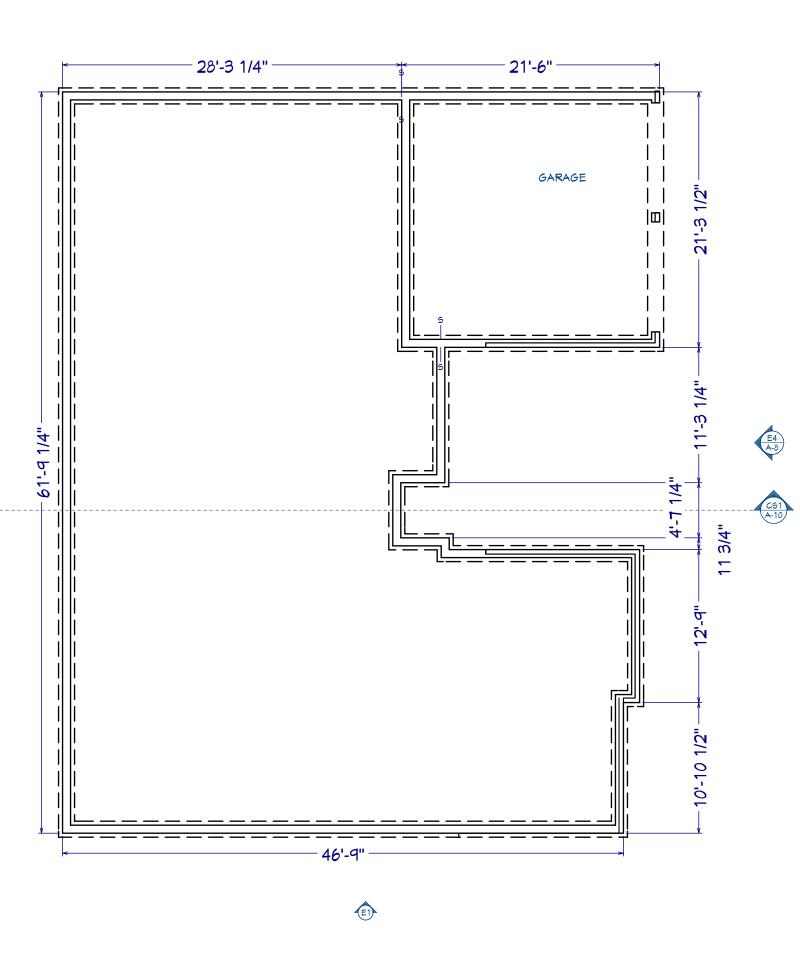


WINDOW SCHEDULE						
NUMBER	LABEL	QTY	SIZE	EGRESS	DESCRIPTION	TEMPERED
M01	4718FX	1	4718FX		FIXED GLASS	
M02	21026FX	1	21026FX		FIXED GLASS	
M03	210345C	1	2103450		SINGLE CASEMENT-HL	YES
M04	21040FX	1	21040FX		FIXED GLASS	
M05	210405C	2	2104050		SINGLE CASEMENT-HL	
M06	210405C	1	2104050		SINGLE CASEMENT-HR	
MOT	4040DC	7	4040DC	YES	DOUBLE CASEMENT-LHL/RHR	
MOg	2640SC	1	26405C		SINGLE CASEMENT-HL	YES
M10	21018AM	2	21018AM		SINGLE AMNING	
W11	01054FX	2	01054FX		FIXED GLASS	

DOOR SCHEDULE						
NUMBER	LABEL	QTY	SIZE	DESCRIPTION	FIRE	
D01	26 80	1	2680 R	POCKET-DOOR P04		
D02	2880	1	2880 L IN	HINGED-GLASS SLAB		
D03	2880	1	2880 L IN	HINGED-SLAB		
D04	2880	4	2880 R IN	HINGED-SLAB		
D05	3080	1	3080 L IN	HINGED-SLAB	YES	
D06	3080	1	3080 R EX	EXT. HINGED-GLASS PANEL		
D07	5080	1	5080 R IN	SLIDER-DOOR P04		
D08	4080	4	4080 L IN	SLIDER-DOOR P04		
D09	3080	1	3080 L	2 DR. BIFOLD-LOUVERED		
D 10	3080	1	3080 R EX	EXT. HINGED-DOOR E21		
D11	6080	2	6080 L/R EX	EXT. DOUBLE HINGED-GLASS PANEL		
D12	9080	2	9080	GARAGE-GARAGE DOOR CHD05		
D13	2868	1	2868 R IN	HINGED-SLAB		
D14	2868	1	2868 L IN	HINGED-SLAB		
D15	266 8	1	2668 L	POCKET-DOOR P04		

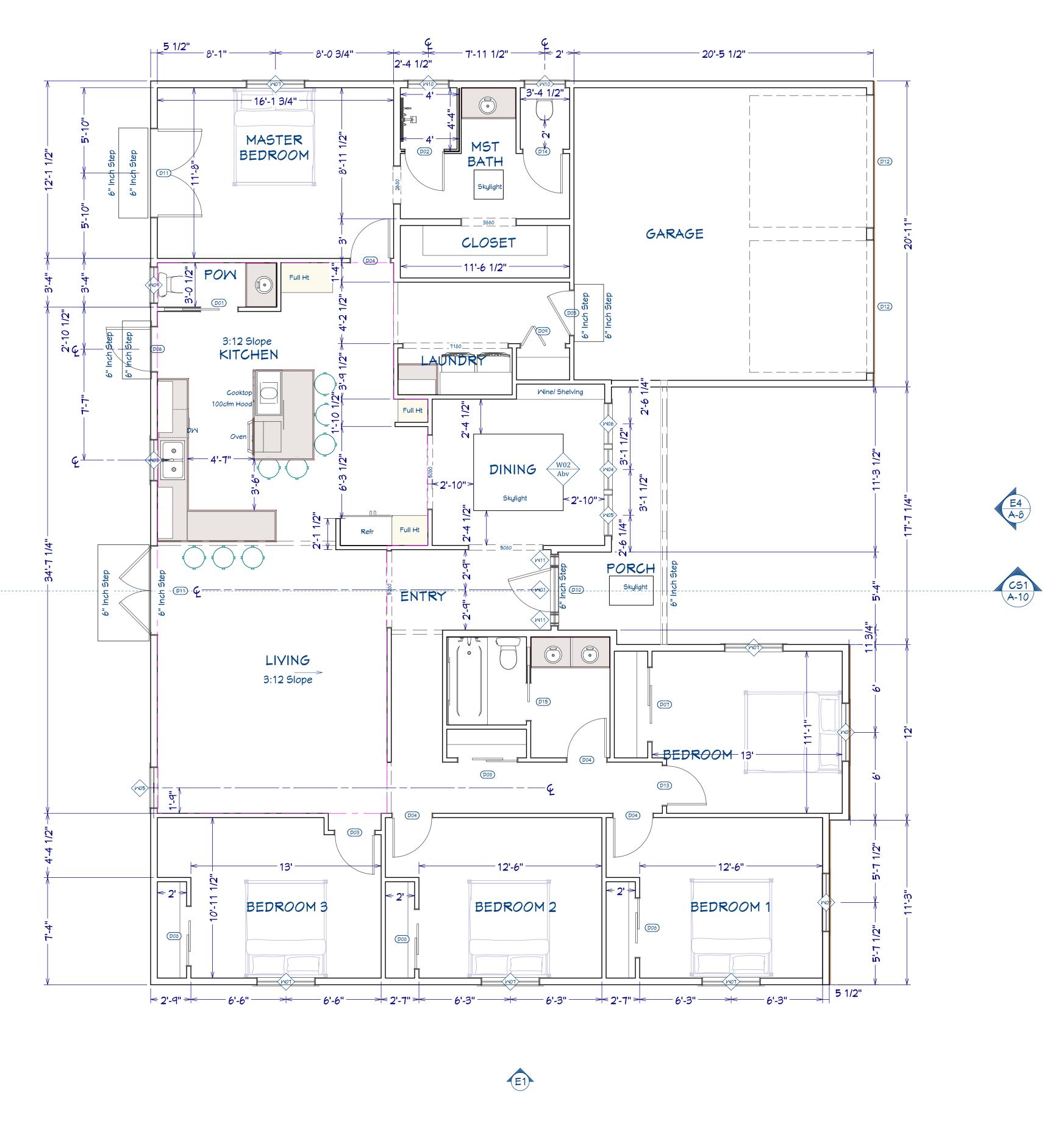
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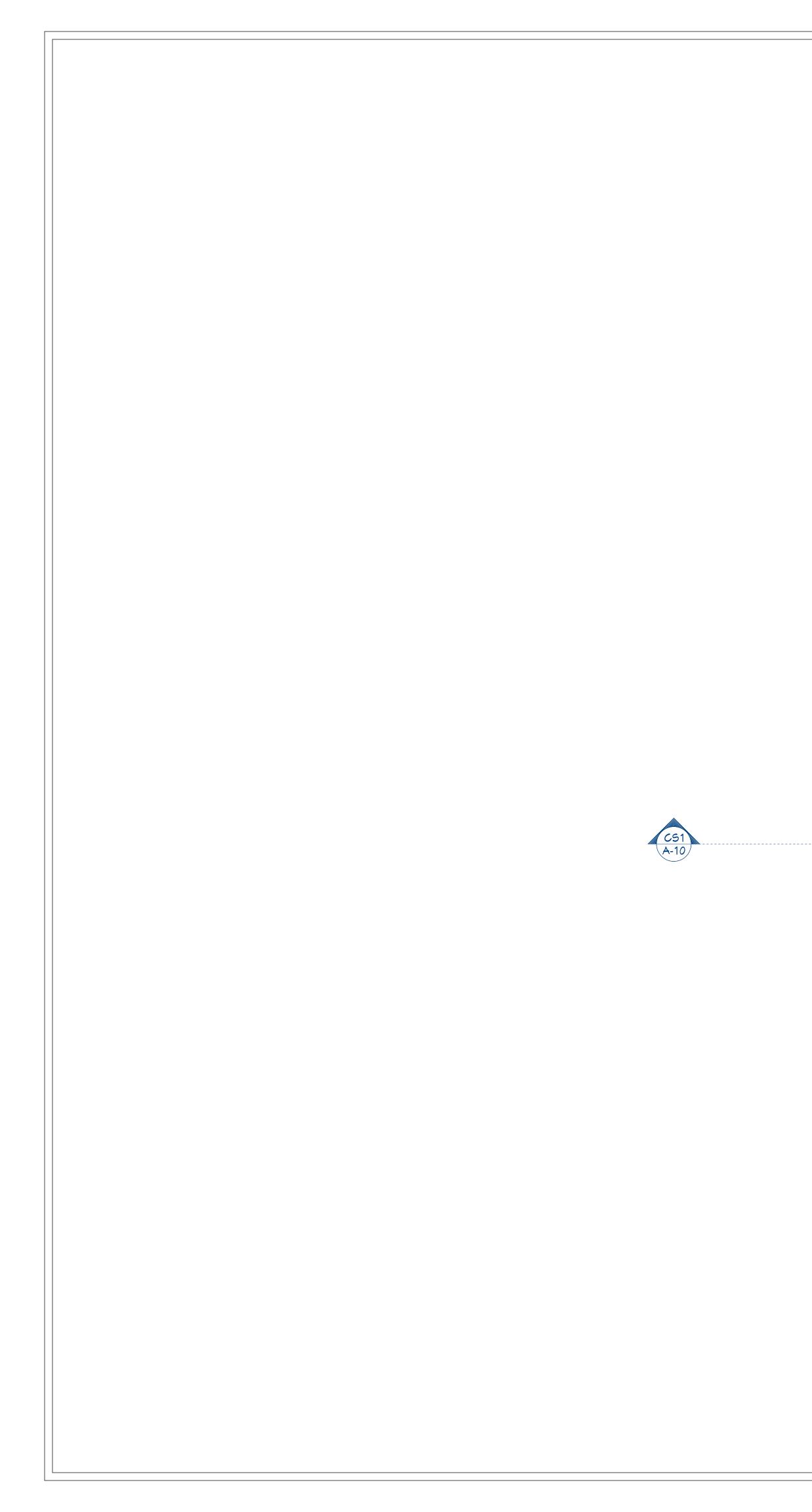


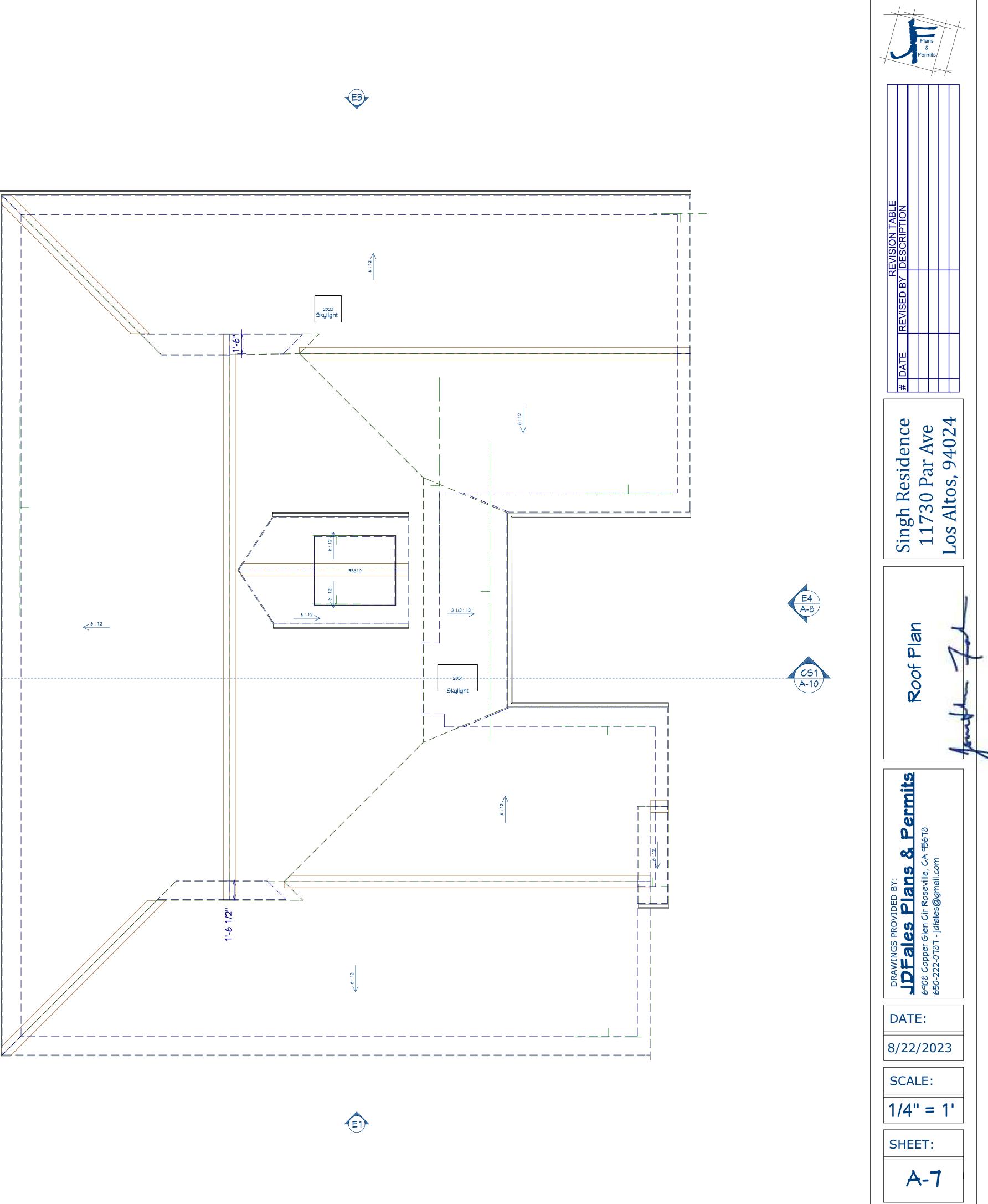




Floor Plan View Dimensioned

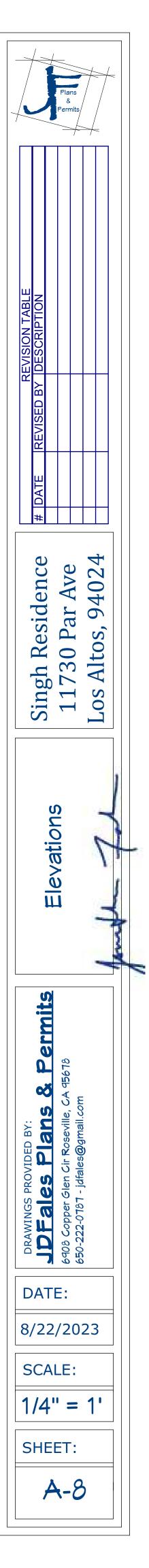


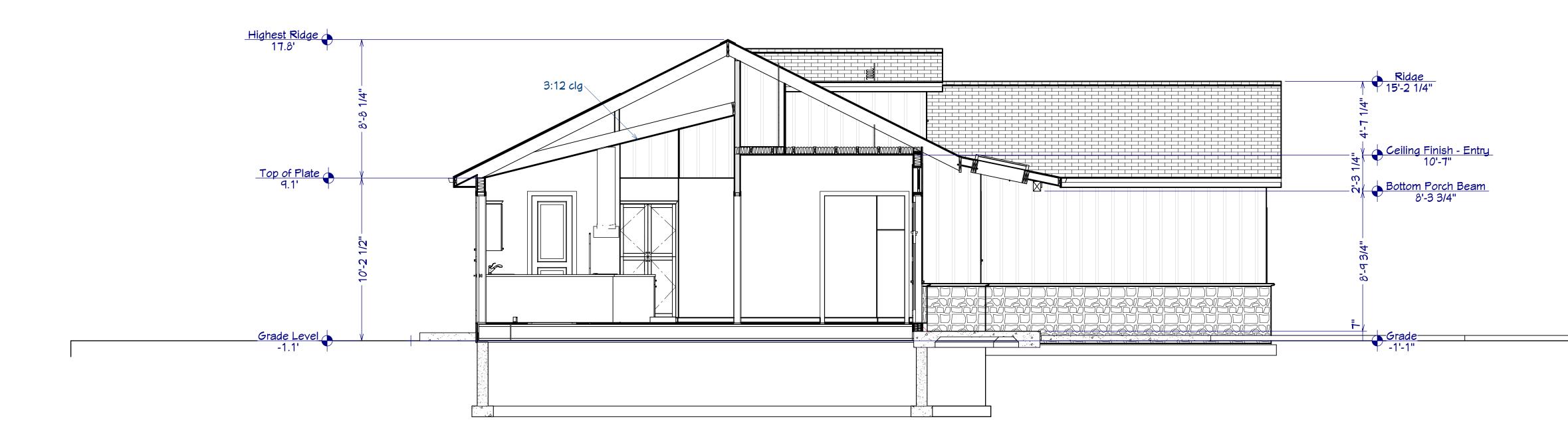






Exterior Elevation Front





Cross Section 1

