SITE PLAN NOTES

1. DEMOLITION CONTRACTOR SHALL RELOCATE REUSABLE MATERIALS TO DESIGNATED SALVAGE AREA, NON-USABLE MATERIALS SHALL BE PLACED APPROPRIATELY IN REFUSE BIN AND SHALL BE COVERED AT NIGHT AND DURING RELATIVE HIGH WINDS, RAIN, ETC...REFUSE BIN SHALL BE COVERED DURING TRANSFER TO AND FROM DUMP SITE. CONTRACTOR TO BE LIABLE FOR REFUSE SPILLING. ALL DEBRIS TO BE HAULED AWAY AND CLEAN-UP SHALL BE COMPLETED TO BROOM FINISH. EXISTING MATERIALS AND/OR STRUCTURE TO REMAIN SHALL BE PROTECTED FROM DUST, PAINT CHIPPING. ETC..., BY USE OF PLASTIC OR WHATEVER IS REQUIRED FOR PROPER PROTECTION. EXISTING STRUCTURES SHALL HAVE BRACING AND SHORING AS REQUIRED TO PROTECT THE EXISTING STRUCTURE. PROVIDE DE-WATERING FACILITIES FOR CONSTRUCTION AS REQUIRED. COORDINATE AS-BUILT INFORMATION, STRUCTURAL, ETC. TO DESIGNER/ENGINEER AS

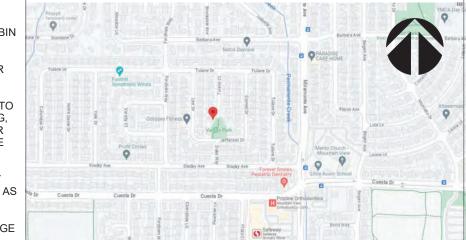
2. THE DISCHARGE OF POLLUTANTS TO ANY STORM DRAINAGE SYSTEM IS PROHIBITED. NO SOID WASTE, PETROLEUM BYPRODUCTS, SOIL PARTICULATE, CONSTRUCTION WASTE MATERIALS, OR WASTEWATER GENERATED ON CONSTRUCTION SITES OR BY CONSTRUCTION ACTIVITIES SHALL BE PLACED. CONVEYED OR DISCHARGED INTO THE STREET, GUTTER OR STORM DRAIN SYSTEM.

3. THE CONSTRUCTION SHALL NOT RESTRICT A FIVE-FOOTCLEAR AND UNOBSTRUCTED ACCESS TO ANY WATER OR POWER DISTRIBUTION FACILITIES (POWER POLES, PULLBOXES, TRANSFORMERS, VAULTS, PUMPS, VALVES, METERS, PPURTENANCES, ETC.) OR TO THE LOCATION OF THE HOOK-UP. THE CONSTRUCTION SHALL NOT BE WITHIN TEN FEET OF ANY POWER LINES WHETHER OR NOT THE LINES ARE LOCATED ON THE PROPERTY. FAILURE TO COMPLY MAY CAUSE CONSTRUCTION DELAYS AND/OR ADDITIONAL

4. WHEN UTILITIES METER ALTERATION / RELOCATION OCCUR, INSTALLATION PROCEDURES SHALL BE VERIFIED AND APPROVED BY THE BUILDING INSPECTOR PRIOR TO INSTALLATION

SCALE: 1" = 30'-0"

VICINITY MAP



SPECIAL NOTES

THE DESIGN OF THE ACCESSORY DWELLING UNIT SHALL BE ARCHITECTURALLY COMPATIBLE WITH THE MAIN DWELLING UNIT. WITH ALL DESIGN. THE DESIGN. COLOR, MATERIAL AND TEXTURE OF THE ROOF SHALL BE SUBSTANTIALLY THE SAME AS THE MAIN DWELLING UNIT

GENERAL NOTES

1. THE CONSTRUCTION SHALL NOT RESTRICT A FIVE-FOOT CLEAR AND UNOBSTRUCTED ACCESS TO ANY WATER OR POWER DISTRIBUTION FACILITIES (POWER POLES, PULL-BOXES, TRANSFORMERS, VAULTS, PUMPS, VALVES, METERS, ETC) OR TO THE LOCATION OF THE HOOK-UP. THE CONSTRUCTION SHALL NOT BE WITHIN TEN FEET OF ANY POWER LINES-WHETHER OR NOT THE LINES ARE LOCATED ON THE PROPERTY. FAILURE TO COMPLY MAY CAUSE CONSTRUCTION DELAYS AND/ OR ADDITIONAL EXPENSES.

2. AN APPROVED SEISMIC GAS SHUTOFF VALVE WILL BE INSTALLED ON THE FUEL GAS LINE ON THE DOWN STREAM SIDE OF THE UTILITY METER AND BE RIGIDLY CONNECTED TO THE EXTERIOR OF THE BUILDING OR STRUCTURE CONTAINING THE FUEL GAS PIPING 3. PROVIDE LOW CONSUMPTION WATER CLOSETS FOR ALL NEW CONSTRUCTION. EXISTING SHOWER HEADS AND TOILETS MUST BE ADAPTED FOR LOW WATER CONSUMPTION. 4. PROVIDE 72" HIGH NON-ABSORBENT WALL ADJACENT TO SHOWER AND APPROVED

SHATTER-RESISTANT MATERIALS FOR SHOWER ENCLOSURE. 5. ALL CONSTRUCTION WASTE AND DEBRIS MUST BE CONTAINERIZED AT ALL TIMES 6. FINAL APPROVAL REQUIRED BY THE PUBLIC WORKS DEPARTMENT FOR STREET

IMPROVEMENTS, CURB CORES, CURB/GUTTERS, ETC. SEPARATE PUBLIC WORKS PERMIT REQUIRED FOR DRIVEWAYS, APPROACH TO DRIVEWAY, SEWER LATERALS AND ANY WORK IN RIGHT OF WAY. 7. ALL CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL

CODES AND AMENDMENTS. 8. A SURVEY SHALL BE PROVIDED BY A LICENSED SURVEYOR ON STRUCTURES WHICH DEFINE PROPERTY LINES, SET BACKS, DESIGNATED PARKLAND OR STREET RIGHT-OF-WAY. 9. DUST CONTROL MEASURES SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE

10. WATER HEATER MUST BE STRAPPED TO WALL. 11. PROVIDE ULTRA FLUSH WATER CLOSETS FOR ALL NEW CONSTRUCTION. EXISTING SHOWER HEADS AND TOILETS MUST BE ADAPTED FOR WATER CONSUMPTION. 12. LAG BOLTS: PROVIDE LEAD HOLE 40%-70% OF THREADED SHANK DIA. AND FULL DIA. FOR SMOOTH SHANK PORTION, 91 NDS

PREVENT ROTATION & LATERAL DISPLACEMENT IN ACCORDANCE w/ THE PROVISIONS OF 14. CONTRACTOR AND/OR OWNER SHALL VERIFY CONSTRUCTION SITE TO CONFIRM THAT THERE IS NO TRACEOF DEMOLISHED SWIMMING POOL WITHIN 5 FT FROM PROPOSED PERIMETER OF THE CONSTRUCTION SITE. OTHERWISE, THEY NEED TO SUBMIT SOIL COMPACTION REPORT FROM LICENSED SOIL ENGINEER TO BUILDING INSPECTOR PRIOR TO FOUNDATION INSPECTION.

13. BLOCKING. ROOF RAFTERS AND CEILING JOINTS SHALL BE SUPPORTED LATERALLY TO

15. SHEARWALLS, LATHING & PLASTER IN MATERIALS SHALL CONFORM TO THE STANDARD LISTED IN CH.6 & CH.7 CRC 16. ALL BOLT HOLES SHALL BE DRILLED 1/32" TO 1/16" OVERSIZED. "ENGINEER" MUST INCLUDE IN STRUCTURAL OBSERVATION NOTES.

17. PROVIDE RAIN GUTTERS AND CONVEY RAIN WATER TO THE STREET.

VERIFIED WITH THE OWNER OR ENGINEER OF RECORD.

THE CITY FOR APPROVAL PRIOR TO BUILDING PERMIT ISSUANCE.

18. CONCRETE 3000PSI 19. PARALLEL BEAM E.2.0 PSL

20. UFER GROUND IS REQUIRED AT NEW ELECTRICAL SERVICE. 21. UNDERGROUND UTILITIES REQUIRED ON SITE PLAN AND SHOW FOR ELECTRICAL, CABLE TV. AND 22. ARC FAULT CIRCUIT INTERRUPTION PROTECTION IS REQUIRED FOR ALL BRANCH CIRCUITS PER 2022 CEC210.12 SHALL BE AFCI PROTECTED

23. BATHROOMS, KITCHEN, GARAGE & OUTSIDE OUTLETS WILL BE GFCI PROTECTED RECEPTACLE OUTLETS. 24. WATER SAVING WATER CLOSET w/1.28 GALLONS PER FLUSH. 25. PROVIDE MECHANICAL VENTILATION FOR BATHROOMS AND LAUNDRY ROOMS WITHOUT OPENABLE 26. GLAZING WHICH IS LESS THAN 60 INCHES FROM A FLOOR AND WITHIN A 24" ARC OF A DOORWAY'S VERTICAL EDGE MUST COMPLY WITH CH.3 CRC 27. LANDINGS AT DOOR. LANDINGS SHALL HAVE A WIDTH NOT LESS THAN THE WIDTH OF THE STAIRWAY OR

THE DOOR, WHICHEVER IS GREATER. 28. EVERY SPACE INTENDED FOR HUMAN OCCUPANCY SHALL BE PROVIDED WITH A NATURAL LIGHT IN ACCORDANCE WITH CRC R303.1(2022) OR SHALL BE PROVIDE AN AVERAGE ILLUMINATION OF 6 FEET-CANDLES OVER THE AREA OF THE ROOM AT A HEIGHT OF 30" ABOVE THE FLOOR LEVEL. 9. THE CONTRACTOR SHALL EXAMINE AND BECOME FAMILIAR WITH ALL CONTRACT DOCUMENTS, SURVEY THE PROPERTY AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND SCOPE OF WORK. ALL COST SUBMITTED SHALL BE BASED ON A THROUGH KNOWLEDGE OF ALL WORK AND MATERIALS REQUIRED. ANY DISCREPANCY AND/OR UNCERTAINTY AS TO WHAT MATERIALS OR PRODUCT IS TO BE USED SHOULD BE

30. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALE. 31. IN THE EVENT A DISCREPANCY IS FOUND IN THE CONTRACT DOCUMENTS, THE OWNER AND THE DESIGNER/ENGINEERS SHALL BE NOTIFIED. IN WRITING, IMMEDIATELY. 32. FIRE SPRINKLER SYSTEM SHALL BE APPROVED BY OCFA AND AN APPROVED PLANS SHALL BE INCLUDED IN THE CONSTRUCTION PACKAGE PRIOR TO BUILDING PERMIT ISSUANCE. 33. VERIFY WITH AQMD FOR ASBESTOS REMOVAL PROCEDURE AND SUBMIT ASBESTOS REPORT TO BUILDING DIVISION PRIOR TO DEMOLITION PERMIT ISSUANCE.

35. LINE AND GRADE CERTIFICATE SHALL BE SUBMITTED TO THE BUILDING INSPECTOR PRIOR TO FOUNDATION 36. A MINIMUM OF 65% OF THE CONSTRUCTION WASTE GENERATED AT THE SITE SHALL BE RECYCLED OR SALVAGED TO MOUNTAIN VIEW RECOLOGY

34. TRUSS PACKAGE WITH AN APPROVED STAMP FROM THE ENGINEER OF RECORD SHALL BE SUBMITTED TO

PROJECT DATA

JURISDICTION HAVING AUTHORITY: CITY OF San Jose, CA 95127 **LEGAL DESCRIPTION:** TRACK 612-14, LOT 053 ASSESSORS PARCEL NO. APN: IN FLOOD ZONE FEMA SHFA'S: FLOOD ZONE D **CONSTRUCTION TYPE** RR-d1 **OCCUPANCY GROUP:** R3/U1 SPRINKLERS:

NUMBER OF STORIES(MAIN HOUSE): 2 STORY NUMBER OF STORIES (ADU): 1 STORY BUILDING MAX HEIGHT (MAIN HOUSE): **BUILDING MAX HEIGHT(ADU):**

16 FT, (ALLOWABLE :18 FT OF ONE

REQUIRED SETBACKS(ADU):

-New detached Accessory Dwelling-A setback of four (4) feet from the side and rear lot lines, measured from the building face, shall be required for an accessory dwelling unit the exceeds forty percent (40%) rear vard coverage and is not converted from an existing structure or is a new structure constructed in the same location and to the same dimensi as the existing structure. No setback over the setback specified for an Accessory Buildin shall be required for the first story of a new detached Accessory Dwelling that does not exceed forty percent (40%) rear yard coverage, unless required to meet current Building Fire Code requirements.

-A detached Accessory Dwelling shall be located at least six (6) feet away from the One-SETBACKS INDICATE REQUIRED MINIMUM DISTANCE FROM PROPERTY LINES. CONTRACTOR TO VERIFY ON SITE.

LOT SIZE : EXISTING: 53,143 SF (1.22ACRES) 3,586 SF (E)MAIN LEVEL (E)LOWER LEVEL 507 SF (E)GARAGE: 795 SF (E) MAIN HOUSE LIVING AREA 4,093 SF (E)ENTRY PORCH (E)TERRACES 1,275 SF **NEW CONSTRUCTION:** (N) DETACHED ADU: 784 SF (N)GARAGE: **NEW TOTAL:** 1,200SF

MAXIMUM LOT COVERAGE: One thousand (1,000) square feet for an accessory dwelling on a lot with an area of up to nine thousand (9,000) square feet;

OK **OVERALL LOT COVERAGE: MAXIMUM FLOOR RATIO (FAR):**

PROJECT INFORMATION

OWNER: PHONE: EMAIL:

DESIGNER:

COMPANY:

PHONE:

EMAIL:

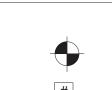
davidepope@gmail.com LEI ZHENG CECILIA HOME (510) 909-1933

David E Pope

408-307-0375

ENGINEER.LEI@GMAIL.COM EMAIL: PROFESSIONAL ENGINEER: LEI ZHENG COMPANY **CECILIA HOME** PHONE: (510) 909-1933

SYMBOL LEGEND



DRAINAGE DIRECTION AND SLOPE PROPERTY LINE CORNER POINTS AND **ELEVATION DATUM**

KEYNOTE CALLOUTS

EXISTING TO BE REMAINED AND NEW CONSTRUCTION

ENGINEER.LEI@GMAIL.COM

EXISTING TO BE DEMOLISHED

SHEET INDEX

	01-ARCHITEC	CTURE
	A.00	SITE PLAN
	A.01	CAL GREEN CODE
	A.02	CAL GREEN CODE
	A.03	EXISTING SEPTIC TANK AND DRAINFIELD DESIGN
	A.10	PROPOSED FLOOR PLAN
	A.11	ELEVATIONS & SECTIONS
	A.12	ROOF PLAN
	A.20	ELECTRICAL PLAN
	A.21	PLUMBING PLAN
	A.22	MECHANICAL PLAN
	AD.10	ARCHITECTURAL DETAILS
	T-1	TITLE 24
ot	T-2	TITLE 24
that	02-STRUCTU	RE
	S-0	GENERAL NOTES & REQUIREMENTS
sions	S-1	RETAINING WALL PLAN
ing	S-2	FOUNDATION & ROOF FRAMING PLAN
a and	SD.0	TYPICAL DETAILS
g and	SD.1	FOUNDATION DETAILS
e-	SD.2	STRUCTURAL DETAILS
	SSW1	ANCHORAGE DETAILS
	SSW2	FARMING DETAILS
	03-GRADING	
	C-1	TITLE SHEET
	C-2	GRADING & DRAINAGE PLAN

SCOPE OF WORK

SECTIONS AND DETAILS

C-4 EROSION CONTROL PLAN

• NEW 784SF DETACHED ADU AND 400 SF TWO-CAR GARAGE -ADU: ONE LIVING ROOM & KITCHEN, ONE BEDROOM AND ONE **BATHROOM** -NEW RETAINING WALL -DRAINFIELD DESIGN

APPLICABLE CODE

LEGAL JURISDICTION: CITY OF San Jose, CA

THIS PROJECT SHALL COMPLY WITH THE FOLLOWING CODES 2022 CALIFORNIA RESIDENTIAL CODE 2022 CALIFORNIA PLUMBING CODE 2022 CALIFORNIA MECHANICAL CODE 2022 CALIFORNIA ENERGY CODE 2022 CALIFORNIA ELECTRICAL CODE 2022 CALIFORNIA GREEN BUILDING STANDARDS REGULATION OF THE STATE AND LOCAL FIRE MARSHALS & CITY ORDINANCE CITY OF **San Jose** MUNICIPAL CODE.

SITE PLAN KEYNOTES



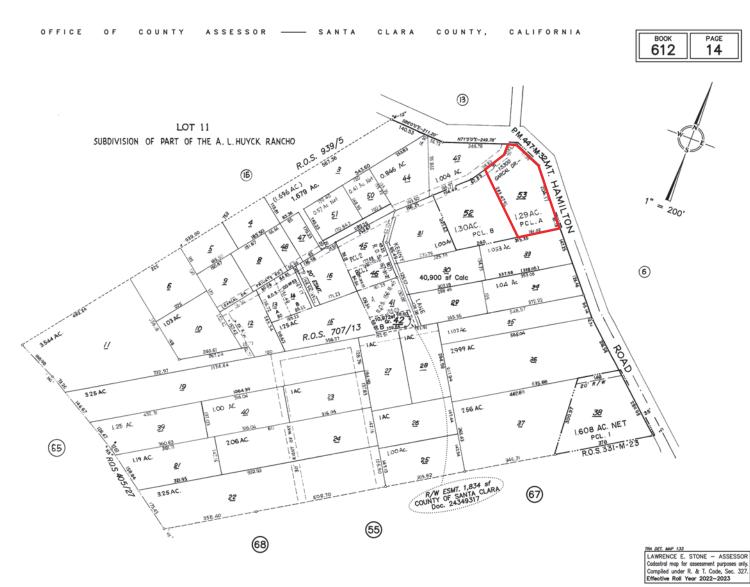
5 (E)RETAINING WALL

7 (N)DRIVEWAY

2	(E)DRIVEWAY	8	(N)RETAINING V
3	(E) SIDEWALK	9	(N)PARKING AR
4	(E)TERRACE		

6 (E)PORCH

PARCEL MAP



DATE DESCRIPTION 0 APPLY FOR PERMITS 05-27-2024

CHIEF ENGINEER:LEI ZHENG (MASON)

EMAIL: ENGINEER.LEI@GMAIL.COM

DURING CONSTRUCTION IF ANY DIFFICULTY

CONTRACTOR WILL TAKE ALL THE LIABILITY

OCCUR, PLEASE CONTACT ENGINEER

FROM THE DRAWING WITHOUT PRIOR

APPROVAL FROM ENGINEER, THE

DUE TO DEVIATION.

ca

300

5

IMMEDIATELY .IF CONTRACTOR DEVIATE

PHONE: (510)909-1933

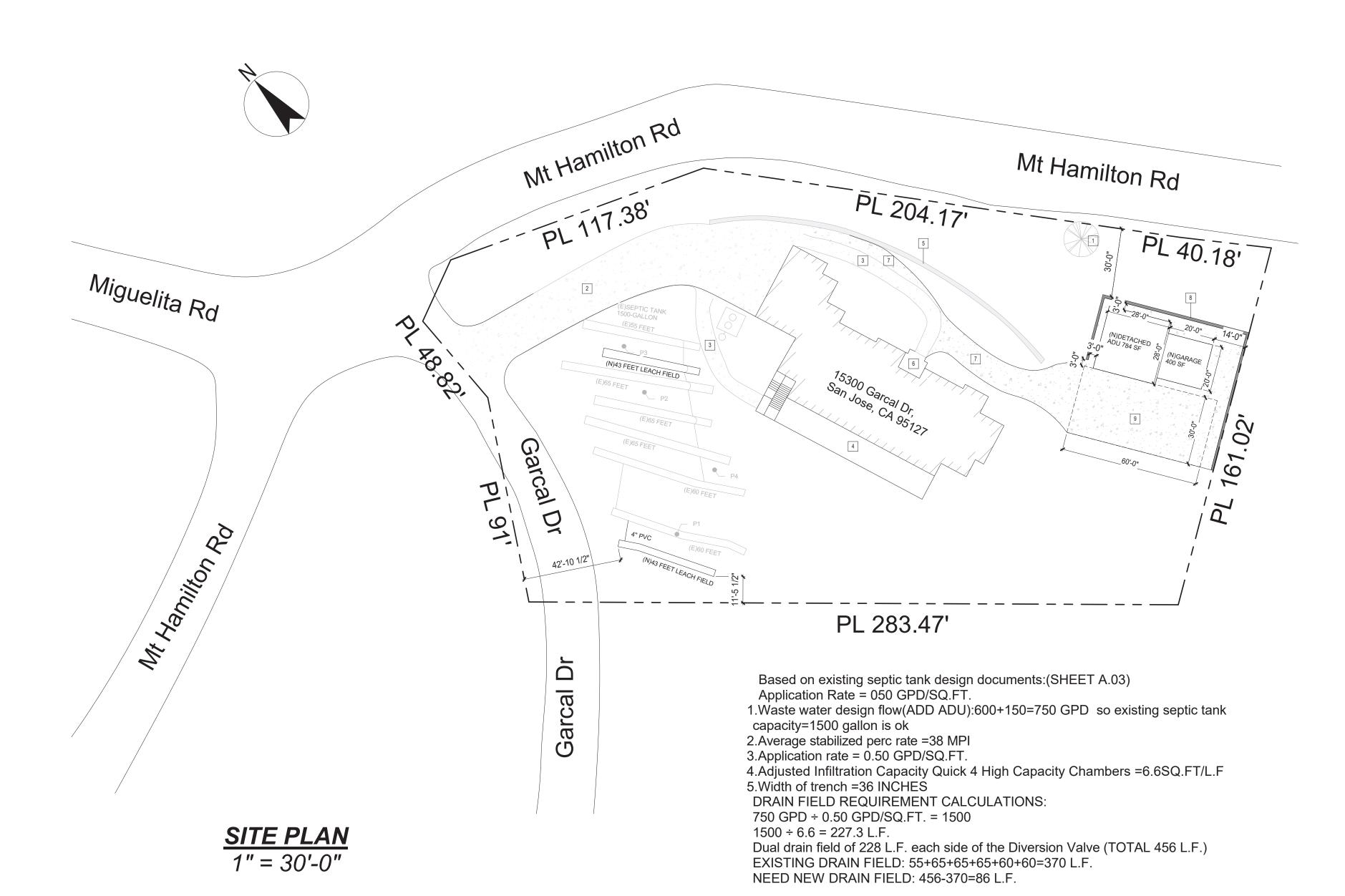
Jurisdiction:



SHEET TITLE:

SITE PLAN

SHEET NUMBER:





California 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2023)

electrical load calculations. Plan design shall be based upon a 40-ampere minimum branch circuit. Required

raceways and related components that are planned to be installed underground, enclosed, inaccessible or in

ncealed areas and spaces shall be installed at the time of original construction

installed in close proximity to the location or the proposed location of the EV space at the time of original **CHAPTER 3** construction in accordance with the California Electrical Code. .106.4.2 New multifamily dwellings, hotels and motels and new residential parking facilities. **GREEN BUILDING** 4.304 OUTDOOR WATER USE When parking is provided, parking spaces for new multifamily dwellings, hotels and motels shall meet the 4.106.4.2.4 Identification 4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. Residential developments shall comply with equirements of Sections 4.106.4.2.1 and 4.106.4.2.2. Calculations for spaces shall be rounded up to the nearest **SECTION 301 GENERAL** The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water whole number. A parking space served by electric vehicle supply equipment or designed as a future EV charging future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code. Efficient Landscape Ordinance (MWELO), whichever is more stringent space shall count as at least one standard automobile parking space only for the purpose of complying with any **301.1 SCOPE.** Buildings shall be designed to include the green building measures specified as mandatory in applicable minimum parking space requirements established by a local jurisdiction. See Vehicle Code Section 22511.2 4.106.4.2.5 Electric Vehicle Ready Space Signage. the application checklists contained in this code. Voluntary green building measures are also included in the Electric vehicle ready spaces shall be identified by signage or pavement markings, in compliance with Caltrans application checklists and may be included in the design and construction of structures covered by this code, Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its 1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the California Code Regulations, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7. 4.106.4.2.1Multifamily development projects with less than 20 dwelling units; and hotels and motels with less Title 23. Chapter 2.7, Division 2. MWELO and supporting documents, including water budget calculator, are than 20 sleeping units or guest rooms. 301.1.1 Additions and alterations, [HCD] The mandatory provisions of Chapter 4 shall be applied to available at: https://www.water.ca.gov/ The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to 4.106.4.3 Electric vehicle charging for additions and alterations of parking facilities serving existing additions or alterations of existing residential buildings where the addition or alteration increases the multifamily buildings. building's conditioned area, volume, or size. The requirements shall apply only to and/or within the DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE When new parking facilities are added, or electrical systems or lighting of existing parking facilities are added or specific area of the addition or alteration. 1.EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types altered and the work requires a building permit, ten (10) percent of the total number of parking spaces added or of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 The mandatory provision of Section 4.106.4.2 may apply to additions or alterations of existing parking altered shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical 4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE facilities or the addition of new parking facilities serving existing multifamily buildings. See Section system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all 4.106.4.3 for application. 4.406.1 RODENT PROOFING. Annular spaces around pipes, electric cables, conduits or other openings in EVs at all required EV spaces at a minimum of 40 amperes. sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such 1. Construction documents are intended to demonstrate the project's capability and capacity for facilitating future Note: Repairs including, but not limited to, resurfacing, restriping and repairing or maintaining existing openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved lighting fixtures are not considered alterations for the purpose of this section for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code. 2. There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use. 4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING Note: On and after January 1, 2014, residential buildings undergoing permitted alterations, additions, or improvements shall replace noncompliant plumbing fixtures with water-conserving plumbing fixtures. **DIVISION 4.2 ENERGY EFFICIENCY** 4.408.1 CONSTRUCTION WASTE MANAGEMENT. Recycle and/or salvage for reuse a minimum of 65 Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate percent of the non-hazardous construction and demolition waste in accordance with either Section 1. When EV chargers (Level 2 EVSE) are installed in a number equal to or greater than the required number of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1. 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste of EV capable spaces et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and 4.201.1 SCOPE. For the purposes of mandatory energy efficiency standards in this code, the California Energy management ordinance. other important enactment dates. 2.When EV chargers (Level 2 EVSE) are installed in a number less than the required number of EV capable Commission will continue to adopt mandatory standards. spaces, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed 301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] The provisions of DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION 1. Excavated soil and land-clearing debris. individual sections of CALGreen may apply to either low-rise residential buildings high-rise residential 2. Alternate waste reduction methods developed by working with local agencies if diversion or 4.303 INDOOR WATER USE buildings, or both. Individual sections will be designated by banners to indicate where the section applies recycle facilities capable of compliance with this item do not exist or are not located reasonably 4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS. Plumbing fixtures (water closets and specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and close to the jobsite. a. Construction documents are intended to demonstrate the project's capability and capacity for facilitating urinals) and fittings (faucets and showerheads) shall comply with the sections 4.303.1.1, 4.303.1.2, 4.303.1.3, high-rise buildings, no banner will be used. 3. The enforcing agency may make exceptions to the requirements of this section when isolated future EV charging. jobsites are located in areas beyond the haul boundaries of the diversion facility. b.There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or SECTION 302 MIXED OCCUPANCY BUILDINGS Note: All noncompliant plumbing fixtures in any residential real property shall be replaced with water-conserving 4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN. Submit a construction waste management plan EV chargers are installed for use. plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final in conformance with Items 1 through 5. The construction waste management plan shall be updated as 302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building completion, certificate of occupancy, or final permit approval by the local building department. See Civil necessary and shall be available during construction for examination by the enforcing agency. 2.EV Readv. Twentv-five (25) percent of the total number of parking spaces shall be equipped with low power shall comply with the specific green building measures applicable to each specific occupancy. Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per 1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, buildings affected and other important enactment dates. dwelling unit when more than one parking space is provided for use by a single dwelling unit. 1. [HCD] Accessory structures and accessory occupancies serving residential buildings shall reuse on the project or salvage for future use or sale. comply with Chapter 4 and Appendix A4, as applicable. 4.303.1.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per 2. Specify if construction and demolition waste materials will be sorted on-site (source separated) or Exception: Areas of parking facilities served by parking lifts. 2. [HCD] For purposes of CALGreen, live/work units, complying with Section 419 of the California flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense bulk mixed (single stream). Building Code, shall not be considered mixed occupancies. Live/Work units shall comply with 3. Identify diversion facilities where the construction and demolition waste material collected will be 4.106.4.2.2 Multifamily development projects with 20 or more dwelling units, hotels and motels with 20 or more Chapter 4 and Appendix A4, as applicable. sleeping units or quest rooms. Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume 4. Identify construction methods employed to reduce the amount of construction and demolition waste **DIVISION 4.1 PLANNING AND DESIGN** The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to of two reduced flushes and one full flush. this section 5. Specify that the amount of construction and demolition waste materials diverted shall be calculated ABBREVIATION DEFINITIONS: 4.303.1.2 Urinals. The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush. by weight or volume, but not by both. 1.EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types Department of Housing and Community Developmen The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush. of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 California Building Standards Commission .408.3 WASTE MANAGEMENT COMPANY. Utilize a waste management company, approved by the EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical Division of the State Architect, Structural Safety enforcing agency, which can provide verifiable documentation that the percentage of construction and system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all OSHPD Office of Statewide Health Planning and Development demolition waste material diverted from the landfill complies with Section 4.408.1 EVs at all required EV spaces at a minimum of 40 amperes. Low Rise 4.303.1.3.1 Single Showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 High Rise gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA Note: The owner or contractor may make the determination if the construction and demolition waste The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved Additions and Alterations WaterSense Specification for Showerheads. materials will be diverted by a waste management company. for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code. New **4.303.1.3.2 Multiple showerheads serving one shower**. When a shower is served by more than one .408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR]. Projects that generate a total combined Exception: When EV chargers (Level 2 EVSE) are installed in a number greater than five (5) percent of **CHAPTER 4** showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 parking spaces required by Section 4.106.4.2.2, Item 3, the number of EV capable spaces required may be a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to only lbs./sq.ft. of the building area shall meet the minimum 65% construction waste reduction requirement in RESIDENTIAL MANDATORY MEASURES reduced by a number equal to the number of EV chargers installed over the five (5) percent required. allow one shower outlet to be in operation at a time. Note: A hand-held shower shall be considered a showerhead 4.408.4.1 WASTE STREAM REDUCTION ALTERNATIVE. Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 2 pounds **SECTION 4.102 DEFINITIONS** a. Construction documents shall show locations of future EV spaces. 4.303.1.4 Faucets per square foot of the building area, shall meet the minimum 65% construction waste reduction 4.102.1 DEFINITIONS The following terms are defined in Chapter 2 (and are included here for reference) b.There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or 4.303.1.4.1 Residential Lavatory Faucets. The maximum flow rate of residential lavatory faucets shall EV chargers are installed for use. not exceed 1.2 gallons per minute at 60 psi. The minimum flow rate of residential layatory faucets shall 4.408.5 DOCUMENTATION. Documentation shall be provided to the enforcing agency which demonstrates FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar not be less than 0.8 gallons per minute at 20 psi. compliance with Section 4.408.2, items 1 through 5, Section 4.408.3 or Section 4.408.4.. pervious material used to collect or channel drainage or runoff water. 2.EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power 4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas. The maximum flow rate of lavator WATTLES. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials dwelling unit when more than one parking space is provided for use by a single dwelling unit. faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also buildings shall not exceed 0.5 gallons per minute at 60 psi. 1. Sample forms found in "A Guide to the California Green Building Standards Code Exception: Areas of parking facilities served by parking lifts. (Residential)" located at www.hcd.ca.gov/CALGreen.html may be used to assist in 4.303.1.4.3 Metering Faucets. Metering faucets when installed in residential buildings shall not deliver documenting compliance with this section. 3.EV Chargers. Five (5) percent of the total number of parking spaces shall be equipped with Level 2 EVSE. 4.106 SITE DEVELOPMENT Mixed construction and demolition debris (C & D) processors can be located at the California 4.106.1 GENERAL. Preservation and use of available natural resources shall be accomplished through evaluation Where common use parking is provided, at least one EV charger shall be located in the common use parking Department of Resources Recycling and Recovery (CalRecycle). and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, area and shall be available for use by all residents or guests. 4.303.1.4.4 Kitchen Faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons management of storm water drainage and erosion controls shall comply with this section. per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not 4.410 BUILDING MAINTENANCE AND OPERATION When low power Level 2 EV charging receptacles or Level 2 EVSE are installed beyond the minimum required to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per **4.410.1 OPERATION AND MAINTENANCE MANUAL.** At the time of final inspection, a manual, compact 4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION. Projects which disturb less an automatic load management system (ALMS) may be used to reduce the maximum required electrical disc, web-based reference or other media acceptable to the enforcing agency which includes all of the capacity to each space served by the ALMS. The electrical system and any on-site distribution transformers than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre following shall be placed in the building: or more, shall manage storm water drainage during construction. In order to manage storm water drainage shall have sufficient capacity to deliver at least 3.3 kW simultaneously to each EV charging station (EVCS) Note: Where complying faucets are unavailable, aerators or other means may be used to achieve during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent served by the ALMS. The branch circuit shall have a minimum capacity of 40 amperes, and installed EVSE shall 1. Directions to the owner or occupant that the manual shall remain with the building throughout the property, prevent erosion and retain soil runoff on the site. have a capacity of not less than 30 amperes. ALMS shall not be used to reduce the minimum required electrical life cycle of the structure. capacity to the required EV capable spaces. 4.303.1.4.5 Pre-rinse spray valves. Operation and maintenance instructions for the following Retention basins of sufficient size shall be utilized to retain storm water on the site. When installed, shall meet the requirements in the California Code of Regulations, Title 20 (Appliance a. Equipment and appliances, including water-saving devices and systems, HVAC systems, 4.106.4.2.2.1 Electric vehicle charging stations (EVCS). 2. Where storm water is conveyed to a public drainage system, collection point, gutter or similar Efficiency Regulations), Sections 1605.1 (h)(4) Table H-2, Section 1605.3 (h)(4)(A), and Section 1607 photovoltaic systems, electric vehicle chargers, water-heating systems and other major Electric vehicle charging stations required by Section 4.106.4.2.2, Item 3, shall comply with Section 4.106.4.2.2.1. disposal method, water shall be filtered by use of a barrier system, wattle or other method approved (d)(7) and shall be equipped with an integral automatic shutoff. appliances and equipment. by the enforcing agency Roof and yard drainage, including gutters and downspouts. 3. Compliance with a lawfully enacted storm water management ordinance. Exception: Electric vehicle charging stations serving public accommodations, public housing, motels and hotels FOR REFERENCE ONLY: The following table and code section have been reprinted from the California Space conditioning systems, including condensers and air filters. shall not be required to comply with this section. See California Building Code, Chapter 11B, for applicable Code of Regulations, Title 20 (Appliance Efficiency Regulations), Section 1605.1 (h)(4) and Section Landscape irrigation systems. Note: Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or e. Water reuse systems. are part of a larger common plan of development which in total disturbs one acre or more of soil. 3. Information from local utility, water and waste recovery providers on methods to further reduce 4.106.4.2.2.1.1 Location. resource consumption, including recycle programs and locations. (Website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html) EVCS shall comply with at least one of the following options: TABLE H-2 Public transportation and/or carpool options available in the area. 5 Educational material on the positive impacts of an interior relative humidity between 30-60 percent 1. The charging space shall be located adjacent to an accessible parking space meeting the requirements of 4.106.3 GRADING AND PAVING. Construction plans shall indicate how the site grading or drainage system will and what methods an occupant may use to maintain the relative humidity level in that range manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space. STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY 6. Information about water-conserving landscape and irrigation design and controllers which conserve water include, but are not limited to, the following: VALUES MANUFACTURED ON OR AFTER JANUARY 28, 2019 2. The charging space shall be located on an accessible route, as defined in the California Building Code, 7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation. 2. Water collection and disposal systems 8. Information on required routine maintenance measures, including, but not limited to, caulking, Exception: Electric vehicle charging stations designed and constructed in compliance with the California Building Code, Chapter 11B, are not required to comply with Section 4.106.4.2.2.1.1 and Section MAXIMUM FLOW RATE (gpm) French drains [spray force in ounce force (ozf)] painting, grading around the building, etc. Water retention gardens 9. Information about state solar energy and incentive programs available. 5. Other water measures which keep surface water away from buildings and aid in groundwater 10. A copy of all special inspections verifications required by the enforcing agency or this code. Product Class 1 (≤ 5.0 ozf) 1.00 11. Information from the Department of Forestry and Fire Protection on maintenance of defensible 4.106.4.2.2.1.2 Electric vehicle charging stations (EVCS) dimensions. space around residential structures. **Exception**: Additions and alterations not altering the drainage path. The charging spaces shall be designed to comply with the following: Product Class 2 (> 5.0 ozf and \leq 8.0 ozf) 1.20 12. Information and/or drawings identifying the location of grab bar reinforcements. Product Class 3 (> 8.0 ozf) 4.106.4 Electric vehicle (EV) charging for new construction. New construction shall comply with Sections 1. The minimum length of each EV space shall be 18 feet (5486 mm). 4.410.2 RECYCLING BY OCCUPANTS. Where 5 or more multifamily dwelling units are constructed on a 4.106.4.1 or 4.106.4.2 to facilitate future installation and use of EV chargers. Electric vehicle supply Title 20 Section 1605.3 (h)(4)(A): Commercial prerinse spray values manufactured on or after January building site, provide readily accessible area(s) that serves all buildings on the site and are identified for the equipment (EVSE) shall be installed in accordance with the California Electrical Code, Article 625. 2. The minimum width of each EV space shall be 9 feet (2743 mm). 1, 2006, shall have a minimum spray force of not less than 4.0 ounces-force (ozf)[113 grams-force(gf)] depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waster, and metals, or meet a lawfully enacted local recycling 3.One in every 25 charging spaces, but not less than one, shall also have an 8-foot (2438 mm) wide minimum 4.303.2 Submeters for multifamily buildings and dwelling units in mixed-used residential/commercial 1. On a case-by-case basis, where the local enforcing agency has determined EV charging and aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is infrastructure are not feasible based upon one or more of the following conditions: Submeters shall be installed to measure water usage of individual rental dwelling units in accordance with the Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 1.1 Where there is no local utility power supply or the local utility is unable to supply adequate California Plumbing Code. 42649.82 (a)(2)(A) et seq. are note required to comply with the organic waste portion of a.Surface slope for this EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 1.2 Where there is evidence suitable to the local enforcing agency substantiating that additional percent slope) in any direction **4.303.3 Standards for plumbing fixtures and fittings.** Plumbing fixtures and fittings shall be installed in local utility infrastructure design requirements, directly related to the implementation of Section accordance with the California Plumbing Code, and shall meet the applicable standards referenced in Table 4.106.4, may adversely impact the construction cost of the project. 1701.1 of the California Plumbing Code. 2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional In addition to the requirements in Sections 4.106.4.2.2.1.1 and 4.106.4.2.2.1.2, all EVSE, when installed, shall **DIVISION 4.5 ENVIRONMENTAL QUALITY** comply with the accessibility provisions for EV chargers in the California Building Code, Chapter 11B. EV ready spaces and EVCS in multifamily developments shall comply with California Building Code, Chapter 11A, Section THIS TABLE COMPILES THE DATA IN SECTION 4.303.1, AND IS INCLUDED AS A **SECTION 4.501 GENERAL** CONVENIENCE FOR THE USER. 4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages. For each The provisions of this chapter shall outline means of reducing the quality of air contaminants that are odorous, dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway 4.106.4.2.3 EV space requirements. TABLE - MAXIMUM FIXTURE WATER USE irritating and/or harmful to the comfort and well being of a building's installers, occupants and neighbors. shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main 1.Single EV space required. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall FIXTURE TYPE SECTION 4.502 DEFINITIONS proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close 5.102.1 DEFINITIONS concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere proximity to the location or the proposed location of the EV space. Construction documents shall identify the SHOWER HEADS (RESIDENTIAL) 1.8 GMP @ 80 PSI The following terms are defined in Chapter 2 (and are included here for reference) 208/240-volt minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit aceway termination point, receptacle or charger location, as applicable. The service panel and/ or subpanel shall have a 40-ampere minimum dedicated branch circuit, including branch circuit overcurrent protective device AGRIFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and door MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 installed, or space(s) reserved to permit installation of a branch circuit overcurrent protective device. LAVATORY FAUCETS (RESIDENTIAL) cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements. Exemption: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the proposed location of an EV charger at the time of original construction in Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is LAVATORY FAUCETS IN COMMON & PUBLIC COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and accordance with the California Electrical Code. installed in close proximity to the location or the proposed location of the EV space, at the time of original 0.5 GPM @ 60 PSI medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, USE AREAS construction in accordance with the California Electrical Code. structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated **4.106.4.1.1 Identification.** The service panel or subpanel circuit directory shall identify the overcurrent 1.8 GPM @ 60 PSI KITCHEN FAUCETS wood I-joists or finger-jointed lumber, all as specified in California Code of regulations (CCR), title 17. Section protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination 2.Multiple EV spaces required. Construction documents shall indicate the raceway termination point and the METERING FAUCETS 0.2 GAL/CYCLE location shall be permanently and visibly marked as "EV CAPABLE". location of installed or future EV spaces, receptacles or EV chargers. Construction documents shall also provide information on amperage of installed or future receptacles or EVSE, raceway method(s), wiring schematics and DIRECT-VENT APPLIANCE. A fuel-burning appliance with a sealed combustion system that draws all air for WATER CLOSET 1.28 GAL/FLUSH

DISCLAIMER: THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING STANDARDS (CALGREEN)

CHIEF ENGINEER:LEI ZHENG (MASON) PHONE: (510)909-1933 EMAIL: ENGINEER.LEI@GMAIL.COM

DURING CONSTRUCTION IF ANY DIFFICULTY OCCUR, PLEASE CONTACT ENGINEER IMMEDIATELY .IF CONTRACTOR DEVIATE FROM THE DRAWING WITHOUT PRIOR APPROVAL FROM ENGINEER. THE CONTRACTOR WILL TAKE ALL THE LIABILITY DUE TO DEVIATION.

	REV.	DESCRIPTION	DATE
	0	APPLY FOR PERMITS	05-27-2024

Jurisdiction:

Licensor:

CAL GREEN CODE

SHEET NUMBER:

combustion from the outside atmosphere and discharges all flue gases to the outside atmosphere.

0.125 GAL/FLUSH



California 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE

RESIDENTIAL MANDATORY MEASURES. SHEET 2

MEASURES, SHEET 2 (January 2023)		Y N/A RESPON. PARTY	= RE	ES OT APPLICABLE ESPONSIBLE PARTY (ie: ARCHITECT, ENGINEER, WNER, CONTRACTOR, INSPECTOR ETC.)
Y N/A RESPON. PARTY	Y N/A RESPON. PARTY			

MAXIMUM INCREMENTAL REACTIVITY (MIR). The maximum change in weight of ozone formed by adding a compound to the "Base Reactive Organic Gas (ROG) Mixture" per weight of compound added, expressed to hundredths of a gram (g O³/g ROC). Note: MIR values for individual compounds and hydrocarbon solvents are specified in CCR, Title 17, Sections 94700

MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood. PRODUCT-WEIGHTED MIR (PWMIR). The sum of all weighted-MIR for all ingredients in a product subject to this article. The PWMIR is the total product reactivity expressed to hundredths of a gram of ozone formed per gram of product (excluding container and packaging). Note: PWMIR is calculated according to equations found in CCR, Title 17, Section 94521 (a).

REACTIVE ORGANIC COMPOUND (ROC). Any compound that has the potential, once emitted, to contribute to

VOC. A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings with vapor pressures greater than 0.1 millimeters of mercury at room temperature. These compounds typically contain hydrogen and may contain oxygen, nitrogen and other elements. See CCR Title 17, Section 94508(a).

4.503.1 GENERAL. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed

woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.

4.504 POLLUTANT CONTROL 4.504.1 COVERING OF DUCT OPENINGS & PROTECTION OF MECHANICAL EQUIPMENT DURING CONSTRUCTION. At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to educe the amount of water, dust or debris which may enter the system.

4.504.2 FINISH MATERIAL POLLUTANT CONTROL. Finish materials shall comply with this section.

4.504.2.1 Adhesives, Sealants and Caulks. Adhesives, sealant and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply: 1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks

- shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and tricloroethylene), except for aerosol products, as specified in Subsection 2 below.
- 2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with section 94507.

4.504.2.2 Paints and Coatings. Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a Flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in

4.504.2.3 Aerosol Paints and Coatings. Aerosol paints and coatings shall meet the Product-weighted MIR Limits for ROC in Section 94522(a)(2) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(e)(1) and (f)(1) of California Code of Regulations, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation

4.504.2.4 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

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

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

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER,

THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.

2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE

THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR

QUALITY MANAGEMENT DISTRICT RULE 1168.

ΓABLE 4.504.2 - SEALANT VOC LIN	ИΙΤ	
(Less Water and Less Exempt Compounds in Grams per Liter)		
SEALANTS	VOC LIMIT	
ARCHITECTURAL	250	
MARINE DECK	760	
NONMEMBRANE ROOF	300	
ROADWAY	250	
SINGLE-PLY ROOF MEMBRANE	450	
OTHER	420	
EALANT PRIMERS		
ARCHITECTURAL		
NON-POROUS	250	
POROUS	775	
MODIFIED BITUMINOUS	500	
MARINE DECK	760	
OTHER	750	

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

AVAILABLE FROM THE AIR RESOURCES BOARD.

OMPOUNDS	
DATING CATEGORY	VOC LIMIT
AT COATINGS	50
N-FLAT COATINGS	100
NFLAT-HIGH GLOSS COATINGS	150
ECIALTY COATINGS	
LUMINUM ROOF COATINGS	400
ASEMENT SPECIALTY COATINGS	400
TUMINOUS ROOF COATINGS	50
TUMINOUS ROOF PRIMERS	350
OND BREAKERS	350
ONCRETE CURING COMPOUNDS	350
DNCRETE/MASONRY SEALERS	100
RIVEWAY SEALERS	50
RY FOG COATINGS	150
UX FINISHING COATINGS	350
RE RESISTIVE COATINGS	350
OOR COATINGS	100
PRM-RELEASE COMPOUNDS	250
RAPHIC ARTS COATINGS (SIGN PAINTS)	500
GH TEMPERATURE COATINGS	420
DUSTRIAL MAINTENANCE COATINGS	250
W SOLIDS COATINGS1	120
GNESITE CEMENT COATINGS	450
STIC TEXTURE COATINGS	100
TALLIC PIGMENTED COATINGS	500
JLTICOLOR COATINGS	250
ETREATMENT WASH PRIMERS	420
IMERS, SEALERS, & UNDERCOATERS	100
ACTIVE PENETRATING SEALERS	350
CYCLED COATINGS	250
	50
OF COATINGS	
ST PREVENTATIVE COATINGS	250
ELLACS	
EAR	730
PAQUE	550
ECIALTY PRIMERS, SEALERS & IDERCOATERS	100
AINS	250
ONE CONSOLIDANTS	450
/IMMING POOL COATINGS	340
AFFIC MARKING COATINGS	100
B & TILE REFINISH COATINGS	420
ATERPROOFING MEMBRANES	250
OOD COATINGS	275
OOD PRESERVATIVES	350
NC-RICH PRIMERS	340
GRAMS OF VOC PER LITER OF COATING, EMPT COMPOUNDS	INCLUDING WATER &
THE SPECIFIED LIMITS REMAIN IN EFFEC	T UNLESS REVISED LIMITS HE TABLE.

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

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

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

DIVISION 4.5 ENVIRONMENTAL QUALITY (continued) 4.504.3 CARPET SYSTEMS. All carpet installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for

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

https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/VOC.aspx. 4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

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

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

4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1. 4.504.4 RESILIENT FLOORING SYSTEMS. Where resilient flooring is installed , at least 80% of floor area receiving resilient flooring shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

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

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

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

- Product certifications and specifications. Chain of custody certifications.
- . Product labeled and invoiced as meeting the Composite Wood Products regulation (see CCR, Title 17, Section 93120, et seq.).
- 4. Exterior grade products marked as meeting the PS-1 or PS-2 standards of the Engine Wood Association, the Australian AS/NZS 2269, European 636 3S standards, and Canadian CSA
- 0121, CSA 0151, CSA 0153 and CSA 0325 standards. Other methods acceptable to the enforcing agency.

4.505 INTERIOR MOISTURE CONTROL

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

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

- 1. A 4-inch (101.6 mm) thick base of 1/2 inch (12.7mm) or larger clean aggregate shall be provided with a vapor barrier in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curling, shall be used. For additional information, see American Concrete Institute,
- 2. Other equivalent methods approved by the enforcing agency. 3. A slab design specified by a licensed design professional.
- **4.505.3 MOISTURE CONTENT OF BUILDING MATERIALS.** Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture content shall be verified in compliance with the following:
- 1. Moisture content shall be determined with either a probe-type or contact-type moisture meter. Equivalent moisture verification methods may be approved by the enforcing agency and shall satisfy requirements
- found in Section 101.8 of this code. 2. Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end

insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to

of each piece verified. 3. At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing.

enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying

4.506 INDOOR AIR QUALITY AND EXHAUST

- **4.506.1 Bathroom exhaust fans.** Each bathroom shall be mechanically ventilated and shall comply with the
- 1. Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building. 2. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a
- a. Humidity controls shall be capable of adjustment between a relative humidity range less than or equal to 50% to a maximum of 80%. A humidity control may utilize manual or automatic means of
- b. A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in)
- 1. For the purposes of this section, a bathroom is a room which contains a bathtub, shower or

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ecommendations prior to enclosure.

- 2. Lighting integral to bathroom exhaust fans shall comply with the California Energy Code.
- 4.507 ENVIRONMENTAL COMFORT
 4.507.2 HEATING AND AIR-CONDITIONING SYSTEM DESIGN. Heating and air conditioning systems shall be
- sized, designed and have their equipment selected using the following methods:
- 1. The heat loss and heat gain is established according to ANSI/ACCA 2 Manual J 2011 (Residential Load Calculation), ASHRAE handbooks or other equivalent design software or methods. 2. Duct systems are sized according to ANSI/ACCA 1 Manual D - 2014 (Residential Duct Systems),
- ASHRAE handbooks or other equivalent design software or methods. 3. Select heating and cooling equipment according to ANSI/ACCA 3 Manual S - 2014 (Residential

Equipment Selection), or other equivalent design software or methods. **Exception:** Use of alternate design temperatures necessary to ensure the system functions are

INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702 QUALIFICATIONS

702.1 INSTALLER TRAINING. HVAC system installers shall be trained and certified in the proper installation of HVAC systems including ducts and equipment by a nationally or regionally recognized training or certification program. Uncertified persons may perform HVAC installations when under the direct supervision and esponsibility of a person trained and certified to install HVAC systems or contractor licensed to install HVAC systems Examples of acceptable HVAC training and certification programs include but are not limited to the following:

- 1. State certified apprenticeship programs.
- Public utility training programs. 3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.
- 4. Programs sponsored by manufacturing organizations. 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 onsidered 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. 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 ecognized state, national or international association, as determined by the local agency. The area of certification shall be closely related to the primary job function, as determined by the local agency

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

703 VERIFICATIONS

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.



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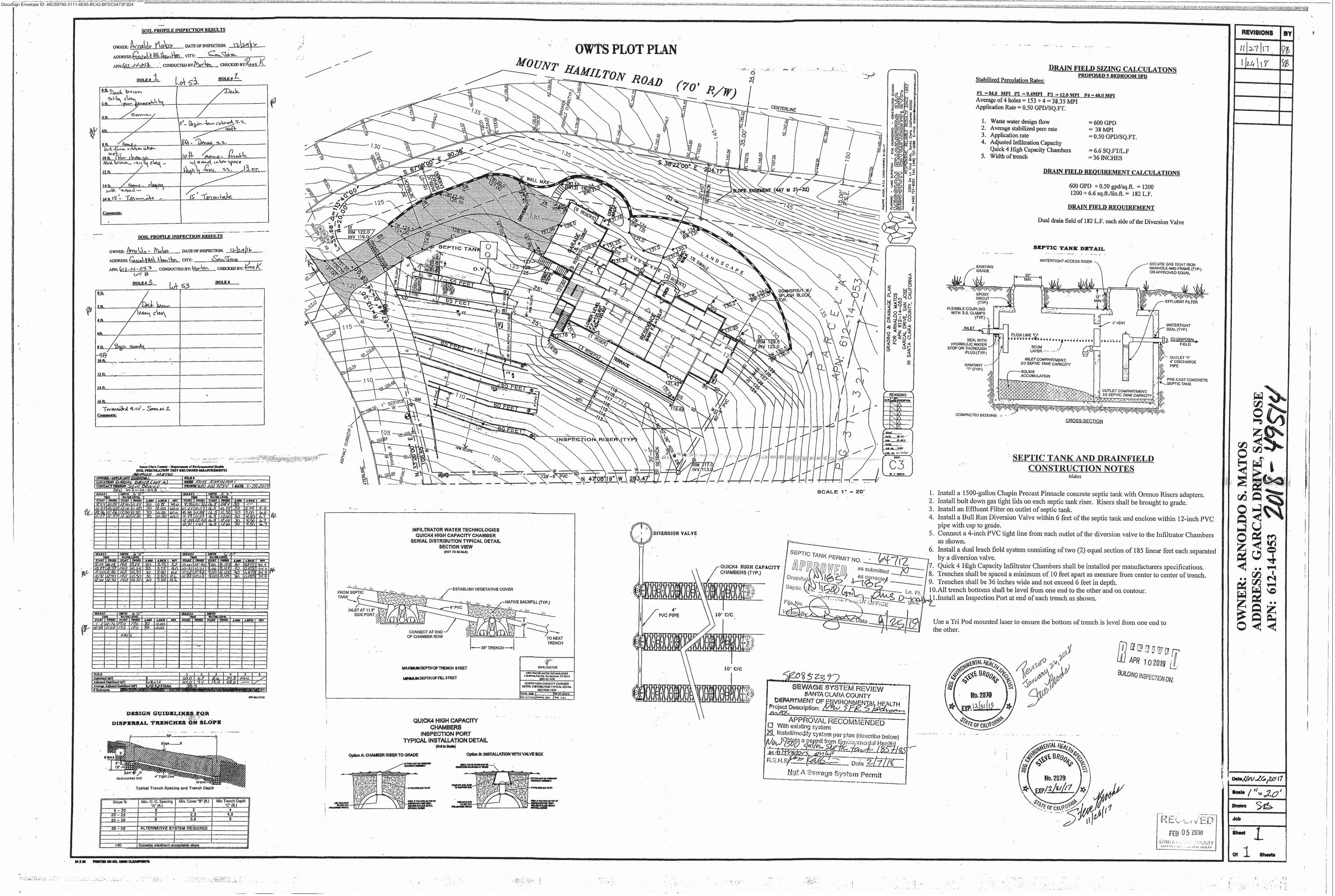
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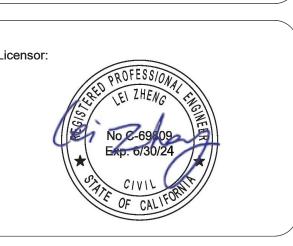


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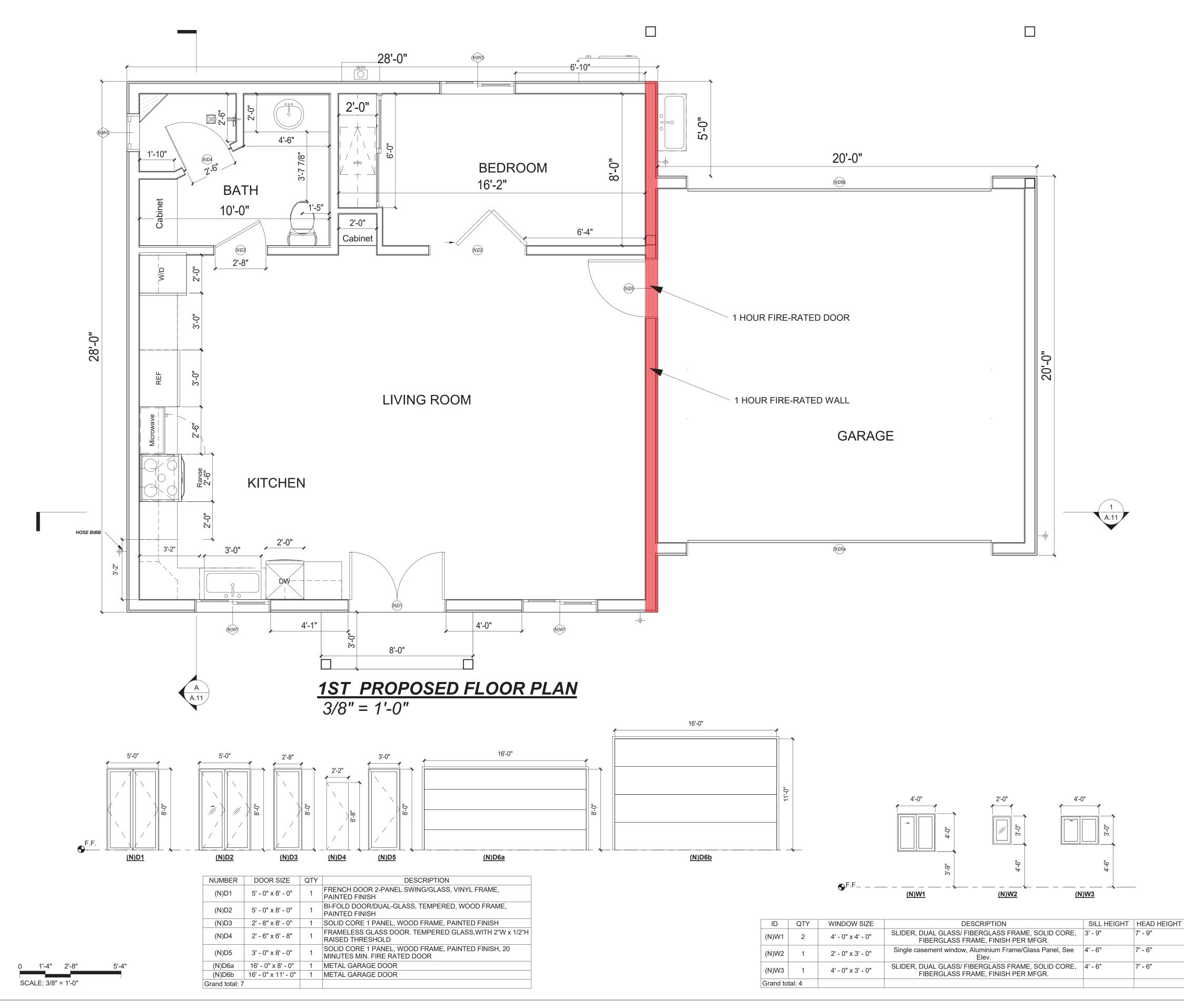


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EXISTING SEPTIC
TANK AND
DRAINFIELD DESIGN

SHEET NUMBER:





LIGHTING REQUIREMENTS

1. ALL INSTALLED LUMINAIRES SHALL BE HIGH-EFFICACY IN ACCORDANCE WITH TABLE 150.0-A.

2.IN BATHROOMS, GARAGES, LAUNDRY ROOMS, UTILITY ROOMS AND WALK-IN CLOSETS, AT LEAST ONE INSTALLED LUMINAIRE SHALL BE CONTROLLED BY AN OCCUPANCY OR VACANCY SENSOR PROVIDING AUTOMATIC-OFF FUNCTIONALITY.2022 CEC 150(K)2E

3.NO CONTROLS SHALL BYPASS A DIMMER, OCCUPANT SENSOR OR VACANCY SENSOR FUNCTION WHERE THAT DIMMER OR SENSOR HAS BEEN INSTALLED TO COMPLY WITH SECTION 150.0(K).

4. LUMINAIRES RECESSED INTO CEILINGS SHALL MEET ALL THE FOLLOWING:

i. SHALL NOT CONTAIN SCREW BASE LAMP SOCKETS; AND
ii. HAVE A LABEL THAT CERTIFIES THE LUMINAIRE IS AIRTIGHT WITH AIR LEAKAGE LESS THAN 2.0 CFM AT
75 PASCALS WHEN TESTED IN ACCORDANCE WITH ASTM E283. AN EXHAUST FAN HOUSING WITH INTEGRAL
LIGHT SHALL NOT BE REQUIRED TO BE CERTIFIED AIRTIGHT; AND

iii. BE SEALED WITH A GASKET OR CAULK BETWEEN THE LUMINAIRE HOUSING AND CEILING, AND HAVE ALL AIR LEAK PATHS BETWEEN CONDITIONED AND UNCONDITIONED SPACES SEALED WITH A GASKET OR CAULK, OR BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS TO MAINTAIN AIRTIGHTNESS BETWEEN THE LUMINAIRE HOUSING AND CEILING; AND

iv. MEET THE CLEARANCE AND INSTALLATION REQUIREMENTS OF CALIFORNIA ELECTRICAL CODE SECTION 410.116 FOR RECESSED LUMINAIRES.

EXCEPTION TO SECTIONS 150.0(K)1Cii AND iii: RECESSED LUMINAIRES MARKED FOR USE IN FIRE-RATED INSTALLATIONS EXTRUDED INTO CEILING SPACE AND RECESSED LUMINAIRES INSTALLED IN NONINSULATED CEILINGS

5. FOR SINGLE-FAMILY RESIDENTIAL BUILDINGS, OUTDOOR LIGHTING PERMANENTLY MOUNTED TO A RESIDENTIAL BUILDING OR TO OTHER BUILDINGS ON THE SAME LOT SHALL MEET THE REQUIREMENT IN ITEM I AND THE REQUIREMENTS IN EITHER ITEM II OR ITEM III:

i. CONTROLLED BY A MANUAL ON AND OFF CONTROL SWITCH THAT PERMITS THE AUTOMATIC ACTIONS OF ITEMS ii OR iii BELOW; AND

ii. CONTROLLED BY A PHOTOCELL AND EITHER A MOTION SENSOR OR AN AUTOMATIC TIME SWITCH CONTROL; OR

6. RUN 2" CONDUIT BENEATH THE GARAGE SLAB, SPECIFY 20A OUTLETS WITH 12 GAUGE WIRING

CONTROLS THAT OVERRIDE TO ON SHALL NOT BE ALLOWED UNLESS THE OVERRIDE AUTOMATICALLY RETURNS THE AUTOMATIC CONTROL TO ITS NORMAL OPERATION WITHIN 6 HOURS. AN ENERGY -MANAGEMENT CONTROL SYSTEM THAT PROVIDES THE SPECIFIED LIGHTING CONTROL FUNCTIONALITY AND COMPLIES WITH ALL REQUIREMENTS AND THE SPECIFIED TO THE SPECIFIED SHAY BE USED TO MEET THESE REQUIREMENTS. 2022 DEC 150 KB.

1. VERIFY ALL APPLIANCE EQUIPMENT AND FIXTURE DIMENSIONS AND INSTALLATION REQUIREMENTS PRIOR TO CASEWORK FABRICATION INSTALLATION.

2. FINISH END WALLS OF CABINETS FLANKING OPENING TO MATCH CABINET FACE. PRIME & PAINT EXPOSED GYP. BD. WALL TO MATCH WALLS. INSTALL MATCHING BASE BD.

3. EXTEND FLOORING UNDER APPLIANCES RESTING ON FLOOR.

iii. CONTROLLED BY AN ASTRONOMICAL TIME CLOCK CONTROL.

4. SHOWER COMPARTMENTS AND WALLS ABOVE BATH TUBS WITH INSTALLED SHOWER HEADS SHALL BE FINISHED WITH A SMOOTH, NON-ABSORBENT SURFACE TO A HEIGHT NOT LESS THAN 70 INCHES ABOVE THE DRAIN INLET.

5. OFFSET ALL IMMEDIATELY ADJACENT DOOR OPENINGS 4" FROM PERPENDICULAR WALL, UNO.

6. CEILING HEIGHTS INDICATED ARE MEASURED FROM FINISH FLOOR TO BOTTOM OF CEILING FINISH.

7. SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS: i. IN EACH SLEEPING ROOM.

ii. OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.
iii. ON EACH ADDITIONAL STORY OF THE DWELLING, INCLUDING BASEMENTS AND HABITABLE ATTICS AND NOT INCLUDING CRAWL SPACES AND UNINHABITABLE ATTICS. IN DWELLINGS OR DWELLING UNITS WITH SPLIT LEVELS AND WITHOUT AN INTERVENING DOOR BETWEEN THE ADJACENT LEVELS, A SMOKE ALARM INSTALLED ON THE UPPER LEVEL SHALL SUFFICE FOR THE ADJACENT LOWER LEVEL PROVIDED THAT THE LOWER LEVEL IS LESS THAN ONE FULL STORY BELOW. THE UPPER LEVEL

iv. NOT LESS THAN 3 FEET (914 MM) HORIZONTALLY FROM THE DOOR OR OPENING OF A BATHROOM THAT CONTAINS A BATHTUB OR SHOWER UNLESS THIS WOULD PREVENT PLACEMENT OF A SMOKE ALARM REQUIRED BY THIS SECTION. v. IN THE HALLWAY AND IN THE ROOM OPEN TO THE HALLWAY IN DWELLING UNITS WHERE THE CEILING HEIGHT OF A ROOM OPEN TO A HALLWAY SERVING BEDROOMS EXCEEDS THAT OF THE HALLWAY BY 24 INCHES (610 MM) OR MORE. (2022 CRC 314.4)

8. WHERE MORE THAN ONE SMOKE ALARM IS REQUIRED TO BE INSTALLED WITHIN AN INDIVIDUAL DWELLING OR SLEEPING UNIT, THE SMOKE ALARMS SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTIVATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT. THE ALARM SHALL BE CLEARLY AUDIBLE IN ALL BEDROOMS OVER BACKGROUND NOISE LEVELS WITH ALL INTERVENING DOORS CLOSED.(2022 CRC 314.4)

9. BATHROOM FANS MUST BE ENERGY STAR W/ HUMIDISTAT CONTROLLER AND MUST BE DUCTED TO THE EXTERIOR OF THE BUILDING

10. ALL NEW WINDOWS TO BE DUAL PANES TO MEET CURRENT ENERGY STANDARD REQUIREMENTS11. USE 2x6 STUDS FOR PLUMBING WALL IF NECESSARY.

12. PROVIDE BACKING FOR ALL ACCESSORIES, FIXTURES AND WINDOW COVERINGS.

13. NO HEATING, COOLING, OR INSULATION IN GARAGE.

14. PROVIDE TWO LAYERS OF GRADE D OR 60-MINUTE GRADE D PAPER OVER ALL WOOD BASE SHEATHING AT EXTERIOR

15. A MINIMUM 0.019-INCH (0.5 MM) (NO. 26 GALVANIZED SHEET GAGE), CORROSION-RESISTANT WEEP SCREED OR PLASTIC WEEP SCREED, WITH A MINIMUM VERTICAL ATTACHMENT FLANGE OF 31/2 INCHES (89 MM), SHALL BE PROVIDED AT OR BELOW THE FOUNDATION PLATE LINE ON EXTERIOR STUD WALLS IN ACCORDANCE WITH ASTM C926. THE WEEP SCREED SHALL BE PLACED NOT LESS THAN 4 INCHES (102 MM) ABOVE THE EARTH OR 2 INCHES (51 MM) ABOVE PAVED AREAS AND SHALL BE OF A TYPE THAT WILL ALLOW TRAPPED WATER TO DRAIN TO THE EXTERIOR OF THE BUILDING. THE WEATHER-RESISTANT BARRIER SHALL LAP THE ATTACHMENT FLANGE. THE EXTERIOR LATH SHALL COVER AND TERMINATE ON THE ATTACHMENT FLANGE OF THE WEEP SCREED. (2022 CRC R703.7.2.1)

16. AN ATTIC OR UNDER-FLOOR SPACE IN WHICH AN APPLIANCE IS INSTALLED SHALL BE ACCESSIBLE THROUGH AN OPENING AND PASSAGEWAY NOT LESS THAN THE LARGEST COMPONENT OF THE APPLIANCE, AND NOT LESS THAN 22 INCHES BY 30 INCHES (559 MM BY 762 MM). (2022 CMC 304.4)
i. LENGTH OF PASSAGEWAY

WHERE THE HEIGHT OF THE PASSAGEWAY IS LESS THAN 6 FEET (1829 MM), THE DISTANCE FROM THE PASSAGEWAY ACCESS TO THE APPLIANCE SHALL NOT EXCEED 20 FEET (6096 MM) MEASURED ALONG THE CENTERLINE OF THE PASSAGEWAY. [NFPA 54:9.5.1.1]
ii. 304.4.2 WIDTH OF PASSAGEWAY

THE PASSAGEWAY SHALL BE UNOBSTRUCTED AND SHALL HAVE SOLID FLOORING NOT LESS THAN 24 INCHES (610 MM)
WIDE FROM THE ENTRANCE OPENING TO THE APPLIANCE. [NFPA 54:9.5.1.2]
iii. 304.4.3 WORK PLATFORM

A LEVEL WORKING PLATFORM NOT LESS THAN 30 INCHES BY 30 INCHES (762 MM BY 762 MM) SHALL BE PROVIDED IN FRONT OF THE SERVICE SIDE OF THE APPLIANCE. [NFPA 54:9.5.2] EXCEPTION: A WORKING PLATFORM NEED NOT BE PROVIDED WHERE THE FURNACE IS CAPABLE OF BEING SERVICED FROM THE REQUIRED ACCESS OPENING. THE FURNACE SERVICE SIDE SHALL NOT EXCEED 12 INCHES (305 MM) FROM THE ACCESS OPENING.

iv. 304.4.4 LIGHTING AND CONVENIENCE OUTLET
A PERMANENT 120V RECEPTACLE OUTLET AND A LUMINAIRE SHALL BE INSTALLED NEAR THE APPLIANCE. THE SWITCH
CONTROLLING THE LUMINAIRE SHALL BE LOCATED AT THE ENTRANCE TO THE PASSAGEWAY. {NFPA 54:9.5.3}

17. PROVIDE GFI PROTECTION TO ALL 120 VOLT, 15 AND 20 AMP RECEPTACLES INSTALLED AT OUTDOORS, IN BATHROOM, AT COUNTER TOP SURFACES AND GARAGES. (CEC2108(a)).

18. PROVIDE GFCI RECEPTACLES AT BATHROOMS, KITCHEN COUNTERTOP SURFACES, LAUNDRY /WET BAR AREA WITHIN 6FT FROM EDGE OF THE SINKS (CEC 210-8)

<u>NOTE:</u>
FACTORY - BUILT FIREPLACES CHIMNEYS AND ALL OTHER
COMPONENTSSHALL BE LISTED AND INSTALLED IN ACCORDANCE WITH

THEIR LISTING AND MANUFACTURER INSTRUCTIONS



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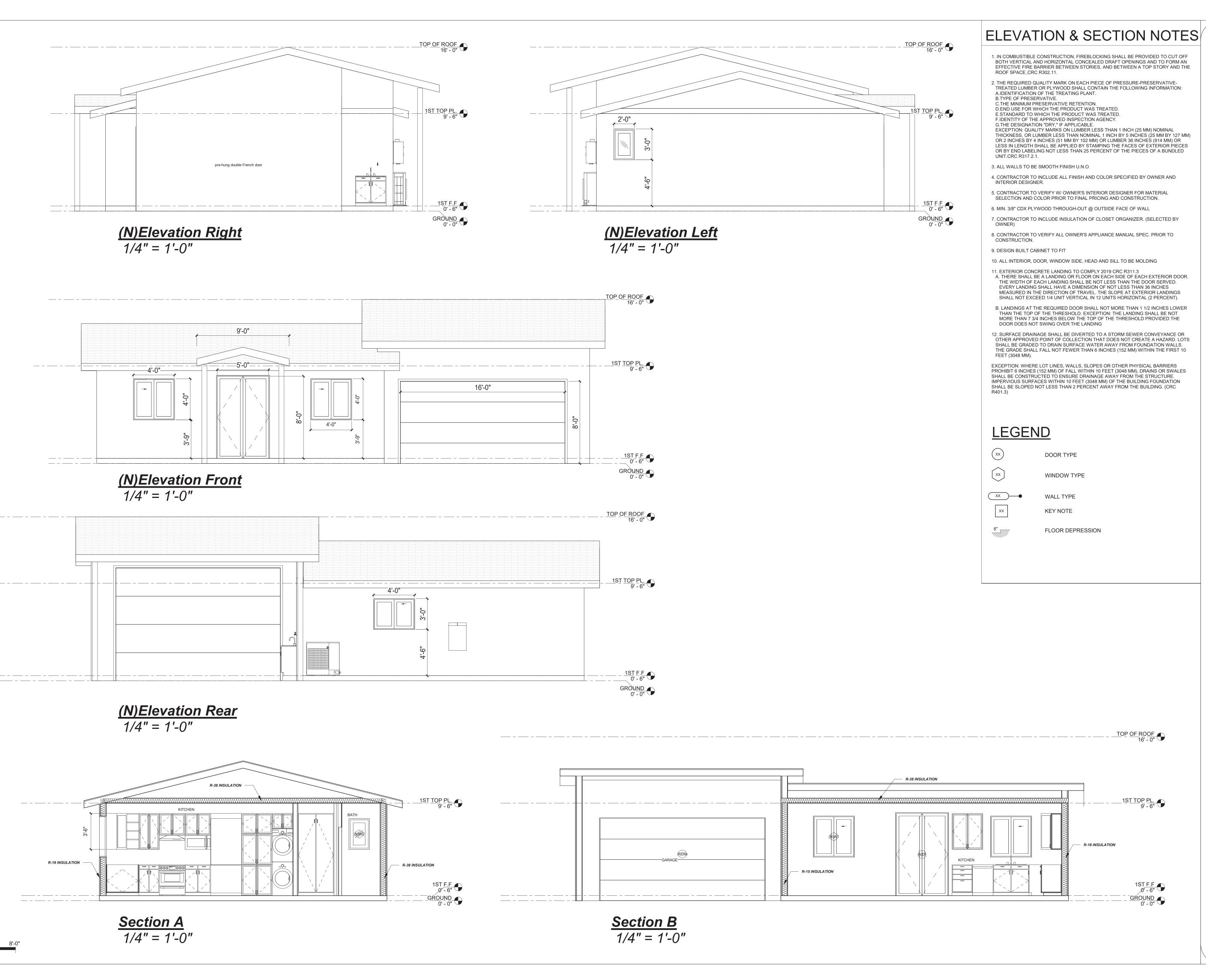
Jurisdiction:



SHEET TITLE:

PROPOSED FLOOR PLAN

SHEET NUMBER:



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



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ELEVATIONS & SECTIONS

SHEET NUMBER:

ROOF VENTILATION NOTES: (2022 CRC R806)

. ENCLOSED ATTICS AND ENCLOSED RAFTER SPACES FORMED WHERE CEILINGS ARE APPLIED DIRECTLY TO THE UNDERSIDE OF ROOF RAFTERS SHALL HAVE CROSS VENTILATION FOR EACH SEPARATE SPACE BY VENTILATING OPENINGS PROTECTED AGAINST THE ENTRANCE OF RAIN OR SNOW. VENTILATION OPENINGS SHALL HAVE A LEAST DIMENSION OF 1/16 INCH (1.6 MM) MINIMUM AND 1/4 INCH (6.4 MM) MAXIMUM. VENTILATION OPENINGS HAVING A LEAST DIMENSION LARGER THAN 1/4 INCH (6.4 MM) SHALL BE PROVIDED WITH CORROSION-RESISTANT WIRE CLOTH SCREENING, HARDWARE CLOTH, PERFORATED VINYL OR SIMILAR MATERIAL WITH OPENINGS HAVING A LEAST DIMENSION OF 1/16 INCH (1.6 MM) MINIMUM AND 1/4 INCH (6.4 MM) MAXIMUM. OPENINGS IN ROOF FRAMING MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF SECTION R802.7. REQUIRED VENTILATION OPENINGS SHALL OPEN DIRECTLY TO THE OUTSIDE AIR AND SHALL BE PROTECTED TO PREVENT THE ENTRY OF BIRDS, RODENTS, SNAKES AND OTHER SIMILAR CREATURES.

2. THE MINIMUM NET FREE VENTILATING AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE. EXCEPTION: THE MINIMUM NET FREE VENTILATION AREA SHALL BE 1/300 OF THE VENTED SPACE PROVIDED BOTH OF THE FOLLOWING CONDITIONS ARE MET: i. IN CLIMATE ZONES 6, 7 AND 8, A CLASS I OR II VAPOR RETARDER IS INSTALLED ON THE WARM-IN-WINTER SIDE

OF THE CEILING. ii. NOT LESS THAN 40 PERCENT AND NOT MORE THAN 50 PERCENT OF THE REQUIRED VENTILATING AREA IS PROVIDED BY VENTILATORS LOCATED IN THE UPPER PORTION OF THE ATTIC OR RAFTER SPACE. UPPER VENTILATORS SHALL BE LOCATED NOT MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE, MEASURED VERTICALLY. THE BALANCE OF THE REQUIRED VENTILATION PROVIDED SHALL BE LOCATED IN THE BOTTOM ONE-THIRD OF THE ATTIC SPACE. WHERE THE LOCATION OF WALL OR ROOF FRAMING MEMBERS CONFLICTS WITH THE INSTALLATION OF UPPER VENTILATORS, INSTALLATION MORE THAN 3 FEET (914 MM) BELOW THE RIDGE OR HIGHEST POINT OF THE SPACE SHALL BE PERMITTED.

3. WHERE EAVE OR CORNICE VENTS ARE INSTALLED, BLOCKING, BRIDGING AND INSULATION SHALL NOT BLOCK THE FREE FLOW OF AIR. NOT LESS THAN A 1-INCH (25 MM) SPACE SHALL BE PROVIDED BETWEEN THE INSULATION AND THE ROOF SHEATHING AND AT THE LOCATION OF THE VENT.

4. VENTILATORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. INSTALLATION OF VENTILATORS IN ROOF SYSTEMS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION R903. INSTALLATION OF VENTILATORS IN WALL SYSTEMS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF

5. UNVENTED ATTICS AND UNVENTED ENCLOSED ROOF FRAMING ASSEMBLIES CREATED BY CEILINGS THAT ARE APPLIED DIRECTLY TO THE UNDERSIDE OF THE ROOF FRAMING MEMBERS AND STRUCTURAL ROOF SHEATHING APPLIED DIRECTLY TO THE TOP OF THE ROOF FRAMING MEMBERS/RAFTERS, SHALL BE PERMITTED WHERE ALL THE FOLLOWING CONDITIONS ARE MET:

1. THE UNVENTED ATTIC SPACE IS COMPLETELY WITHIN THE BUILDING THERMAL ENVELOPE. 2. INTERIOR CLASS I VAPOR RETARDERS ARE NOT INSTALLED ON THE CEILING SIDE (ATTIC FLOOR) OF THE UNVENTED ATTIC ASSEMBLY OR ON THE CEILING SIDE OF THE UNVENTED ENCLOSED ROOF FRAMING ASSEMBLY. 3. WHERE WOOD SHINGLES OR SHAKES ARE USED, A MINIMUM 1/4-INCH (6.4 MM) VENTED AIRSPACE SEPARATES THE SHINGLES OR SHAKES AND THE ROOFING UNDERLAYMENT ABOVE THE STRUCTURAL 4. IN CLIMATE ZONES 5, 6, 7 AND 8, ANY AIR-IMPERMEABLE INSULATION SHALL BE A CLASS II VAPOR RETARDER, OR SHALL HAVE A CLASS II VAPOR RETARDER COATING OR COVERING IN DIRECT CONTACT WITH

THE UNDERSIDE OF THE INSULATION. 5. INSULATION SHALL COMPLY WITH ITEM 5.3 AND EITHER ITEM 5.1 OR 5.2: 5.1 ITEM 5.1.1, 5.1.2, 5.1.3 OR 5.1.4 SHALL BE MET, DEPENDING ON THE AIR PERMEABILITY OF THE INSULATION DIRECTLY UNDER THE STRUCTURAL ROOF SHEATHING. 5.1.1 WHERE ONLY AIR-IMPERMEABLE INSULATION IS PROVIDED, IT SHALL BE APPLIED IN DIRECT

CONTACT WITH THE UNDERSIDE OF THE STRUCTURAL ROOF SHEATHING. 5.1.2 WHERE AIR-PERMEABLE INSULATION IS INSTALLED DIRECTLY BELOW THE STRUCTURAL SHEATHING, RIGID BOARD OR SHEET INSULATION SHALL BE INSTALLED DIRECTLY ABOVE THE STRUCTURAL ROOF SHEATHING IN ACCORDANCE WITH THE R-VALUES IN TABLE R806.5 FOR CONDENSATION CONTROL. 5.1.3 WHERE BOTH AIR-IMPERMEABLE AND AIR-PERMEABLE INSULATION ARE PROVIDED, THE AIR-IMPERMEABLE INSULATION SHALL BE APPLIED IN DIRECT CONTACT WITH THE UNDERSIDE OF THE STRUCTURAL ROOF SHEATHING IN ACCORDANCE WITH ITEM 5.1.1 AND SHALL BE IN ACCORDANCE WITH THE R-VALUES IN TABLE R806.5 FOR CONDENSATION CONTROL. THE AIR-PERMEABLE INSULATION SHALL BE INSTALLED DIRECTLY UNDER THE AIR-IMPERMEABLE INSULATION. 5.1.4 ALTERNATIVELY, SUFFICIENT RIGID BOARD OR SHEET INSULATION SHALL BE INSTALLED DIRECTLY ABOVE THE STRUCTURAL ROOF SHEATHING TO MAINTAIN THE MONTHLY AVERAGE TEMPERATURE OF THE UNDERSIDE OF THE STRUCTURAL ROOF SHEATHING ABOVE 45°F (7°C). FOR CALCULATION PURPOSES, AN

INTERIOR AIR TEMPERATURE OF 68°F (20°C) IS ASSUMED AND THE EXTERIOR AIR TEMPERATURE IS ASSUMED

TO BE THE MONTHLY AVERAGE OUTSIDE AIR TEMPERATURE OF THE THREE COLDEST MONTHS.

5.2 IN CLIMATE ZONES 1, 2 AND 3, AIR-PERMEABLE INSULATION INSTALLED IN UNVENTED ATTICS SHALL MEET THE FOLLOWING REQUIREMENTS: 5.2.1 AN APPROVED VAPOR DIFFUSION PORT SHALL BE INSTALLED NOT MORE THAN 12 INCHES (305 MM) FROM THE HIGHEST POINT OF THE ROOF, MEASURED VERTICALLY FROM THE HIGHEST POINT OF THE ROOF TO THE LOWER EDGE OF

5.2.2 THE PORT AREA SHALL BE GREATER THAN OR EQUAL TO 1:600 OF THE CEILING AREA. WHERE THERE ARE MULTIPLE PORTS IN THE ATTIC, THE SUM OF THE PORT AREAS SHALL BE GREATER THAN OR EQUAL TO THE AREA

5.2.3 THE VAPOR-PERMEABLE MEMBRANE IN THE VAPOR DIFFUSION PORT SHALL HAVE A VAPOR PERMEANCE RATING OF GREATER THAN OR EQUAL TO 20 PERMS WHEN TESTED IN ACCORDANCE WITH PROCEDURE A OF ASTM E96. 5.2.4 THE VAPOR DIFFUSION PORT SHALL SERVE AS AN AIR BARRIER BETWEEN THE ATTIC AND THE EXTERIOR OF

THE BUILDING. 5.2.5 THE VAPOR DIFFUSION PORT SHALL PROTECT THE ATTIC AGAINST THE ENTRANCE OF RAIN AND SNOW. 5.2.6 FRAMING MEMBERS AND BLOCKING SHALL NOT BLOCK THE FREE FLOW OF WATER VAPOR TO THE PORT, NOT LESS THAN A 2-INCH (51 MM) SPACE SHALL BE PROVIDED BETWEEN ANY BLOCKING AND THE ROOF SHEATHING. AIR-PERMEABLE INSULATION SHALL BE PERMITTED WITHIN THAT SPACE. 5.2.7 THE ROOF SLOPE SHALL BE GREATER THAN OR EQUAL TO 3:12 (VERTICAL/HORIZONTAL).

5.2.8 WHERE ONLY AIR-PERMEABLE INSULATION IS USED, IT SHALL BE INSTALLED DIRECTLY BELOW THE STRUCTURAL ROOF SHEATHING, ON TOP OF THE ATTIC FLOOR, OR ON TOP OF THE CEILING. 5.2.9 AIR-IMPERMEABLE INSULATION, WHERE USED IN CONJUNCTION WITH AIR-PERMEABLE INSULATION, SHALL BE DIRECTLY ABOVE OR BELOW THE STRUCTURAL ROOF SHEATHING AND IS NOT REQUIRED TO MEET THE R-VALUE IN TABLE R806.5. WHERE DIRECTLY BELOW THE STRUCTURAL ROOF SHEATHING, THERE SHALL BE NO SPACE BETWEEN THE AIR-IMPERMEABLE INSULATION AND AIR-PERMEABLE INSULATION.

5.2.10 WHERE AIR-PERMEABLE INSULATION IS USED AND IS INSTALLED DIRECTLY BELOW THE ROOF STRUCTURAL SHEATHING, AIR SHALL BE SUPPLIED AT A FLOW RATE GREATER THAN OR EQUAL TO 50 CFM (23.6 L/S) PER 1,000 SQUARE FEET (93 M2) OF CEILING. THE AIR SHALL BE SUPPLIED FROM DUCTWORK PROVIDING SUPPLY AIR TO THE OCCUPIABLE SPACÈ WHÉN THE CONDITIONING SYSTEM IS OPERATING. ALTERNATIVELY, THE AIR SHALL BE SUPPLIED BY A SUPPLY FAN WHEN THE CONDITIONING SYSTEM IS OPERATING.

EXCEPTIONS: 1. WHERE BOTH AIR-IMPERMEABLE AND AIR-PERMEABLE INSULATION ARE USED, AND THE R-VALUE IN TABLE 806.5 IS MET, AIR SUPPLY TO THE ATTIC IS NOT REQUIRED. 2. WHERE ONLY AIR-PERMEABLE INSULATION IS USED AND IS INSTALLED ON TOP OF THE ATTIC FLOOR, OR ON TOP OF THE CEILING, AIR SUPPLY TO THE ATTIC IS NOT REQUIRED. 5.3 WHERE PREFORMED INSULATION BOARD IS USED AS THE AIR-IMPERMEABLE INSULATION LAYER, IT SHALL BE SEALED AT THE PERIMETER OF EACH INDIVIDUAL SHEET INTERIOR SURFACE TO FORM A CONTINUOUS LAYER.

ROOF PLAN GENERAL NOTES

1. ROOF MATERIAL COVERING CLASS "A" ASPHALT SHINGLES BY CERTAINTEED ICC-ESR# 3537. COLOR & PER THE INSTALLATION OF ROOF COVERING SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

2. CHIMNEY TO BE 2FT ABOVE ROOF WITHIN 10'-0" WITH SPARK ARRESTOR AND SHROUD 12" MAX. HEIGHT, TYP.

SPRINKLER) TO PROPERTY LINE TO BE 1-

3. PROJECTIONS LESS THAN 3'-0" (HOUSE WITH SPRINKLER) OR 5'-0" (HOUSE WITH NO

4. ROOF VENT: SEE ROOF VENTILATION CALCULATION.

HOUR CONSTRUCTION, TYP.

5. PROVIDE MIN. 2% SLOPE AT FLAT ROOF AND DECK.



CHIEF ENGINEER:LEI ZHENG (MASON) PHONE: (510)909-1933 EMAIL: ENGINEER.LEI@GMAIL.COM

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300

REV.	DESCRIPTION	DATE
0	APPLY FOR PERMITS	05-27-2024

Jurisdiction:

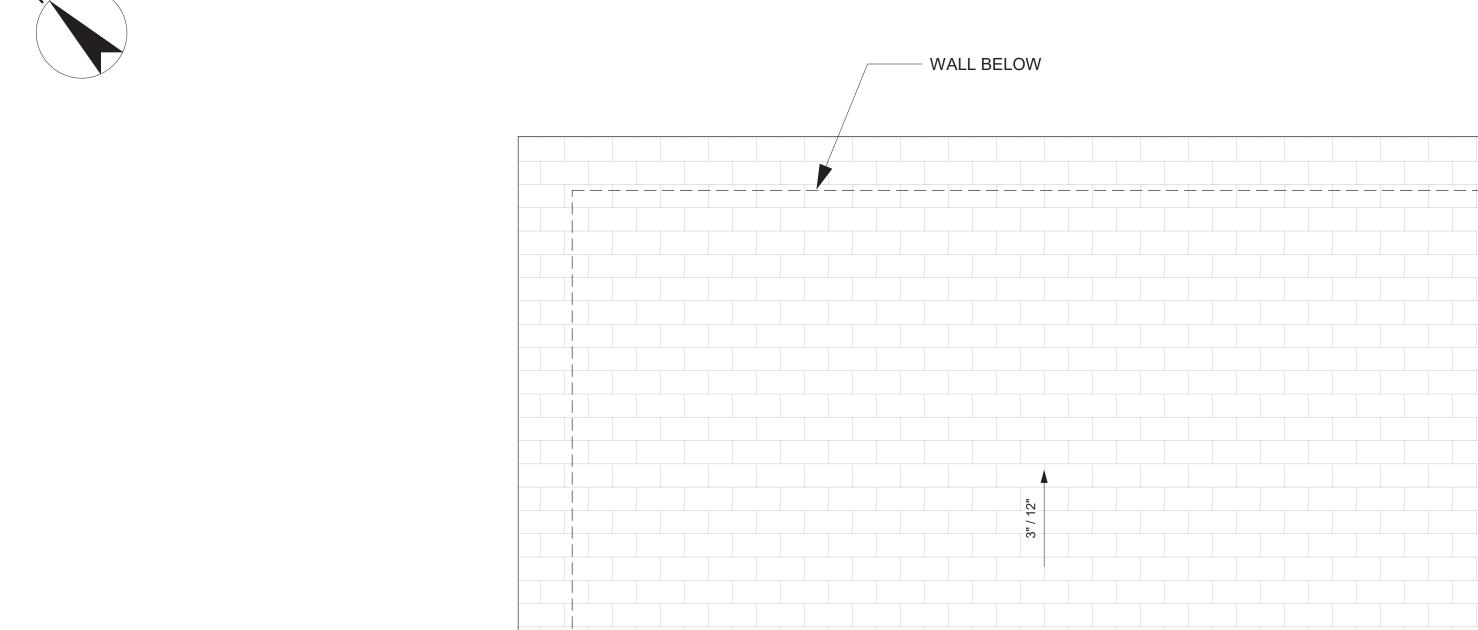


SHEET TITLE:

ROOF PLAN

SHEET NUMBER:

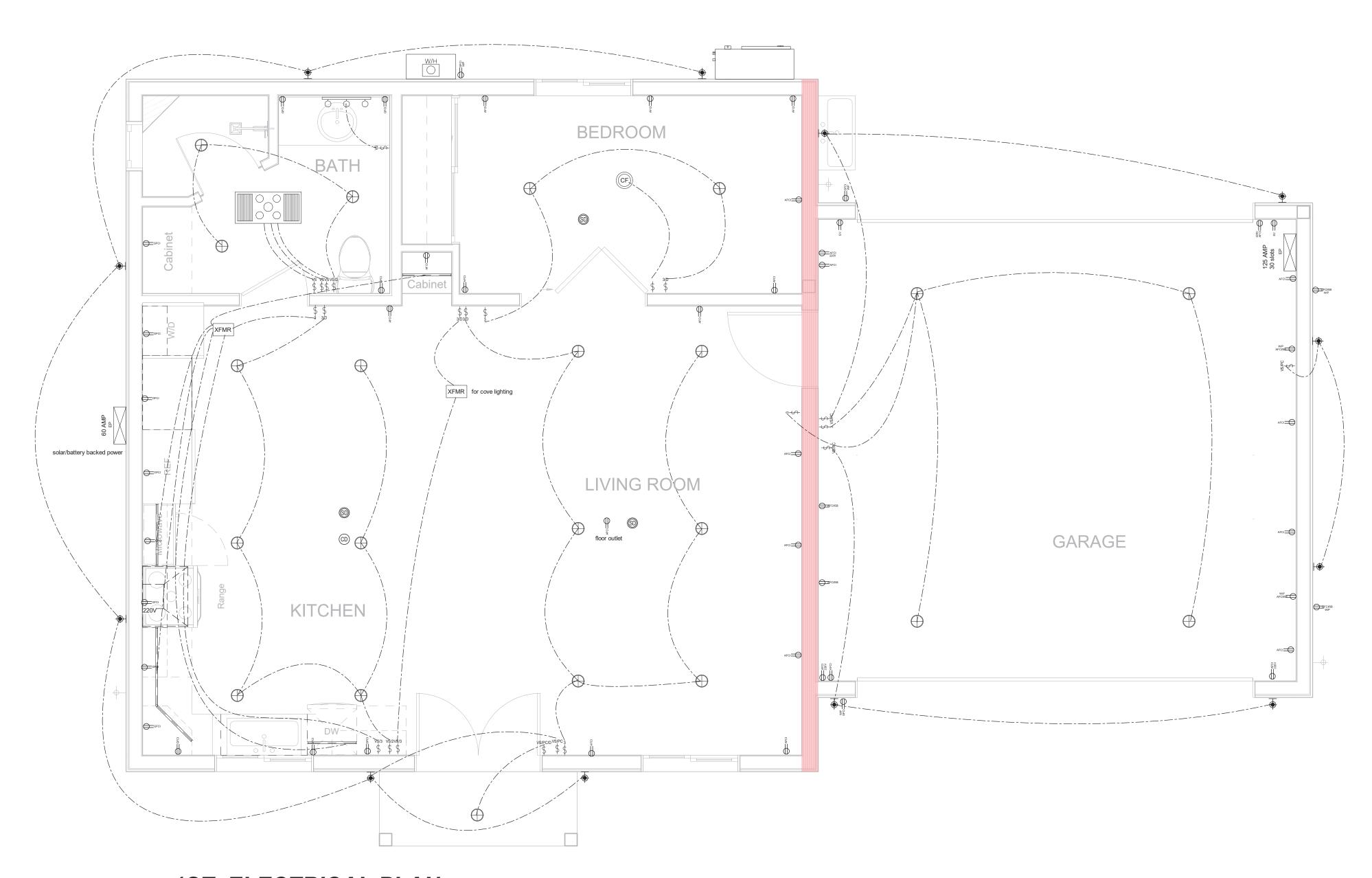
A.12



(P)ROOF PLAN 3/8" = 1'-0"

3" / 12"





1ST ELECTRICAL PLAN
3/8" = 1'-0"

LIGHTING REQUIREMENTS

1. ALL INSTALLED LUMINAIRES SHALL BE HIGH-EFFICACY IN ACCORDANCE WITH TABLE 150.0-A.

2.IN BATHROOMS, GARAGES, LAUNDRY ROOMS, UTILITY ROOMS AND WALK-IN CLOSETS, AT LEAST ONE INSTALLED LUMINAIRE SHALL BE CONTROLLED BY AN OCCUPANCY OR VACANCY SENSOR PROVIDING AUTOMATIC-OFF FUNCTIONALITY.2022 CEC 150(K)2E

3.NO CONTROLS SHALL BYPASS A DIMMER, OCCUPANT SENSOR OR VACANCY SENSOR FUNCTION WHERE THAT DIMMER OR SENSOR HAS BEEN INSTALLED TO COMPLY WITH SECTION 150.0(K).

4. LUMINAIRES RECESSED INTO CEILINGS SHALL MEET ALL THE FOLLOWING:

i. SHALL NOT CONTAIN SCREW BASE LAMP SOCKETS; AND
 ii. HAVE A LABEL THAT CERTIFIES THE LUMINAIRE IS AIRTIGHT WITH AIR LEAKAGE LESS THAN 2.0 CFM AT
 75 PASCALS WHEN TESTED IN ACCORDANCE WITH ASTM E283. AN EXHAUST FAN HOUSING WITH INTEGRAL LIGHT SHALL NOT BE REQUIRED TO BE CERTIFIED AIRTIGHT; AND
 iii. BE SEALED WITH A GASKET OR CAULK BETWEEN THE LUMINAIRE HOUSING AND CEILING, AND HAVE ALL

iii. BE SEALED WITH A GASKET OR CAULK BETWEEN THE LUMINAIRE HOUSING AND CEILING, AND HAVE ALL AIR LEAK PATHS BETWEEN CONDITIONED AND UNCONDITIONED SPACES SEALED WITH A GASKET OR CAULK, OR BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS TO MAINTAIN AIRTIGHTNESS BETWEEN THE LUMINAIRE HOUSING AND CEILING; AND

iv. MEET THE CLEARANCE AND INSTALLATION REQUIREMENTS OF CALIFORNIA ELECTRICAL CODE SECTION 410.116 FOR RECESSED LUMINAIRES.

EXCEPTION TO SECTIONS 150.0(K)1Cii AND iii: RECESSED LUMINAIRES MARKED FOR USE IN FIRE-RATED INSTALLATIONS EXTRUDED INTO CEILING SPACE AND RECESSED LUMINAIRES INSTALLED IN NONINSULATED CEILINGS.

5. FOR SINGLE-FAMILY RESIDENTIAL BUILDINGS, OUTDOOR LIGHTING PERMANENTLY MOUNTED TO A RESIDENTIAL BUILDING OR TO OTHER BUILDINGS ON THE SAME LOT SHALL MEET THE REQUIREMENT IN ITEM I AND THE REQUIREMENTS IN EITHER ITEM II OR ITEM III:

i. CONTROLLED BY A MANUAL ON AND OFF CONTROL SWITCH THAT PERMITS THE AUTOMATIC ACTIONS OF

ITEMS II OR III BELOW; AND

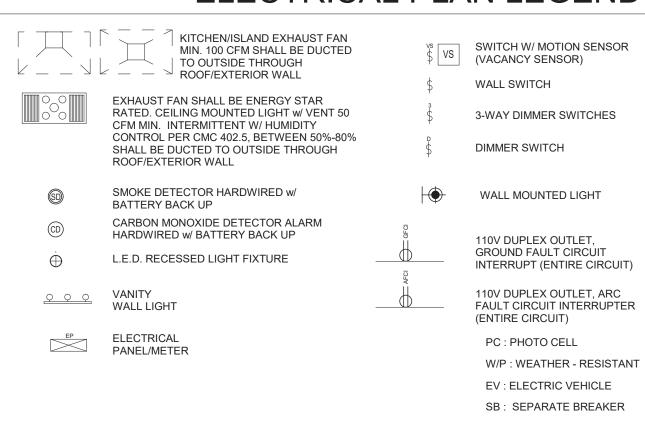
II. CONTROLLED BY A PHOTOCELL AND EITHER A MOTION SENSOR OR AN AUTOMATIC TIME SWITCH

CONTROL; OR
iii. CONTROLLED BY AN ASTRONOMICAL TIME CLOCK CONTROL.

6. RUN 2" CONDUIT BENEATH THE GARAGE SLAB, SPECIFY 20A OUTLETS WITH 12 GAUGE WIRING THROUGHOUT GARAGE.

CONTROLS THAT OVERRIDE TO ON SHALL NOT BE ALLOWED UNLESS THE OVERRIDE AUTOMATICALLY RETURNS THE AUTOMATIC CONTROL TO ITS NORMAL OPERATION WITHIN 6 HOURS. AN ENERGY MANAGEMENT CONTROL SYSTEM THAT PROVIDES THE SPECIFIED LIGHTING CONTROL FUNCTIONALITY AND COMPLIES WITH ALL REQUIREMENTS APPLICABLE TO THE SPECIFIED CONTROLS MAY BE USED TO MEET THESE REQUIREMENTS.2022 CEC 150(K)3

ELECTRICAL PLAN LEGEND





WWW.CECILIA123.COM CHIEF ENGINEER:LEI ZHENG (MASON) PHONE: (510)909-1933 EMAIL: ENGINEER.LEI@GMAIL.COM

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15300 Garcal Dr,San Jose, CA 95127

REV.	DESCRIPTION	DATE
0	APPLY FOR PERMITS	05-27-2024

Jurisdiction:

CF: COMPACT FLUORESCENT LAMP

XFMR: TRANSFORMER IN ATTIC



SHEET TITLE:

ELECTRICAL PLAN

SHEET NUMBER:

A.20

0 1'-4" 2'-8" 5'-SCALE: 3/8" = 1'-0"

RESIDENTIAL WATER METER AND SUPPLY LINE WORKSHEET

SUPPLY LINE SIZE: 1 IN THE FOLLOWING WATER CALCULATIONS ARE NECESSARY TO DETERMINE WATER METER AND SUPPLY LINE SIZE:

TOTAL PRESSURE		64 PSI
SUBTRACT 1/2 PSI PER FOOT OF ELEVATION DIFFERENCE BETWEEN METER AND HIGHEST FIXTURE	-	
IF PRESSURE IS OVER 80PSI, INSTALL PRESSURE REGULATOR AND USE 80% OF 80PSI OR 64 PSI	+	
AVAILABLE WATER PRESSURE (FIELD VERIFICATION)		64 PSI

2. TOTAL FIXTURE UNITS

SCALE: 3/8" = 1'-0"

WATER METER SIZE: 3/4 IN

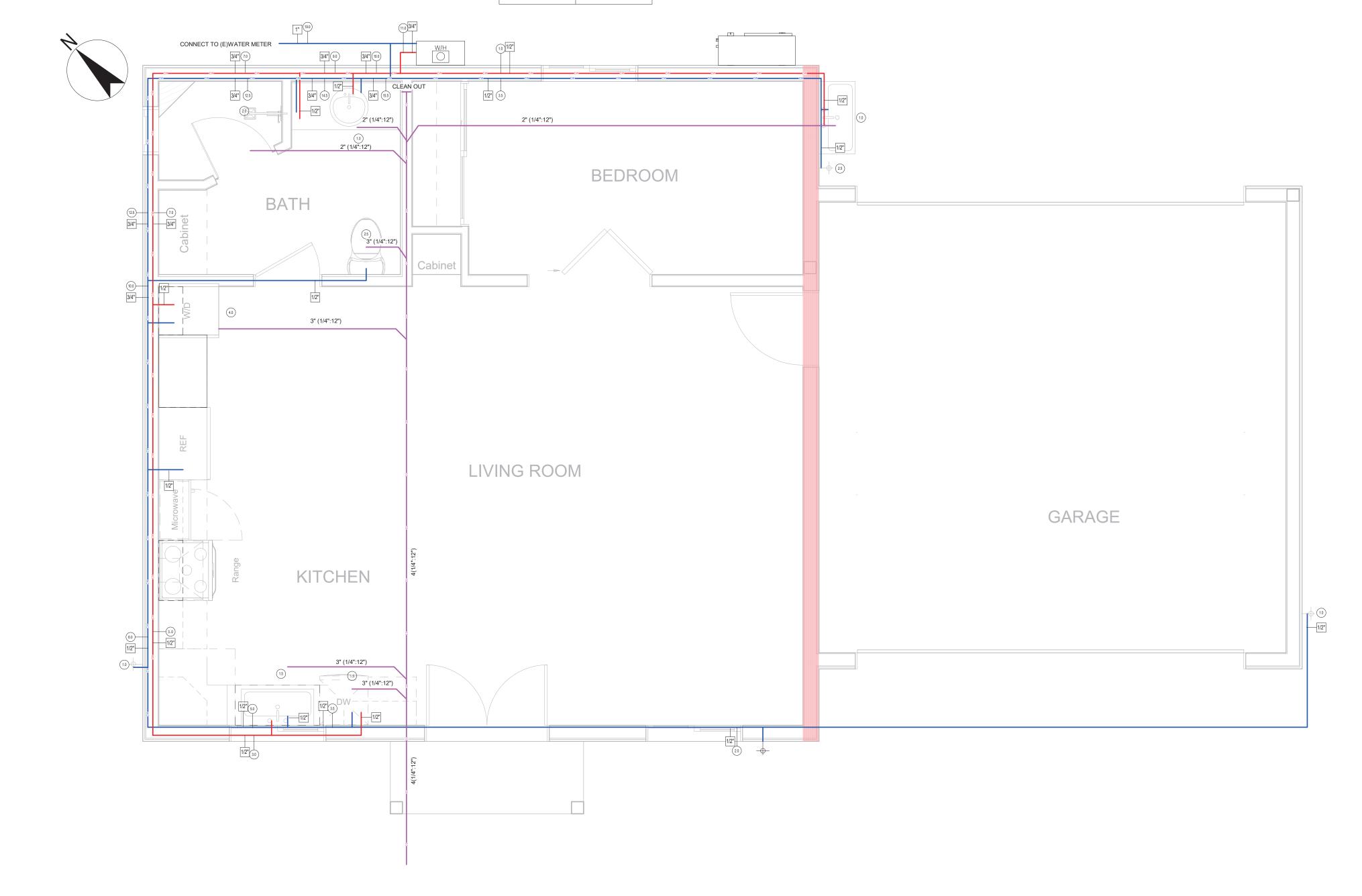
2. TOTAL FIXTURE UNITS			
FIXTURE	FIXTURE UNITS	NUMBER OF FIXTURES	TOTAL
BAR SINK	1.0		
BATHTUB OR COMBINATION OF BATHTUB/SHOWER	4.0		
BIDET	1.0		
CLOTHES WASHER	4.0	1	4.0
DISH WASHER	1.5	1	1.5
HOSE BIBB	2.5	1	2.5
HOSE BIBB (EACH ADDITIONAL)	1.0	3	3.0
KITCHEN SINK	1.5	1	1.5
LAUNDRY SINK	1.5		
LAVATORY	1.0	2	2.0
LAWN SPINKLER, EACH HEAD OR 12 F.U. TO BE USED	1.0		
SHOWER	2.0	1	2.0
WATER CLOSET	2.5	1	2.5
WHIRLPOOL BATH OR COMBINATION BATH/SHOWER	4.0		
FIRE SPRINKLER HEAD GPM OR 18 F.U. TO BE USED			
TOTAL FIXTURE UNITS		10	19

3. LENGTH OF SUPPLY PIPE FROM METER TO MOST REMOTE OUTLET: 120 FT PLEASE REFER TO THE 2019 CALIFORNIA PLUMBING CODE CHAPTER 6, FOR ADDITIONAL INFORMATION. PLEASE SEE ATTACHED.

METER AND	BUILDING						MAX	IMUM A	LLOWAI	BLE LEN	IGTH					
STREET SERVICE (inches)	AND BRANCHES (inches)	40	60	80	100	150	200	250	300	400	500	600	700	800	900	10
					PR	SSURE	RANGE	- 30 to	45 psi ¹							
3/4	1/22	6	5	4	3	2	1	1	1	0	0	0	0	0	0	Т
3/4	3/4	16	16	14	12	9	6	5	5	4	4	3	2	2	2	+
3/4	1	29	25	23	21	17	15	13	12	10	8	6	6	6	6	t
1	1	36	31	27	25	20	17	15	13	12	10	8	6	6	6	
3/4	11/4	36	33	31	28	24	23	21	19	17	16	13	12	12	-11	
1	11/4	54	47	42	38	32	28	25	23	19	17	14	12	12	-11	
11/2	11/4	78	68	57	48	38	32	28	25	21	18	15	12	12	11	
1	1½	85	84	79	65	56	48	43	38	32	28	26	22	21	20	
11/2	1½	150	124	105	91	70	57	49	45	36	31	26 27	23	21	20	1
1	11/2	151 85	129 85	129	110 85	80 85	64 85	53 82	46 80	38	32 61	57	52	49	46	1
11/2	2	220	205	190	176	155	138	127	120	104	85	70	61	57	54	
2	2	370	327	292	265	217	185	164	147	124	96	70	61	57	54	
2	21/2	445	418	390	370	330	300	280	265	240	220	198	175	158	143	i
					PR	SSURE	RANGE	- 46 to	60 psi ¹							
3/4	1/22	7	7	6	5	4	3	2	2	1	1	1	0	0	0	Т
3/4	3/4	20	20	19	17	14	- 11	9	8	6	5	4	4	3	3	
3/4	1	39	39	36	33	28	23	21	19	17	14	12	10	9	8	\top
1	1	39	39	39	36	30	25	23	20	18	15	12	10	9	8	
3/4	11/4	39	39	39	39	39	39	34	32	27	25	22	19	19	17	
1	11/4	78	78	76	67	52	44	39	36	30	27	24	20	19	17	1
1½	11/4	78	78	78	78	66	52	44	39	33	29	24	20	19	17	
1	1½	85	85	85	85	85	85	80	67	55	49	41	37	34	32	1
1½	11/2	151	151	151	151	128	105	90	78	62	52	42	38	35	32	3
2	1½	151 85	151 85	151 85	151 85	150 85	117 85	98 85	84 85	67 85	55 85	42 85	38 85	35 85	32 83	1 8
11/2	2	370	370	340	318	272	240	220	198	170	150	135	123	110	102	9
2	2	370	370	370	370	368	318	280	250	205	165	142	123	110	102	-
2	21/2	654	640	610	580	535	500	470	440	400	365	335	315	285	267	2
				010	PR	SSURE		- Over			0.00					
3/4	1/2	7	7	7	6	5	4	3	3	2	1	1	1	1	1	
3/4	3/4	20	20	20	20	17	13	11	10	8	7	6	6	5	4	
3/4	1	39	39	39	39	35	30	27	24	21	17	14	13	12	12	
1	1	39	39	39	39	38	32	29	26	22	18	14	13	12	12	
3/4	11/4	39	39	39	39	39	39	39	39	34	28	26	25	23	22	2
1	11/4	78	78	78	78	74	62	53	47	39	31	26	25	23	22	1
11/2	1¼	78	78	78	78	78	74	65	54	43	34	26	25	23	22	1
1	1½	85	85	85	85	85	85	85	85	81	64	51	48	46	43	4
11/2	1½	151	151	151	151	151	151	130	113	88	73	51	51	46	43	4
2	11/2	151	151	151	151	151	151	142	122	98	82	64	51	46	43	4
11/2	2 2	85 370	85 370	85 370	85 370	85 360	85 335	85 305	85 282	85 244	85 212	85 187	85 172	85 153	85	1
2	2	370	370	370	370	370	370	370	340	288	245	204	172	153	141	1
	21/2	654	654	654	654	654	650	610	570	510	460	430	404	380	356	3
2																

4. SUMARY OF DISTRIBUTION SYSTEM SIZE

SIZE	F.U
1/2"	5
3/4"	17
1"	35
1 1/4"	39
1 1/2"	85



PLUMBING NOTES

- PROVIDE A MIN. OF 3" DIAMETER SEWER/ DRAIN LINE WITH 2% MIN. SLOPE
- CONTROL VALVES FOR SHOWER & TUB- SHOWER SHALL BE OF THE PRESSURE BALANCE OF THERMOSATIC MIXING VALVE TYPE.
- PROVIDE ULTRA-LOW FLUSH WATER CLOSETS FOR ALL NEW CONSTRUCTION, EXISTING SHOWER HEADS AND TOILETS MUST BE ADAPTED FOR LOW WATER CONSUMPTION.
 - MAX. FLOW RATE STANDARD SET BY THE CALIFORNIA ENERGY COMISSION. WATER CLOSET SHOWER HEAD
 - : 1.28 GPM. : 1.80 GPM. : 1.50 GPM. : 1.80 GPM. LAUNDRY FAUCET SINK FAUCET
 - PLUMBING FIXTURES SHALL BE CONNECTED TO A SANITARY SEWER OR TO AN APPROVED PRIVATE SEWAGE DISPOSAL SYSTEM.(R306.3)
 - PLUMBING FIXTURES SHALL BE CONNECTED TO AN APPROVED WATER SUPPLY. KITCHEN SINKS, LAVATORIES, BATHTUBS, SHOWERS, BIDETS, LAUNDRY TUBS AND WASHING MACHINE OUTLETS SHALL BE PROVIDED WITH HOT AND COLD WATER. (R306.4)
 - ACCESS PANEL (12"X12") REQUIRED FOR TUB TRAP SLIP JOINT OR USE NON-SLIP (WELDED)
 - WATER HEATERS SHALL BE ANCHORED OR STRAPPED TO RESIST HORIZONTAL DISPLACEMENT DUE TO EARTHQUAKE MOTION. STRAPPING SHALL BE AT POINTS WITHIN THE UPPER ONE THIRD (1/3) AND LOWER ONE-THIRD (1/3) OF ITS VERTICAL DIMENSIONS. AT THE LOWER POINT, A MINIMUM DISTANCE OF FOUR(4) INCHES (102 MM) SHALL BE MAINTAINED ABOVE THE CONTROLS WITH THE STRAPPING.
 - NOTE: [HCD 1 & HCD 2] REFERENCE HEALTH AND SAFETY CODE SECTION 19211(A) WHICH ADDRESSES NEW, REPLACEMENT, AND EXISTING WATER HEATERS. NOTE: THE APPLICABLE SUBSECTION OF HEALTH AND SAFETY CODE SECTION 19211(A) WHICH ADDRESSES NEW, REPLACEMENT, AND EXISTING WATER HEATERS IS REPEATED HERE FOR CLARITY AND READS AS FOLLOWS:

SECTION 19211(A) NOTWITHSTANDING SECTION 19100, ALL NEW AND REPLACEMENT WATER HEATERS, AND ALL EXISTING RESIDENTIAL WATER HEATERS SHALL BE BRACED, ANCHORED, OR STRAPPED TO RESIST FALLING OR HORIZONTAL DISPLACEMENT DUE TO EARTHQUAKE MOTION. AT A MINIMUM, ANY WATER HEATER SHALL BE SECURED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE, OR MODIFICATIONS MADE THERETO BY A CITY, COUNTY, OR CITY AND COUNTY PURSUANT TO SECTION 17958.5.(507.2 CPC).

PLUMBING LEGEND

-CW-CW-CW--HW---HW---HW- COLD WATER SUPPLY HOT WATER SUPPLY

-SS---SS---SS-

SEWER LINE



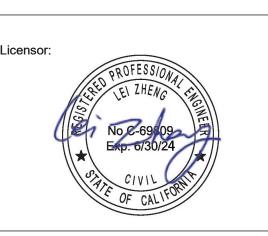
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	0	APPLY FOR PERMITS	05-27-2024

Jurisdiction:

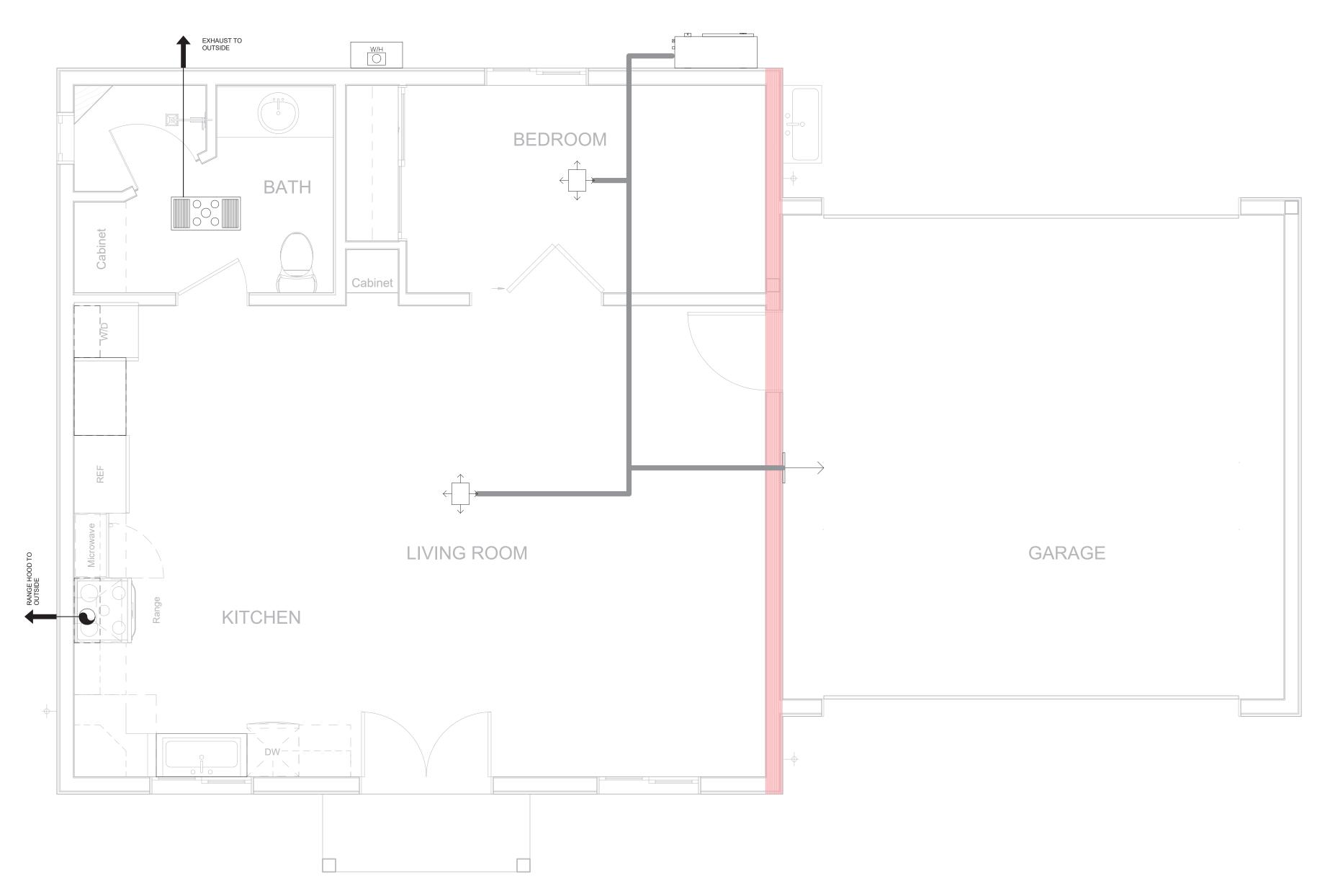


SHEET TITLE:

PLUMBING PLAN

SHEET NUMBER:





1ST MECHANICAL FLOOR PLAN 3/8" = 1'-0"

MECHANICAL NOTES

- 1. WHERE THE WINTER DESIGN TEMPERATURE IN TABLE R301.2 IS BELOW 60°F (16°C), EVERY DWELLING UNIT SHALL BE PROVIDED WITH HEATING FACILITIES CAPABLE OF MAINTAINING A ROOM TEMPERATURE OF NOT LESS THAN 68°F (20°C) AT A POINT 3 FEET (914 MM) ABOVE THE FLOOR AND 2 FEET (610 MM) FROM EXTERIOR WALLS IN HABITABLE ROOMS AT THE DESIGN TEMPERATURE. THE INSTALLATION OF ONE OR MORE PORTABLE SPACE HEATERS SHALL NOT BE USED TO ACHIEVE COMPLIANCE WITH THIS SECTION.(R303.10)
- 2. BATHROOMS, WATER CLOSET COMPARTMENTS AND SIMILAR ROOM SHALL BE PROVIDE WITH APPROVED MECHANICAL VENTILATION (R303.3) UNLESS FUNCTIONING AS A COMPONENT OF A WHOLE HOUSE VENTILATION SYSTEM, FANS MUST BE CONTROLLED BY A HUMIDISTAT WHICH SHALL BE ACCESSIBLE. HUMIDISTAT CONTROLS SHALL BE CAPABLE OF ADJUSTMENT BETWEEN A RELATIVE HUMIDITY RANGE OF 50 TO 80 PERCENT.
- 3. BATHROOMS, WATER CLOSET COMPARTMENTS AND OTHER SIMILAR ROOMS SHALL BE PROVIDED WITH AGGREGATE GLAZING AREA IN WINDOWS OF NOT LESS THAN 3 SQUARE FEET (0.3 M2), ONE-HALF OF WHICH SHALL BE OPENABLE.

EXCEPTION: THE GLAZED AREAS SHALL NOT BE REQUIRED WHERE ARTIFICIAL LIGHT AND A LOCAL EXHAUST SYSTEM ARE PROVIDED. THE MINIMUM LOCAL EXHAUST RATES SHALL BE 50 CUBIC FEET PER MINUTE (25 L/S) FOR INTERMITTENT VENTILATION OR 20 CUBIC FEET PER MINUTE (10 L/S) FOR CONTINUOUS VENTILATION IN ACCORDANCE WITH THE CALIFORNIA MECHANICAL CODE, CHAPTER 4. EXHAUST AIR FROM THE SPACE SHALL BE EXHAUSTED DIRECTLY TO THE OUTDOORS. (R303.3) BATH ROOM EXHAUSTS, DRYER EXHAUST, AND KITCHEN EXHAUST NEED TO TERMINATE AT A
MINIMUM OF 3 FEET IN VERTICAL DIRECTION FROM FRESH AIR INTAKE SUCH AS WINDOWS/ DOORS/
VENTILATION TO HOUSE.

- PLUMBING VENT TERMINATIONS NEED TO BE AT LEAST 10 FEET FROM FRESH AIR INTAKE OR VENTILATION.
- B-VENTS NEED TO TERMINATE AT LEAST 4 FEET FROM FRESH AIR INTAKE DORMERS, WINDOWS, DOORS.

MECHANICAL LEGEND

KITCHEN/ISLAND EXHAUST FAN MIN. 100 CFM SHALL BE DUCTED TO OUTSIDE THROUGH ROOF/EXTERIOR WALL

MINI SPLITS:

MINI SPLITS: CEILING CASSETTES

OUTDOOR UNIT

EXHAUST



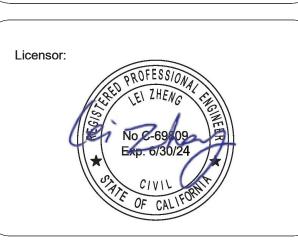
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EMAIL: ENGINEER.LEI@GMAIL.COM

5300

	REV.	DESCRIPTION	DATE
	0	APPLY FOR PERMITS	05-27-2024

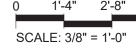
Jurisdiction:

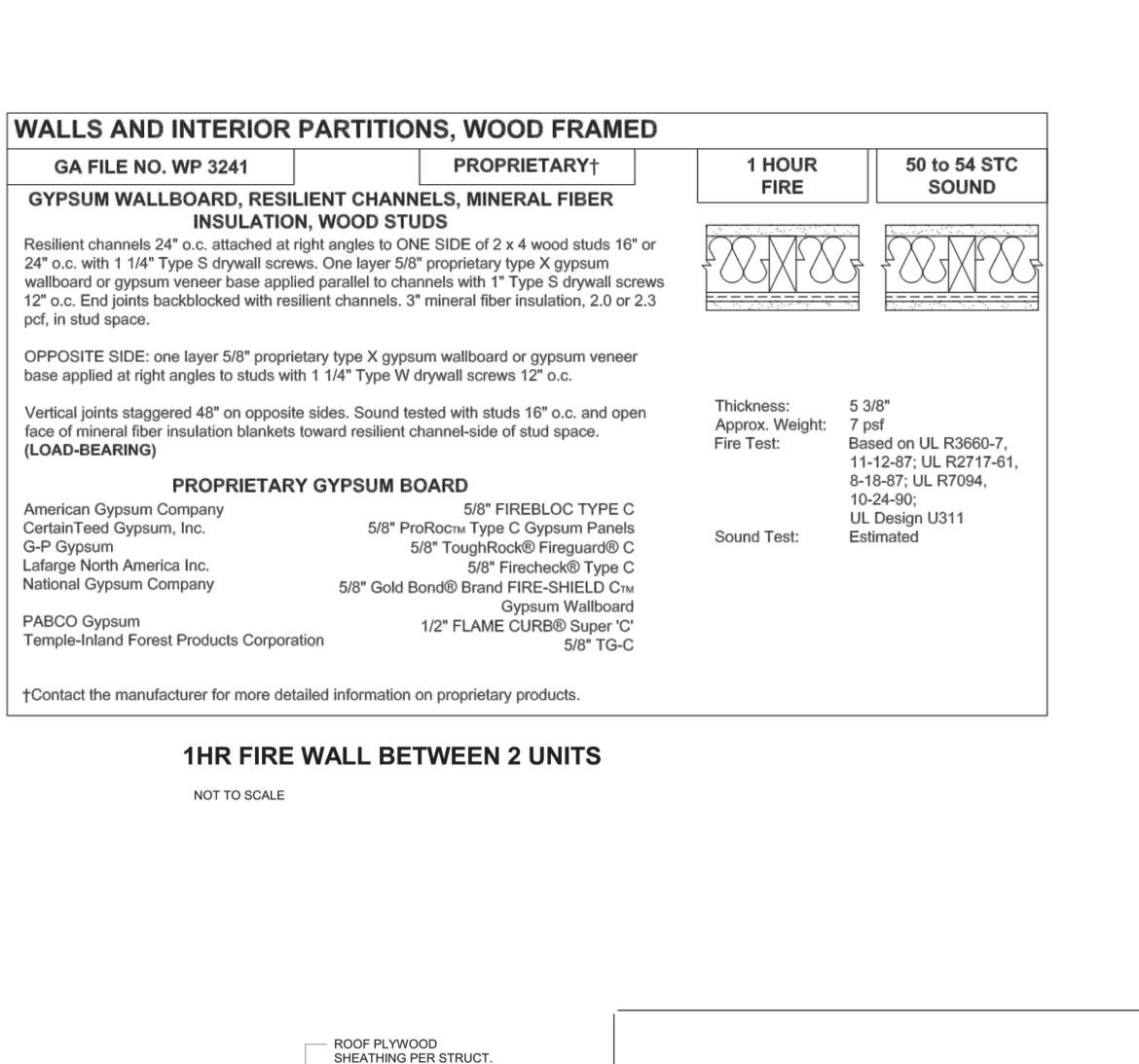


SHEET TITLE:

MECHANICAL PLAN

SHEET NUMBER:





1/2" GYP. CEILING -

1 LAYER OF 5/8" TYPE "X" GYPSUM BOARD

CHANNEL @24" O.C.

RESILIENT

1/2" GYP. CEILING TYP.

1 LAYER OF 5/8" TYPE

"X" GYPSUM BOARD

BATT INSULATION

CERAMIC TILE

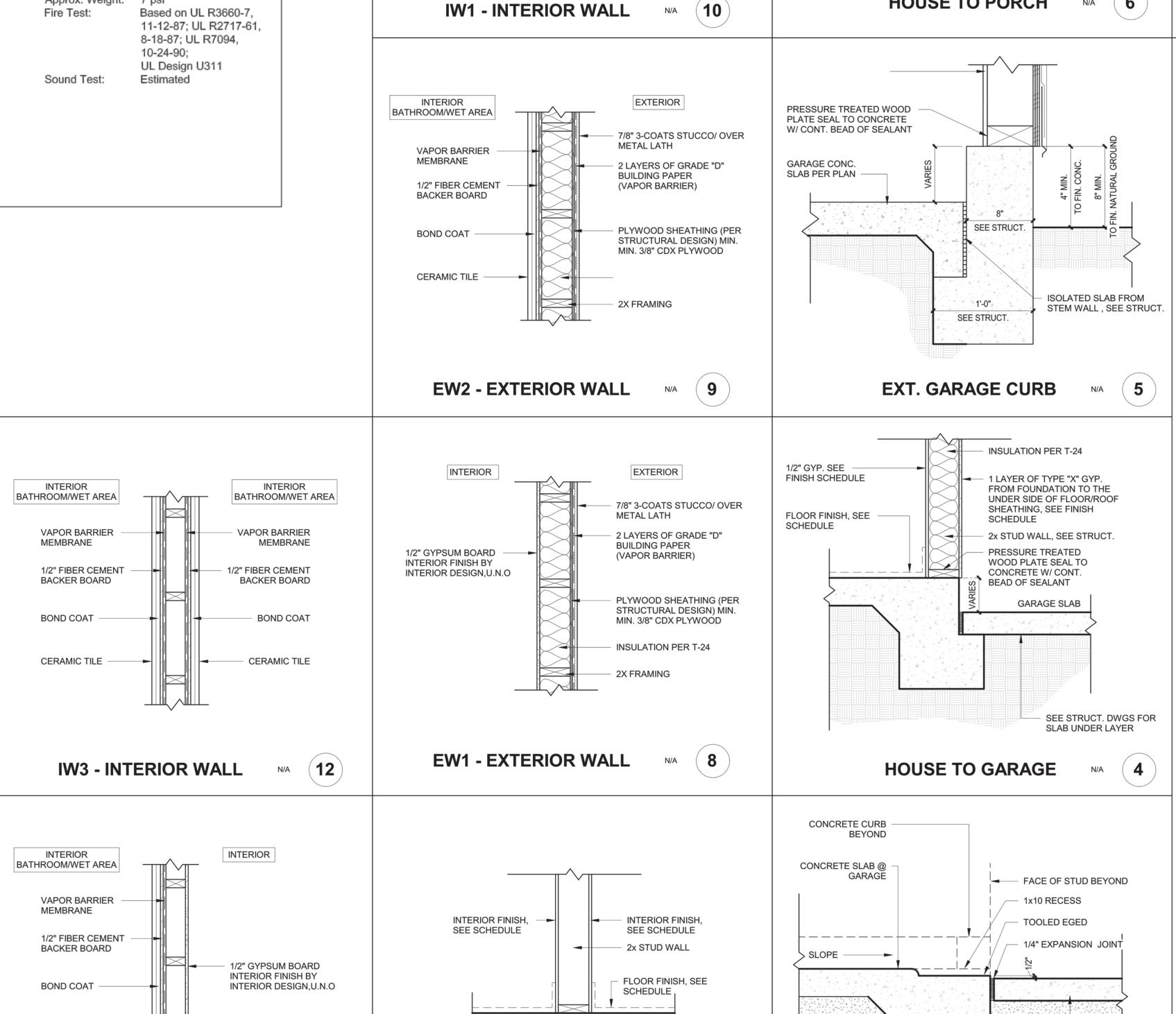
IW2 - INTERIOR WALL

2X FRAMING

FOUNDATION/SLAB PER

CONCRETE

STRUCT.



SLAB AND UNDER LAYER SEE STRUCT. DWGS

NON-BEARING WALL

INTERIOR

1/2" GYPSUM BOARD

INTERIOR FINISH BY

INTERIOR DESIGN,U.N.O

INTERIOR

FLOOR FINISH, SEE

SCHEDULE

- FACE OF STUD

ISOLATED SLAB FROM CONC. SEE STRUCT.

PORCH SLAB

HOUSE TO PORCH

SEE STRUCT. DWGS FOR

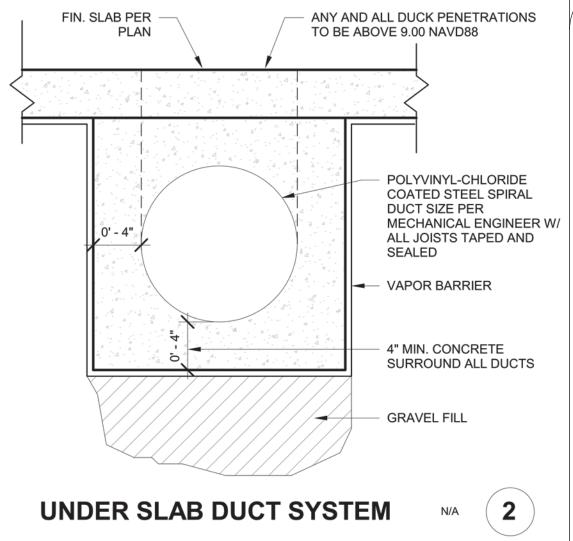
N/A

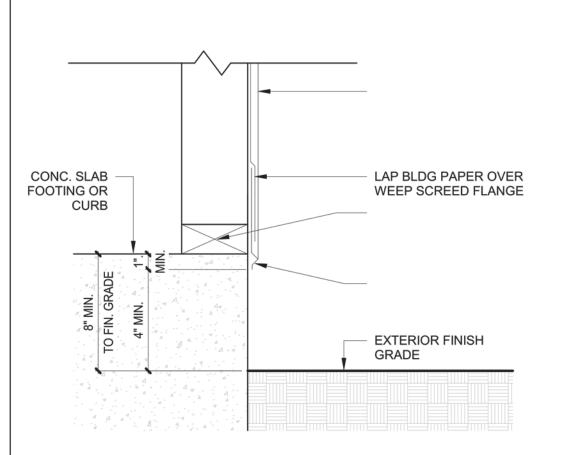
CONCRETE DRIVE OVER SAND

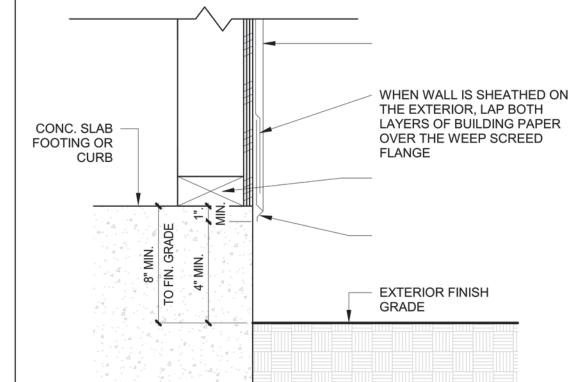
N/A (**3**

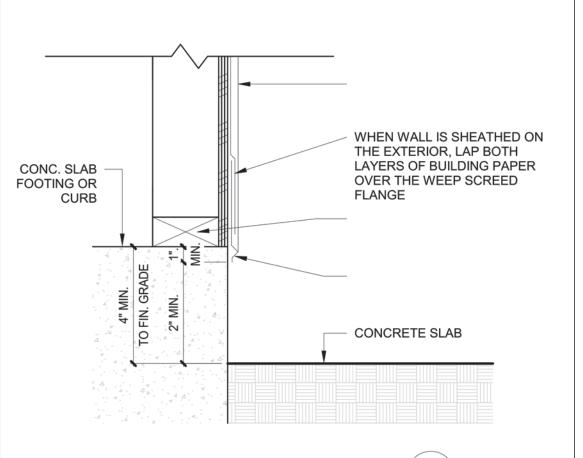
SLAB EDGE AT GARAGE

SLAB UNDER LAYER









WEEP SCREET



CHIEF ENGINEER:LEI ZHENG (MASON) PHONE: (510)909-1933 EMAIL: ENGINEER.LEI@GMAIL.COM

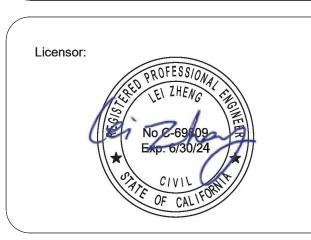
DURING CONSTRUCTION IF ANY DIFFICULTY OCCUR, PLEASE CONTACT ENGINEER IMMEDIATELY .IF CONTRACTOR DEVIATE FROM THE DRAWING WITHOUT PRIOR APPROVAL FROM ENGINEER, THE CONTRACTOR WILL TAKE ALL THE LIABILITY DUE TO DEVIATION.

arcal 300 2

0	APPLY FOR PERMITS	05-27-2024
luri	ediction:	
Juri	sdiction:	

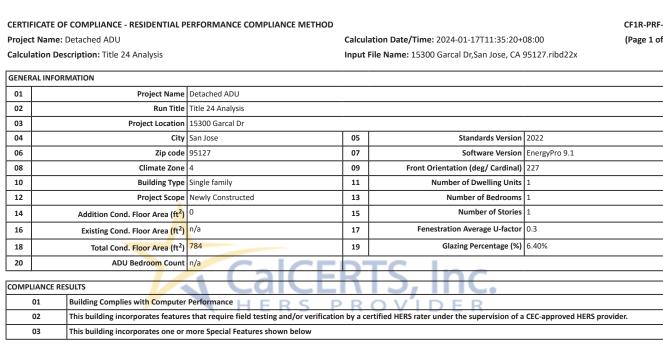
DESCRIPTION

DATE



SHEET TITLE: **ARCHITECTURAL DETAILS**

SHEET NUMBER: AD.10



CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01E Project Name: Detached ADU Calculation Date/Time: 2024-01-17T11:35:20+08:00 (Page 2 of 11) Calculation Description: Title 24 Analysis Input File Name: 15300 Garcal Dr, San Jose, CA 95127.ribd22x ENERGY DESIGN RATINGS **Energy Design Ratings** Compliance Margins (EDR1) (EDR1) (EDR2efficiency) (EDR2total) (EDR2efficiency) (EDR2total) **Proposed Design** 39.3 32.2 RESULT³: PASS

Calcento, IIIC.

HERS PROVIDER

³Building complies when source energy, efficiency and total compliance margins are greater than or equal to zero and unmet load hour limits are not exceeded

Calculation Description: Title 24 Analysis Input File Name: 15300 Garcal Dr, San Jose, CA 95127.ribd22x **ENERGY USE SUMMARY** Proposed Design Source Proposed Design TDV Energy Compliance Compliance Energy (EDR1) (kBtu/ft²-yr) (EDR2) (kTDV/ft²-yr) Margin (EDR1) Margin (EDR2) Standard Design Source Standard Design TDV Energy Energy (EDR1) (kBtu/ft²-yr) (EDR2) (kTDV/ft² -yr) Energy (EDR1) (kBtu/ft² -yr) Space Heating 16.61 2.12 3.69 Space Cooling 18.45 21.55 -0.12 -3.1 IAQ Ventilation 0.37 3.98 0.61 5.71 Water Heating 2.45 26.59 1.84 20.88 Jtilization/Flexibility Credit Efficiency Compliance 59.33 2.61 6.3 Photovoltaics -1.92 -64.74 -64.88 Battery PROV $= P^0$ Flexibility Indoor Lighting 10.23 10.23 1.04 Appl. & Cooking 6.22 41.89 6.23 42 Plug Loads 4.58 47.71 4.58 47.71 Outdoor Lighting 0.21 1.88 0.21 1.88 TOTAL COMPLIANCE 17.18 102.6 14.58 96.27

Calculation Date/Time: 2024-01-17T11:35:20+08:00

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01E Project Name: Detached ADU Calculation Date/Time: 2024-01-17T11:35:20+08:00 (Page 4 of 11) Calculation Description: Title 24 Analysis Input File Name: 15300 Garcal Dr,San Jose, CA 95127.ribd22x ENERGY USE INTENSITY Standard Design (kBtu/ft² - yr) Proposed Design (kBtu/ft² - yr) Compliance Margin (kBtu/ft² - yr) Margin Percentage Gross EUI¹ 23.73 13.57 11.93 8.71 3.22 26.99 Net EUI² 2. Net EUI is Energy Use Total (including PV) / Total Building Area. REQUIRED PV SYSTEMS Module Type Array Type Power Electronics CFI Azimuth (deg) Tilt (array Angle (deg) Tilt: (x in (12) Inverter Eff. (%) Solar Access (%) DC System Size (kWdc) Fixed none true 150-270 n/a n/a <=7:12 96 98 REQUIRED SPECIAL FEATURES The following are features that must be installed as condition for meeting the modeled energy performance for this computer analysis. Variable capacity heat pump compliance option (verification details from VCHP Staff report, Appendix B, and RA3) Northwest Energy Efficiency Alliance (NEEA) rated heat pump water heater; specific brand/model, or equivalent, must be installed

Registration Number: 224-P010006790A-000-000-0000000-0000 Registration Date/Time: 2024-01-16 19:39:31 CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Schema Version: rev 20220901

HERS Provider: CalCERTS inc. Report Generated: 2024-01-16 19:36:54

300

2

WWW.CECILIA123.COM

PHONE: (510)909-1933

CHIEF ENGINEER:LEI ZHENG (MASON)

DURING CONSTRUCTION IF ANY DIFFICULTY

CONTRACTOR WILL TAKE ALL THE LIABILITY

EMAIL: ENGINEER.LEI@GMAIL.COM

OCCUR, PLEASE CONTACT ENGINEER

FROM THE DRAWING WITHOUT PRIOR

APPROVAL FROM ENGINEER, THE

DUE TO DEVIATION.

IMMEDIATELY .IF CONTRACTOR DEVIATE

DATE DESCRIPTION 0 APPLY FOR PERMITS 05-27-2024

Jurisdiction:

Licensor:

SHEET TITLE:

SHEET NUMBER:

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01E Project Name: Detached ADU Calculation Date/Time: 2024-01-17T11:35:20+08:00 (Page 5 of 11) Calculation Description: Title 24 Analysis Input File Name: 15300 Garcal Dr, San Jose, CA 95127.ribd22x HERS FEATURE SUMMARY The following is a summary of the features that must be field-verified by a certified HERS Rater as a condition for meeting the modeled energy performance for this computer analysis. Additional detail is provided in the building tables below. Registered CF2Rs and CF3Rs are required to be completed in the HERS Registry Building air leakage/reduced infiltration Indoor air quality ventilation Kitchen range hood Verified EER/EER2

Verified Refrigerant Charge Airflow in habitable rooms (SC3.1.4.1.7) Verified HSPF Verified heat pump rated heating capacity Wall-mounted thermostat in zones greater than 150 ft2 (SC3.4.5) Ductless indoor units located entirely in conditioned space (SC3.1.4.1.8)

CA Building Energy Efficiency Standards - 2022 Residential Compliance

Verified SEER/SEER2

02 03 04 05 06

Conditioned Floor Area (ft²) Number of Dwelling Units Number of Bedrooms Number of Zones Cooling Systems Project Name 784 HEIRS PROVIDER ZONE INFORMATION Zone Name HVAC System Name Zone Floor Area (ft²) Avg. Ceiling Height Water Heating System 1 ADU Zone Conditioned Res HVAC1 784

Window and Door Tilt (deg) Name Zone Construction Azimuth Orientation Gross Area (ft²) Area (ft2) Front Wall ADU Zone R-19 Wall 317 Left Left Wall ADU Zone 252 Registration Number: 224-P010006790A-000-000-0000000-0000 Registration Date/Time: 2024-01-16 19:39:31 HERS Provider: CalCERTS inc.

Report Version: 2022.0.000

Report Generated: 2024-01-16 19:36:54

Registration Number: 224-P010006790A-000-000-0000000-0000 Registration Date/Time: 2024-01-16 19:39:31 HERS Provider: CalCERTS inc. CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Report Generated: 2024-01-16 19:36:54

Azimuth

n/a

n/a

47

 03
 04
 05
 06

 Type
 Roof Rise (x in 12)
 Roof Reflectance
 Roof Emittance

Input File Name: 15300 Garcal Dr,San Jose, CA 95127.ribd22x Calculation Description: Title 24 Analysis DPAQUE DOORS U-factor Area (ft²) Front Wall Entry Door GarageCarDoorFront 2 SLAB FLOORS Edge Insul. R-value Edge Insul. R-value Name Zone Area (ft²) Perimeter (ft) Carpeted Fraction Heated and Depth Covered Slab ADU Zone 784 80% GarageSlab __Garage__ 400 80 0% No **Total Cavity** Continuous U-factor R-value Construction Name Surface Type Construction Type Framing Assembly Layers Inside Finish: Gypsum Board Garage Ext Wall Exterior Walls 2x4 @ 16 in. O. C. None / None 0.361 Wood Framed Wall Cavity / Frame: no insul. / 2x4 Exterior Finish: 3 Coat Stucco Inside Finish: Gypsum Board R-19 Wall Exterior Walls 2x6 @ 16 in. O. C. R-19 None / None 0.074 Exterior Finish: 3 Coat Stucco Inside Finish: Gypsum Board R-15 Wall Interior Walls 2x4 @ 16 in. O. C. Other Side Finish: Gypsum Board

CF1R-PRF-01E Calculation Date/Time: 2024-01-17T11:35:20+08:00 (Page 7 of 11) ty / Frame: R-19 in 5-1/2 in. (R-18)

OPAQUE SURFACE CONSTRUCTIONS Registration Number: 224-P010006790A-000-000-0000000-0000 Registration Date/Time: 2024-01-16 19:39:31 HERS Provider: CalCERTS inc.

CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000

Calculation Description: Title 24 Analysis **Construction Name** Attic Garage Roof Cons Attic RoofADU Zone R-0 Roof Attic R-38 Attic

DHW Sys 1 Standard DHW Heater 1 Water (DHW)

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Ceiling

Wood Framed

Wood Framed

Ceiling

Ceiling

Surface Type

Attic Roofs

Attic Roofs

Ceilings (below

Ceilings (below

Project Name: Detached ADU

Registration Date/Time: 2024-01-16 19:39:31 Report Version: 2022.0.000

Calculation Date/Time: 2024-01-17T11:35:20+08:00

Total Cavity Interior / Exterior

R-value

Input File Name: 15300 Garcal Dr,San Jose, CA 95127.ribd22x

R-value

None / 0

None / 0

None / None

HERS Provider: CalCERTS inc. Report Generated: 2024-01-16 19:36:54

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Registration Number: 224-P010006790A-000-000-0000000-0000 Registration Date/Time: 2024-01-16 19:39:31 HERS Provider: CalCERTS inc. CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Report Generated: 2024-01-16 19:36:54

Schema Version: rev 20220901

Registration Number: 224-P010006790A-000-000-0000000-0000 Registration Date/Time: 2024-01-16 19:39:31 CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000 Schema Version: rev 20220901

¹Efficiency EDR includes improvements like a better building envelope and more efficient equipment

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Construction

R-19 Wall

R-19 Wall

R-15 Wall

R-38 Attic

__Garage ____ Garage Ext Wall

Garage Ext Wall

 Name
 Construction
 Type
 ROOF RISE (x III 22)
 ROOF RESERVATION
 ROOF RESERVATION

 Attic __Garage__
 Attic Garage Roof Cons
 Ventilated
 3
 0.1
 0.85

 Attic ADU Zone
 Attic RoofADU Zone
 Ventilated
 3
 0.1
 0.85

Surface Orientation Azimuth Width Height (ft) Mult. Area (ft²)

Zone

ADU Zone

ADU Zone

ADU Zone

__Garage_

__Garage__

__Garage__

Construction

Front Windows Window Front Wall Front 227

Back Windows Window Back Wall Back 47

Window Front Wall

Left Windows Window Left Wall Left

Project Name: Detached ADU

Name

Right Wall

Wall to Garage

R-38 Roof

GarageWallback

GarageWallRight

FENESTRATION / GLAZING

Front Windows

01 02

Name Type

Calculation Description: Title 24 Analysis

²Total EDR includes efficiency and demand resp<mark>onse</mark> measures such as photovoltaic (PV) system and batteries

PV System resized to 1.71 kWdc (a factor of 1.712) to achieve 'Standard Design PV' PV scaling

HERS Provider: CalCERTS inc. Report Generated: 2024-01-16 19:36:54

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Tilt (deg)

n/a

SHGC SHGC Source Exterior Shading

Bug Screen

NFRC

NFRC

Calculation Date/Time: 2024-01-17T11:35:20+08:00

Orientation

Right

n/a

Front

Back

Right

03 04 05 06 07 08 09 10 11 12 13

Input File Name: 15300 Garcal Dr,San Jose, CA 95127.ribd22x

Gross Area (ft²)

180

200

U-factor Source

16 0.3 NFRC 0.23 NFRC Bug Screen

1 12 0.3 NFRC 0.23 NFRC Bug Screen

Window and Door

Area (ft2)

5.68

Registration Number: 224-P010006790A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

Project Name: Detached ADU

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD

Registration Date/Time: 2024-01-16 19:39:31 Report Version: 2022.0.000 Schema Version: rev 20220901

HERS Provider: CalCERTS inc. Report Generated: 2024-01-16 19:36:54

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Detached ADU

Report Generated: 2024-01-16 19:36:54

CFM50 CFM50 Quality Insulation Installation (QII) High R-value Spray Foam Insulation Building Envelope Air Leakage Required 352.8 Required Not Required 3 01 05 06 Compact Distribution Solar Heating System Type Distribution Type Water Heater Name Number of Units HERS Verification System Name (#) n/a None DHW Heater 1 (1) n/a

Framing

2x4 @ 24 in. O. C.

Registration Number: 224-P010006790A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

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Roofing: Light Roof (Asphalt Shingle)

Roof Deck: Wood

Siding/sheathing/decking

Roofing: Light Roof (Asphalt Shingle)

Roof Deck: Wood

Siding/sheathing/decking Cavity / Frame: no insul. / 2x4

Cavity / Frame: no insul. / 2x4

Inside Finish: Gypsum Board

Over Ceiling Joists: R-28.9 insul.

Cavity / Frame: R-9.1 / 2x4

Inside Finish: Gypsum Board

Cavity / Frame: no insul. / 2x4

TITLE 24

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Detached ADU Calculation Description: Title 24 Analysis								Cald	Calculation Date/Time: 2024-01-17T11:35:20+08:00 Input File Name: 15300 Garcal Dr,San Jose, CA 95127.ribd22x							CF1R-PRF-01E (Page 9 of 11)
WATER HEATERS - N	EEA HE	AT PUMP														
01		02		03			04		05			06		07		08
Name		# of Units		Tank Vol.	(gal)		Heat Pun Brand	np N	NEEA Heat Pump Model		р 1	Tank Locat	ion Du	ct Inlet Air Sour	ce D	uct Outlet Air Source
DHW Heater 1		1		40			Rheem	Rhe	RheemXE40T10H22U		Garage	_	Garage		Garage	
WATER HEATING - H	ERS VE	RIFICATION				•					•					
01		02	2		03			04		05		06			07	
Name		Pipe Insi	ulation	ion Pa		arallel Piping		Compact Distribut		Compact Distribution Type		Recircul	ation Control	on Control Shower D		
DHW Sys 1 - 1/	1	Not Rec	quired		Not Required		Not Required		ed		None		Not	Not Required		Not Required
SPACE CONDITIONIN	IG SYS	TEMS						_								
01		02	0	3		04		05	$\Box \Box$	5	06	nc	07	08		09
Name	S	ystem Type	Heating l	Init Name	Heat	ing Equipm Count	ent Coo	oling Unit N	ame C		Equipmen	t Fa	ın Name	Name Distribution Nar		Required Thermostat Type
Res HVAC1	Heat pump Heat Pump System 1 Heat Pump System 1		at Pump Sy:			n/a	n/a n/a		Setback							
HVAC - HEAT PUMPS	5						,									
01		02	03		4	05	06	07	08	:	09	10	11	12		13
						Heatin	g				L Cooling					
Name	Sy	stem Type	Number of Units	Effic	iency pe	HSPF / HSPF2 /	Cap 47	Cap 17	Efficie Typ	•	SEER / SEER2	EER / EER /	Zonally Controlled	Compressor Type	١	HERS Verification

Registration Number: 224-P010006790A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

Registration Date/Time: 2024-01-16 19:39:31 HERS Provider: CalCERTS inc. Report Version: 2022.0.000 Report Generated: 2024-01-16 19:36:54 Schema Version: rev 20220901

CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD Project Name: Detached ADU Calculation Date/Time: 2024-01-17T11:35:20+08:00 Calculation Description: Title 24 Analysis Input File Name: 15300 Garcal Dr,San Jose, CA 95127.ribd22x

0.35

Reference Residential Appendix RA3.3. *

Ventilation and Indoor Air Quality:

§ 150.0(o)1B:

Exhaust

HVAC HEAT PUMPS - HERS VERIFICATION Verified Heating Cap 47 Verified Airflow Airflow Target Verified EER/EER2 Name SEER/SEER2 Charge HSPF/HSPF2 Cap 17 Heat Pump System Yes Not Required Required Required Yes Yes

Certified Low-Static VCHP System Rooms Ductless Units in Conditioned Space Wall Mount Thermostat Thermostat Drop Rating Ducts in Conditioned Space Space Space Space Space Wall Mount Thermostat Space Certified Indoor Fan not INDOOR AIR QUALITY (IAQ) FANS 04 05 06 07 IAQ Recovery Includes Fault Fan Efficacy Heat/Energy Recovery? Airflow (CFM) IAQ Fan Type HERS Verification Effectiveness - SRE | Indicator Display?

2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(m)13: be ≥ 350 CFM per ton of nominal cooling capacity, and an air-handling unit fan efficacy ≤ 0.45 watts per CFM for gas furnace air

Space Conditioning System Airflow Rate and Fan Efficacy. Space conditioning systems that use ducts to supply cooling must have

handlers and ≤ 0.58 watts per CFM for all others. Small duct high velocity systems must provide an airflow ≥ 250 CFM per ton of nominal

a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must

cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with

Requirements for Ventilation and Indoor Air Quality. All dwelling units must meet the requirements of ASHRAE Standard 62.2, Ventilation and Acceptable Indoor Air Quality in Residential Buildings subject to the amendments specified in § 150.0(o)1. * Central Fan Integrated (CFI) Ventilation Systems. Continuous operation of CFI air handlers is not allowed to provide the whole-

dwelling unit ventilation airflow required per §150.0(o)1C. A motorized damper(s) must be installed on the ventilation duct(s) that prevents all airflow through the space conditioning duct system when the damper(s) is closed and controlled per §150.0(o)1Biii&iv. CFI ventilation systems must have controls that track outdoor air ventilation run time, and either open or close the motorized damper(s) for

emonstrates a Variable Capacity Heat Pump

SFam IAQVentRpt

Registration Number: 224-P010006790A-000-000-0000000-0000 CA Building Energy Efficiency Standards - 2022 Residential Compliance

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CERTIFICATE OF COMPLIANCE - RESIDENTIAL PERFORMANCE COMPLIANCE METHOD CF1R-PRF-01E Project Name: Detached ADU Calculation Date/Time: 2024-01-17T11:35:20+08:00 (Page 11 of 11) Calculation Description: Title 24 Analysis Input File Name: 15300 Garcal Dr, San Jose, CA 95127.ribd22x DOCUMENTATION AUTHOR'S DECLARATION STATEMENT I certify that this Certificate of Compliance documentation is accurate and complet Lei Zheng Lei Zheng 2024-01-16 19:39:31 Cecilia Home A/ HERS Certification Identification (If applicable 1816 enclave pl Lei Zheng concord, CA 94519 510-909-1933 RESPONSIBLE PERSON'S DECLARATION STATEMENT rtify the following under penalty of perjury, under the laws of the State of California: I am eligible under Division 3 of the Busin<mark>es</mark>s and Professions Code to accept responsibility for the building design identified on this Certificate of Complian I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulation chis building permit application.

Responsible Designer Signature:

Lei Zheng Lei Zheng Date Signed: 2024-01-16 19:39:31 Cecilia Home 1816 enclave pl C-69809 concord, CA 94519 510-909-1933

Digitally signed by CalCERTS. 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: 224-P010006790A-000-000-0000000-0000 Registration Date/Time: 2024-01-16 19:39:31 CA Building Energy Efficiency Standards - 2022 Residential Compliance Report Version: 2022.0.000

at CalCERTS.com HERS Provider: CalCERTS inc. Report Generated: 2024-01-16 19:36:54

Easy to Verify

5/6/22

2022 Single-Family Residential Mandatory Requirements Summary

§ 110.5:	Pilot Lights. Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces; household cooking appliances (except appliances without an electrical supply voltage connection with pilot lights that consume less than 150 Btu per hour); and pool and
	spa heaters. *
§ 150.0(h)1:	Building Cooling and Heating Loads. Heating and/or cooling loads are calculated in accordance with the ASHRAE Handbook, Equipment Volume, Applications Volume, and Fundamentals Volume; the SMACNA Residential Comfort System Installation Standards Manual; or the ACCA Manual J using design conditions specified in § 150.0(h)2.
§ 150.0(h)3A:	Clearances. Air conditioner and heat pump outdoor condensing units must have a clearance of at least five feet from the outlet of any dryer.
§ 150.0(h)3B:	Liquid Line Drier. Air conditioners and heat pump systems must be equipped with liquid line filter driers if required, as specified by the manufacturer's instructions.
§ 150.0(j)1:	Water Piping, Solar Water-heating System Piping, and Space Conditioning System Line Insulation. All domestic hot water piping must be insulated as specified in § 609.11 of the California Plumbing Code. *
§ 150.0(j)2:	Insulation Protection. Piping insulation must be protected from damage, including that due to sunlight, moisture, equipment' maintenance, and wind as required by §120.3(b). Insulation exposed to weather must be water retardant and protected from UV light (no adhesive tapes). Insulation covering chilled water piping and refrigerant suction piping located outside the conditioned space must include, or be protected by, a Class I or Class II vapor retarder. Pipe insulation buried below grade must be installed in a waterproof and non-crushable casing or sleeve.
§ 150.0(n)1:	Gas or Propane Water Heating Systems. Systems using gas or propane water heaters to serve individual dwelling units must designate a space at least 2.5' x 2.5' x 7' suitable for the future installation of a heat pump water heater, and meet electrical and plumbing requirements, based on the distance between this designated space and the water heater location; and a condensate drain no more than 2" higher than the base of the water heater
§ 150.0(n)3:	Solar Water-heating Systems. Solar water-heating systems and collectors must be certified and rated by the Solar Rating and Certification Corporation (SRCC), the International Association of Plumbing and Mechanical Officials, Research and Testing (IAPMO R&T), or by a listing agency that is approved by the executive director.

ucts and Fans:	
§ 110.8(d)3:	Ducts. Insulation installed on an existing space-conditioning duct must comply with § 604.0 of the California Mechanical Code (CMC). If a contractor installs the insulation, the contractor must certify to the customer, in writing, that the insulation meets this requirement.
§ 150.0(m)1:	CMC Compliance. All air-distribution system ducts and plenums must meet CMC §§ 601.0-605.0 and ANSI/SMACNA-006-2006 HVAC Duct Construction Standards Metal and Flexible 3rd Edition. Portions of supply-air and return-air ducts and plenums must be insulated to R-6.0 or higher; ducts located entirely in conditioned space as confirmed through field verification and diagnostic testing (RA3.1.4.3.8) do not require insulation. Connections of metal ducts and inner core of flexible ducts must be mechanically fastened. Openings must be sealed with mastic, tape, or other duct-closure system that meets the applicable UL requirements, or aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than 1/4", If mastic or tape is used. Building cavities, air handler support platforms, and plenums designed or constructed with materials other than sealed sheet metal, duct board or flexible duct must not be used to convey conditioned air. Building cavities and support platforms may contain ducts; ducts installed in
	these spaces must not be compressed.*
§ 150.0(m)2:	Factory-Fabricated Duct Systems. Factory-fabricated duct systems must comply with applicable requirements for duct construction, connections, and closures; joints and seams of duct systems and their components must not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.
§ 150.0(m)3:	Field-Fabricated Duct Systems. Field-fabricated duct systems must comply with applicable requirements for: pressure-sensitive tapes, mastics, sealants, and other requirements specified for duct construction.
§ 150.0(m)7:	Backdraft Damper. Fan systems that exchange air between the conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8:	Gravity Ventilation Dampers. Gravity ventilating systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings to the outside, except combustion inlet and outlet air openings and elevator shaft vents.
§ 150.0(m)9:	Protection of Insulation. Insulation must be protected from damage due tosunlight, moisture, equipment maintenance, and wind. Insulation exposed to weather must be suitable for outdoor service (e.g., protected by aluminum, sheet metal, painted canvas, or plastic cover). Cellular foam insulation must be protected as above or painted with a water retardant and solar radiation-resistant coating.
§ 150.0(m)10:	Porous Inner Core Flex Duct. Porous inner cores of flex ducts must have a non-porous layer or air barrier between the inner core and

§ 150.0(m)11: occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in

§ 150.0(m)12: or equivalent filters. Filters for space conditioning systems must have a two inch depth or can be one inch if sized per Equation 150.0-A.

accordance with Reference Residential Appendix RA3.1.

Duct System Sealing and Leakage Test. When space conditioning systems use forced air duct systems to supply conditioned air to an

Air Filtration. Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13

Clean-filter pressure drop and labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter

racks or grilles must use gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the

Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses . Single-family detached dwelling units, § 150.0(o)1C: and attached dwelling units not sharing ceilings or floors with other dwelling units, occupiable spaces, public garages, or commercial spaces must have mechanical ventilation airflow specified in § 150.0(o)1Ci-iii. Local Mechanical Exhaust. Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demandcontrolled exhaust system meeting requirements of §150.0(o)1Giii,enclosed kitchens and bathrooms can use demand-controlled or continuous exhaust meeting §150.0(o)1Giii-iv. Airflow must be measured by the installer per §150.0(o)1Gv, and rated for sound per § 150.0(o)1H&l: Airflow Measurement and Sound Ratings of Whole-Dwelling Unit Ventilation Systems. The airflow required per § 150.0(o)1C must be measured by using a flow hood, flow grid, or other airflow measuring device at the fan's inlet or outlet terminals/grilles per Reference Residential Appendix RA3.7. Whole-Dwelling unit ventilation systems must be rated for sound per ASHRAE 62.2 §7.2 at no less than the minimum airflow rate required by §150.0(o)1C. Field Verification and Diagnostic Testing. Whole-Dwelling Unit ventilation airflow, vented range hood airflow and sound rating, and HRV and ERV fan efficacy must be verified in accordance with Reference Residential Appendix RA3.7. Vented range hoods must be verified per Reference Residential Appendix RA3.7.4.3 to confirm if it is rated by HVI or AHAM to comply with the airflow rates and sound requirements per §150.0(o)1G Pool and Spa Systems and Equipment: Certification by Manufacturers. Any pool or spa heating system or equipment must be certified to have all of the following: compliance with the Appliance Efficiency Regulations and listing in MAEDbS; an on-off switch mounted outside of the heater that allows shutting off the heater without adjusting the thermostat setting; a permanent weatherproof plate or card with operating instructions; and must not use electric resistance heating. * **Piping.** Any pool or spa heating system or equipment must be installed with at least 36 inches of pipe between the filter and the heater, or dedicated suction and return lines, or built-in or built-up connections to allow for future solar heating. Covers. Outdoor pools or spas that have a heat pump or gas heater must have a cover. Directional Inlets and Time Switches for Pools. Pools must have directional inlets that adequately mix the pool water, and a time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods. Pilot Light. Natural gas pool and spa heaters must not have a continuously burning pilot light. Pool Systems and Equipment Installation. Residential pool systems or equipment must meet the specified requirements for pump sizing, flow rate, piping, filters, and valves. * Lighting Controls and Components. All lighting control devices and systems, ballasts, and luminaires must meet the applicable § 110.9: Luminaire Efficacy. All installed luminaires must meet the requirements in Table 150.0-A, except lighting integral to exhaust fans, kitchen range hoods, bath vanity mirrors, and garage door openers; navigation lighting less than 5 watts; and lighting internal to drawers, cabinets, and linen closets with an efficacy of at least 45 lumens per watt. 150.0(k)1B: Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. * Recessed Downlight Luminaires in Ceilings. Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, § 150.0(k)1C: and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met. Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.

Blank Electrical Boxes. The number of electrical boxes that are more than five feet above the finished floor and do not contain a § 150.0(k)1E: luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor Lighting Integral to Exhaust Fans. Lighting integral to exhaust fans (except when installed by the manufacturer in kitchen exhaust hoods) must meet the applicable requirements of § 150.0(k).



2022 Single-Family Residential Mandatory Requirements Summary

ENERGY COMMISSION	
§ 150.0(k)1G:	Screw based luminaires. Screw based luminaires must contain lamps that comply with Reference Joint Appendix JA8. *
§ 150.0(k)1H:	Light Sources in Enclosed or Recessed Luminaires. Lamps and other separable light sources that are not compliant with the JA8 elevated temperature requirements, including marking requirements, must not be installed in enclosed or recessed luminaires.
§ 150.0(k)1I:	Light Sources in Drawers, Cabinets, and Linen Closets. Light sources internal to drawers, cabinetry or linen closets are not required to comply with Table 150.0-A or be controlled by vacancy sensors provided that they are rated to consume no more than 5 watts of power, emit no more than 150 lumens, and are equipped with controls that automatically turn the lighting off when the drawer, cabinet or linen closet is closed.
§ 150.0(k)2A:	Interior Switches and Controls. All forward phase cut dimmers used with LED light sources must comply with NEMA SSL 7A.
§ 150.0(k)2B:	Interior Switches and Controls. Exhaust fans must be controlled separately from lighting systems. *
§ 150.0(k)2A:	Accessible Controls. Lighting must have readily accessible wall-mounted controls that allow the lighting to be manually turned on and off. *
§ 150.0(k)2B:	Multiple Controls. Controls must not bypass a dimmer, occupant sensor, or vacancy sensor function if the dimmer or sensor is installed to comply with § 150.0(k).
§ 150.0(k)2C:	Mandatory Requirements. Lighting controls must comply with the applicable requirements of § 110.9.
§ 150.0(k)2D:	Energy Management Control Systems. An energy management control system (EMCS) may be used to comply with dimming, occupancy, and control requirements if it provides the functionality of the specified control per § 110.9 and the physical controls specified in § 150.0(k)2A.
§ 150.0(k)2E:	Automatic Shutoff Controls. In bathrooms, garages, laundry rooms, utility rooms and walk-in closets, at least one installed luminaire must be controlled by an occupancy or vacancy sensor providing automatic-off functionality. Lighting inside drawers and cabinets with opaque fronts or doors must have controls that turn the light off when the drawer or door is closed.
§ 150.0(k)2F:	Dimmers. Lighting in habitable spaces (e.g., living rooms, dining rooms, kitchens, and bedrooms) must have readily accessible wall-mounted dimming controls that allow the lighting to be manually adjusted up and down. Forward phase cut dimmers controlling LED light sources in these spaces must comply with NEMA SSL 7A.
§ 150.0(k)2K:	Independent controls. Integrated lighting of exhaust fans shall be controlled independently from the fans. Lighting under cabinets or shelves, lighting in display cabinets, and switched outlets must be controlled separately from ceiling-installed lighting.
§ 150.0(k)3A:	Residential Outdoor Lighting. For single-family residential buildings, outdoor lighting permanently mounted to a residential building, or to other buildings on the same lot, must have a manual on/off switch and either a photocell and motion sensor or automatic time switch control) or an astronomical time clock. An energy management control system that provides the specified control functionality and meets a applicable requirements may be used to meet these requirements.
§ 150.0(k)4:	Internally illuminated address signs. Internally illuminated address signs must either comply with § 140.8 or consume no more than 5 watts of power.
§ 150.0(k)5:	Residential Garages for Eight or More Vehicles. Lighting for residential parking garages for eight or more vehicles must comply with the applicable requirements for nonresidential garages in §§ 110.9, 130.0, 130.1, 130.4, 140.6, and 141.0.
olar Readiness	
§ 110.10(a)1:	Single-family Residences. Single-family residences located in subdivisions with 10 or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete and approved by the enforcement agency, which do not have a photovoltaic system installed, must comply with the requirements of § 110.10(b)-(e).
§110.10(b)1A:	Minimum Solar Zone Area. The solar zone must have a minimum total area as described below. The solar zone must comply with access, pathway, smoke ventilation, and spacing requirements as specified in Title 24, Part 9 or other parts of Title 24 or in any requirements adopted by a local jurisdiction. The solar zone total area must be comprised of areas that have no dimension less than 5 feet and are no less than 80 square feet each for buildings with roof areas less than or equal to 10,000 square feet or no less than 160 square feet each for buildings with roof areas greater than 10,000 square feet. For single-family residences, the solar zone must be located on the roof or overhang of the building and have a total area no less than 250 square feet.
§ 110.10(b)2:	Azimuth. All sections of the solar zone located on steep-sloped roofs must have an azimuth between 90-300° of true north.
§ 110.10(b)3A:	Shading. The solar zone must not contain any obstructions, including but not limited to: vents, chimneys, architectural features, and roof mounted equipment.
§ 110.10(b)3B:	Shading. Any obstruction located on the roof or any other part of the building that projects above a solar zone must be located at least twice the horizontal distance of the height difference between the highest point of the obstruction and the horizontal projection of the nearest point of the solar zone, measured in the vertical plane.*
§ 110.10(b)4:	Structural Design Loads on Construction Documents. For areas of the roof designated as a solar zone, the structural design loads for roof dead load and roof live load must be clearly indicated on the construction documents.
§ 110.10(c):	Interconnection Pathways. The construction documents must indicate: a location reserved for inverters and metering equipment and a pathway reserved for routing of conduit from the solar zone to the point of interconnection with the electrical service; and for single-family residences and central water-heating systems, a pathway reserved for routing plumbing from the solar zone to the water-heating system.
§ 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.

Electric and Energy Storage Ready:



2022 Single-Family Residential Mandatory Requirements Summary

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

(04/2022)	e respective section for more information.
uilding Envelo	pe:
§ 110.6(a)1:	Air Leakage. Manufactured fenestration, exterior doors, and exterior pet doors must limit air leakage to 0.3 CFM per square foot or less when tested per NFRC-400, ASTM E283, or AAMA/WDMA/CSA 101/I.S.2/A440-2011. *
§ 110.6(a)5:	Labeling. Fenestration products and exterior doors must have a label meeting the requirements of § 10-111(a).
§ 110.6(b):	Field fabricated exterior doors and fenestration products must use U-factors and solar heat gain coefficient (SHGC) values from Tables 110.6-A, 110.6-B, or JA4.5 for exterior doors. They must be caulked and/or weather-stripped.*
§ 110.7:	Air Leakage. All joints, penetrations, and other openings in the building envelope that are potential sources of air leakage must be caulked, gasketed, or weather stripped.
§ 110.8(a):	Insulation Certification by Manufacturers. Insulation must be certified by the Department of Consumer Affairs, Bureau of Household Goods and Services (BHGS).
§ 110.8(g):	Insulation Requirements for Heated Slab Floors. Heated slab floors must be insulated per the requirements of § 110.8(g).
§ 110.8(i):	Roofing Products Solar Reflectance and Thermal Emittance. The thermal emittance and aged solar reflectance values of the roofing material must meet the requirements of § 110.8(i) and be labeled per §10-113 when the installation of a cool roof is specified on the CF1R.
§ 110.8(j):	Radiant Barrier. When required, radiant barriers must have an emittance of 0.05 or less and be certified to the Department of Consumer Affairs.
§ 150.0(a):	Roof Deck, Ceiling and Rafter Roof Insulation. Roof decks in newly constructed attics in climate zones 4 and 8-16 area-weighted average U-factor not exceeding U-0.184. Ceiling and rafter roofs minimum R-22 insulation in wood-frame ceiling; or area-weighted average U-factor must not exceed 0.043. Rafter roof alterations minimum R-19 or area-weighted average U-factor of 0.054 or less. Attic access doors must have permanently attached insulation using adhesive or mechanical fasteners. The attic access must be gasketed to prevent air leakage. Insulation must be installed in direct contact with a roof or ceiling which is sealed to limit infiltration and exfiltration as specified in § 110.7, including but not limited to placing insulation either above or below the roof deck or on top of a drywall ceiling.*
§ 150.0(b):	Loose-fill Insulation. Loose fill insulation must meet the manufacturer's required density for the labeled R-value.
§ 150.0(c):	Wall Insulation. Minimum R-13 insulation in 2x4 inch wood framing wall or have a U-factor of 0.102 or less, or R-20 in 2x6 inch wood framing or have a U-factor of 0.071 or less. Opaque non-framed assemblies must have an overall assembly U-factor not exceeding 0.102. Masonry walls must meet Tables 150.1-A or B. *
§ 150.0(d):	•
§ 150.0(d).	Raised-floor Insulation. Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor. * Slab Edge Insulation. Slab edge insulation must meet all of the following: have a water absorption rate, for the insulation material alone without facings, no greater than 0.3 percent; have a water vapor permeance no greater than 2.0 perm per inch; be protected from

Vapor Retarder. In climate zones 1 through 16, the earth floor of unvented crawl space must be covered with a Class I or Class II vapor retarder. This requirement also applies to controlled ventilation crawl space for buildings complying with the exception to Vapor Retarder. In climate zones 14 and 16, a Class I or Class II vapor retarder must be installed on the conditioned space side of all insulation in all exterior walls, vented attics, and unvented attics with air-permeable insulation. Fenestration Products. Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must hav a maximum U-factor of 0.45; or area-weighted average U-factor of all fenestration must not exceed 0.45. * Fireplaces, Decorative Gas Appliances, and Gas Log: Pilot Light. Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces. Closable Doors. Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox. Combustion Intake. Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in

physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).

Flue Damper. Masonry or factory-built fireplaces must have a flue damper with a readily accessible control. * Space Conditioning, Water Heating, and Plumbing System: Certification. Heating, ventilation, and air conditioning (HVAC) equipment, water heaters, showerheads, faucets, and all other regulated appliances must be certified by the manufacturer to the California Energy Commission. HVAC Efficiency. Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N. Controls for Heat Pumps with Supplementary Electric Resistance Heaters. Heat pumps with supplementary electric resistance heaters must have controls that prevent supplementary heater operation when the heating load can be met by the heat pump alone; and in which the cut-on temperature for compression heating is higher than the cut-on temperature for supplementary heating, and the cut-off temperature for compression heating is higher than the cut-off temperature for supplementary heating. *

area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.

Thermostats. All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a § 110.2(c): Insulation. Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank

Isolation Valves. Instantaneous water heaters with an input rating greater than 6.8 kBtu per hour (2 kW) must have isolation valves with hose bibbs or other fittings on both cold and hot water lines to allow for flushing the water heater when the valves are closed.

5/6/22



2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(s)	Energy Storage System (ESS) Ready. All single-family residences must meet all of the following: Either ESS-ready interconnection equipment with backed up capacity of 60 amps or more and four or more ESS supplied branch circuits, <u>or</u> a dedicated raceway from the main service to a subpanel that supplies the branch circuits in § 150.0(s); at least four branch circuits must be identified and have their source collocated at a single panelboard suitable to be supplied by the ESS, with one circuit supplying the refrigerator, one lighting circuit near the primary exit, and one circuit supplying a sleeping room receptacle outlet; main panelboard must have a minimum busbar rating of 225 amps; sufficient space must be reserved to allow future installation of a system isolation equipment/transfer switch within 3' of the main panelboard, with raceways installed between the panelboard and the switch location to allow the connection of backup power source.
§ 150.0(t)	Heat Pump Space Heater Ready. Systems using gas or propane furnaces to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the furnace with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
§ 150.0(u)	Electric Cooktop Ready. Systems using gas or propane cooktop to serve individual dwelling units must include: A dedicated unobstructed 240V branch circuit wiring installed within 3' of the cooktop with circuit conductors rated at least 50 amps with the blank cover identified as "240V ready;" and a reserved main electrical service panel space to allow for the installation of a double pole circuit breaker permanently marked as "For Future 240V use."
C 4EO O(-)	Electric Clothes Dryer Ready. Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A

circuit breaker permanently marked as "For Future 240V use."

dedicated unobstructed 240V branch circuit wiring installed within 3' of the dryer location with circuit conductors rated at least 30 amps with the blank cover identified as "240V ready," and a reserved main electrical service panel space to allow for the installation of a double pole

*Exceptions may apply.

5/6/22



CHIEF ENGINEER:LEI ZHENG (MASON)

DURING CONSTRUCTION IF ANY DIFFICULTY

CONTRACTOR WILL TAKE ALL THE LIABILITY

EMAIL: ENGINEER.LEI@GMAIL.COM

OCCUR, PLEASE CONTACT ENGINEER

FROM THE DRAWING WITHOUT PRIOR

APPROVAL FROM ENGINEER, THE

DUE TO DEVIATION.

2

IMMEDIATELY .IF CONTRACTOR DEVIATE

PHONE: (510)909-1933

DATE DESCRIPTION 0 APPLY FOR PERMITS 05-27-2024

Jurisdiction:

Licensor:

SHEET TITLE:

TITLE 24

SHEET NUMBER:

5/6/22

5/6/22

Main Electrical Service Panel. The main electrical service panel must have a reserved space to allow for the installation of a double pole

§ 110.10(e)1: Main Electrical Service Panel. The main electrical service panel must have a minimum busbar rating of 200 amps.

§ 110.10(e)2: Wall Electrical Service Faller. The main electrical

A. GENERAL	
Building code	2022 CBC
Risk category	II
B. SOIL PARAMETERS	
Soil enginieer	Phillip Penrose
Report number	301664-006
Date	7/27/2023
Allowable soil bearing pressure	2500 PSF
Allowable passive pressure	250 PCF
C. WIND DESIGN PARAMETERS	
Exposure category	С
Design speed	92 MPH
D. SEISMIC DESIGN PARAMETERS	
Seismic design category	E
Seismic importance factor, I _e	1
Site class	D-Default
Short period spectral acceleration, S_S	2.57
1st period spectral acceleration, S ₁	0.93
Short period acceleration parameter, S_{DS}	1.8
1 second acceleration parameter, S_{D1}	1.36
Response modification factor, R	6.5
Seismic response coeffiecient, C _S	0.28
Design base shear $V = 0.7C_SW$	0.1946W

LOAD	Roof	Ceiling	Exterior wall	Interior wall	
Dead	15	8	17	10	
Roof live	20				
Live	-	10			

GENERAL NOTES

- Reference to codes, rules, regulations, standards, manufacturer's instructions or requirements of regulatory agencies is to the latest printed edition of each in effect at the date of submission of bid unless the document date is shown.
- Structural information shown on framing plans is for the main structural elements. Non-structural elements shall be constructed per approved code requirements.
- Details of construction not shown shall be of same nature as those shown for similar conditions. Refer to the typical detail sheets for typical details of construction. Typical details apply to all construction unless specifically noted or shown otherwise. Where conditions require modifications of a typical detail, the contractor shall submit modified detail for approval by the EOR to fabrication and installation.
- Do not use scaled dimensions, use written dimensions. Where no dimension is provide, consult the architect for clarification before proceeding with the work. Field measure existing dimensions
- Omissions or conflicts between various elements of the drawings, notes, and details shall be brought to the attention of the architect and resolved before proceeding with the work.
- The contractor shall verify the location of existing utilities before beginning work. Special care shall be taken to project utilities that are to remain in service during construction.
- The contractor shall inform the engineer in writing of any deviation from the contract documents.
- Drawings and specifications represent finished structure. Contractor shall be responsible for 19. Provide #3 X 24" dowel at 24" o.c. and 12" from the corner at all concrete stoops and porches. he contractor shall take all necessary measures to insure safety of all persons and structures at the site and adjacent to the site. Observation visits to the site by the architect, engineer or construction manager shall not relieve the contractor of such responsibility.
- Specifications related to waterproofing, including but not limited to membranes, waterstops, sealants, flashing, vapor barrier, are as specified by architect/water proofing consultant.
-). Construction materials shall be distributed when placed on the structure such that loads do not exceed design live loads or result in an unbalanced condition.

CONCRETE NOTES

- Concrete is reinforced and cast-in-place unless otherwise noted. Where reinforcing is not specifically shown or where details are not given, provide reinforcing similar to that shown for similar conditions, subject to review by the owner's representative.
- All phases of work pertaining to the concrete construction shall conform to the latest edition of ACI318 "Building Code Requirements for Reinforced Concrete", and the latest edition of ACI117 "Specifications for tolerances for concrete construction and materials".
- All structural concrete shall have a minimum compressive strength at 28 days shall be min 2500 psi, U.N.O.
- No more than one grade of concrete shall be on the job site at any one time.
- Concrete mixes shall be prepared with type II/V portland cement conforming to ASTM C150.
- Concrete mix designs containing fly ash may be used where concrete is not visually exposed. Fly
- ash shall conform with ASTM C618 and may replace up to 20% porland cement by volume. Concrete mix proportioning shall meet statistical strength requirements of ACI 301 and ACI 214R. Mix designs showing compliance with strength requirements to be submitted to E.O.R for
- Normal weight concrete aggregates shall conform to ASTM C33. Light weight concrete aggregates shall conform to ASTM C330.
- Concrete strength test reports shall be in compliance with ACI 318 and shall be submitted to
- 10. Water used in mixing concrete shall conform with ASTM C1602.
- I. Thoroughly clean and roughen all hardened concrete and masonry surfaces to receive new concrete. Interface shall be roughened to a full amplitude of 1/4", U.O.N.

REIFORCING STEEL NOTES

- Reinforcing steel shall conform to ASTM A615, Grade 60 for all sizes.
- All reinforcing to be accurately and securely located prior to pouring concrete.
- All horizontal reinforcement to have matching dowels at corners of walls. All vertical reinforcement to have matching dowels to footing, U.O.N.
- Coverage shall be: 3" clear for concrete cast against earth, 2" clear for concrete exposed to moisture but not cast against earth, and 1 1/2" for all other conditions. (U.N.O)

FOUNDATION NOTES

- 1. Verify min. foundation depth, width, reinforcing steel and additional expansive soil requirements 1. with valid soils report and if more stringent, they shall supersede the above minimum requirements. See note #7 under reinforced concrete for concrete strength.
- 2. Footings shall be examined and certified in writing by the project soil/geology engineer prior to inspection and placement of concrete.
- 3. Concrete shall be to the strength and slump as specified per structural design, and consist of Portland cement ASTM C-150 Type V per soils engineer's recommendations and Building Code section 1904 (ACI 318 section 19.3.2.1) when exposed to sulfate containing solutions. Aggregates shall be per ASTM C-33. Water to be clean and potable.
- 4. Admixtures in concrete mix. containing calcium chlorides shall not be used.
- Placement shall be in one continuous operation unless otherwise specified. Slab surface shall be cured with 'Hunts' compound or equal or cured with other methods in accordance with good construction practice at contractor's option.
- 6. Contractor shall dampen slab underlayment of sand/membrane just prior to concrete placement to assist uniform concrete curing. Slabs must not be poured during or immediately after rainstorms. The specified sand over visqueen should not be saturated at the time of the concrete pour. Any free water trapped in the sand layer must be removed prior to the concrete pour.
- The bottoms of footing excavations shall be level, clean and free of loose material or water when concrete is placed. Over excavation shall be filled with concrete or properly compacted fill that has been tested and approved by the soils engineer. Backfill shall not be placed until supporting foundations, walls and slab have attained sufficient strength to support lateral soil pressure.
- 8. Concrete placement shall be monolithic in one continuous operation uniformly placed and must be vibrated and well consolidated unless shown otherwise on plans. Dual pour is defined by ACI as to when 1st. & 2nd. pour can not be vibrated together.
- 9. Floor slab shall be poured level to 1/8" in 10'.
- 10. Requirements for pre-saturation of subgrade soils and daylight setback of exterior footings from any descending slope shall comply with soil report recommendations.
- 11. Finish grade around the perimeter of slab shall be constructed such that rain and irrigation
- water is drained away from the slab. 12. All site and pad preparation, such as but not limited to shading, compacting of the fill, pre-saturation, and concrete slab base preparation, shall be performed in accordance with the
- soil engineer's recommendation and soils report. 13. Foundation drawings prepared by E.O.R. reflect the structural requirements. Refer to architectural plans for dimensions, depressions, slope, shelves, patios, stoops and porches not 4.
- reviewed by the architect and the contractor prior to construction. 14. Waiting period for concrete slabs-on-grade prior to start of construction is as follows:
- a. Do not walk on slab until 24 hours after concrete has been poured.
- b. Begin wall framing 4-5 days after concrete poured. c. Begin roof/floor framing 7-10 days after concrete poured. d. Do not load roof prior to 14 days after concrete poured.
- No pipes or conduits shall extend under isolated column footing or under continuous wall footings unless specifically detailed or approved by the architect, structural engineer and the 5. Typical stud wall table: building official.
- 16. The contractor shall arrange for observation of the work by the soils engineer. The following are requirements of the soils engineer:
- a. All footing excavations shall be inspected and certified in compliance with the soils report by the soil engineer prior to placing of concrete or steel.
- b. Soil conditions, including compacting and moisture content, shall be inspected and certified to be in compliance with the soil report by the soils engineer prior to placing of concrete or
- c. A certificate of compliance shall be submitted to the building official prior to his foundation inspection and to the architect and structural engineer.
- 17. Prior to the contractor requesting a Building Department foundation inspection, the soil engineer shall advise the building official in writing that: a. The building pad was prepared in accordance with the soil report.
- b. The utility trenches have been properly backfilled and compacted c. The foundation excavations, the soils expansive characteristics and bearing capacity conform to the soils report.
- 18. All grade beams shall be poured monolithically for their entire length.
- means and methods of construction, including but not limited to shoring and temporary bracing. 20. Provide min. (1) #4 reinforcing for electrical ground, location to be verified with the electrical

WOOD SPECIFICATIONS & NOTES

- Sawn framing lumber Douglas Fir-Larch U.N.C
- Beams/ Post/ Rafters & all other structural framing: 2x, 4x members: No. 2
- Studs: use Stud grade if height up to 9'-0" and No. 2 if taller than 9'-0".
- Plates and blocking: No. 2
- All lumber in contact with concrete or masonry to be pressure preservative treated.
- All framing lumber shall have 19% maximum moisture content at time of installation and fabrication.
- 2. Engineered lumber:

6x, 8x members: No. 1

- The following beams/headers/rims can be from any manufacturer with current approved icc-es
- evaluation report with the following mechanical properties:
- Parallam (PSL) beams: Fb = 2900 psi, Fv = 290 psi, E = 2.0E6 psi (MIN)
- Versa-lam (LVL) beams/Headers:
- 1 3/4" wide: Fb = 2800 psi, Fv = 285 psi, E = 2.0E6 psi (MIN)

3 1/2" and wider: Fb = 3100 psi, Fv = 285 psi, E = 2.0E6 psi (MIN)

- For manufactured rim board with min 1½" thick, continuously supported by wall, and matches joist depth: Fc (perp.) = 680 psi, Fc (para.) = 1400 psi, Ft = 1075 psi, E = 1.3E6 psi (MIN)
- Diaphragm (U.N.O. on plan):
- Roof: use 15/32" APA rated sheathing Exp 1 with a min. panel index of 32/16 with 8d 10. Fasteners penetrating pressure-preservative treated and fire-retardant treated wood shall be hot common nails (B.N. @ 6" o.c., E.N. @ 6" o.c., F.N. @ 12" o.c.)
- Floor: 23/32" APA rated Sturd-I-Floor T&G Exp I with min. span rating of 24" o.c. with 10d 11. All nails shall be sinker nails and staggered U.N.O., except as shown in Nailing Schedule. common nails (B.N. @ 6" o.c., E.N. @ 6" o.c., F.N. @ 12" o.c.)
- Refer to NER 108 for installation and conditions of use
- All structural rated panels must be stamped by one of the following approved agencies, APA,
- Adhesive used to attach floor sheathing to framing elements shall conform with APA specification AFG-01.
- Roof diaphragm nailing to be inspected before covering. Face grain of plywood shall be perpendicular to supports. Floor shall have tongue and groove or blocked panel edges. Plywood spans shall conform with Table 2304.8(1).
- Structural Glued laminated members: shown in foundation drawings. Accuracy of the dimensions and final fit of the building shall be
 - a. All structural glued laminated members shall be combination 24F-V4 DF/DF (24F-V8 DF/DF at all continuous or cantilever applications) fabricated and erected in accordance with ANSI/ASTM standard A190.1 and ASTM D3737.
 - b. Adhesive shall be exterior type adhesive meeting requirements of US commercial standard PS-56 and ASTM D3737.
 - c. The fabricator shall furnish AITC certificates to the structural engineer and the building inspection department prior to framing inspection.

SIZE, HEIGHT AND SPACING OF WOOD STUDS								
		Bearing Wal	ls 10ft max.		Non-Bearing Walls			
Stud size	max	kimum spacin	g when support	ting		N4:		
Stud Size	Roof	One floor & roof	Two floor & roof	One floor only	Stud Height	Max. Spacing		
	(inches)	(inches)	(inches)	(inches)	(feet)	(inches)		
2x4	24	16	not allowed	24	14	24		
3x4	24	24	16	24	14	24		
2x6	24	24	16	24	20	24		
2-2x4	-	-	16	-	-	-		
2-2x6	-	_	-	-	-			

Bearing walls exceeding 10'-0" must be designed case by case.

6. Typical ceiling joists with dead load DL = 6.0 psf, live load LL = 10.0 psf:

2:	2x4 2x6			2x8		
Spacing	Max span	Spacing	Max span	Spacing	Max span	
12"	9'-10"	12"	16'-0"	12"	20'-5"	
16"	8'-10"	16"	14'-5"	16"	18'-4"	
24"	7'-7"	24"	12'-6"	24"	15'-9"	

- 7. I-joists shall be manufactured by Weyerhaeuser or equivalent approved ICC manufactured
- 8. Framing contractor should notify E.O.R. in writing if the roofing weight exceeds 10 psf prior to construction
- 9. Stud walls perpendicular to a concrete or masonry wall shall be bolted to the concrete or masonry wall with 5/8" diameter x 8" A307 bolts at top, mid-height and bottom.
- 10. Install windows and doors in stud walls after dead loads are applied, and provide a 1/2" shim space at the head condition.
- 11. All posts shall be full height from foundation to roof. Where posts are discontinous at joist space and/or from top of beams/headers to lower top plate, block this space with stud post.
- 12. Blocking and bridging provide as follows: - 2x solid blocking between joists and rafters over support. - 2x solid blocking between joists and rafter not over 8'-0" on center nor more than 8'-0" from
- Omit blocking between ceiling joists and rafters 2x8 and smaller. 13. All vertical pipes through plates and/or solid rim beams must be drilled clean cut w/ 1/16"

tolerance. do not notch or cut plates.

14. Hold-down connector bolts into wood framing require approved plate washers; and hold-downs shall be finger tight and wrench turned just prior to covering the wall framing. Connector bolts into wood framing require steel plate washers on the post on the opposite side of the anchorage device. Plate size shall be a minimum of 0.299 inch by 3 inches by 3 inches.(2305.5)

NAILING & HARDWARE NOTES

- 1. Connectors for wood construction noted on plans and details shall be Simpson company 1. Strong-tie connectors or approved equal.
- U.N.O. on plan or detail. Follow manufacturer's recommendations for installation.
- 3. All machine bolts shall conform to ASTM A307.
- 4. Typically sills on concrete footing shall be anchored with 5/8" diameter x 12" min. length 3. Special inspections are not required where the work is done on the premises of a fabricator registered machine bolts with 7" embedment at 72" o.c.. Locate bolts 6" min. and 12" max. from each end of each stick. There shall be at least 2 bolts in each stick.
- 5. At shear walls, anchor bolt spacing not over 48" o.c. See shear wall schedule for specific spacing of anchor bolts which may be noted as less than 48" o.c.. Anchor bolts shall be installed with plate washers of min. 3" sq. x 0.229" thick between sill plate and nut. Edge(s) of plate washers
- shall be 1/2" max. from inside face of shear panel(s) 6. At non shear wall, round washers shall be used on all bolts and should conform with ANSI/ASME
- B 18.22.1. Use min. 1 3/8" Ø x 7/64" thick washer for 1/2" Ø bolt, 1 3/4" Ø x 9/64" thick washer for 5/8" ø bolt and 2 1/2" ø x 11/64" thick washer for 1" ø bolt. U.N.O.
- 7. At interior non-shear walls, use Simpson PHNW series 0.145¢ pins with a penetration of 1 1/4" 7
- into slab at 16" O.C. to be installed in accordance with ICC ESR-2138. 8. Where notches for pipes, etc., exceed 1/3 the width of the sill, place a bolt within 6" of each side
- of notch. Tiedown bolts shall not be considered as sill bolts. 9. Bolt holes in wood and steel shall be the diameter of the bolt plus 1/16"
- depped galvanized per ASTM A153, Class D.
- 12. All diaphragm and shear wall nailing shall utilize common nails or galvanized box. 13. Lag screws per ANSI/ASME standard B18.2.1 provide lead hole same diameter and depth as shank and then drill hole 60%-70% of shank diameter for threaded portions.

NAILING SCHEDULE TABLE R602.3 (1)

		T
CONNECTION	NAILING	LOCATION
1. Joist to sill or girder	3-8d	Toenail
2. Bridging to joist	2-8d	Toenail ea. end
3. 1" X 6" subfloor or less to each joist	2-8d	Face nail
4. Wider than 1" x 6" subfloor to each joist	3-8d	Face nail
5. 2" subfloor to joist or girder	2-16d	Blind and face nail
6. Sole plate to joist or blocking	16d (box) at 16" O.C.	Typical face nail
Sole plate to joist or blocking at braced wall panel	(3) 16d (box) at 16"	Braced wall panels
7. Top plate to stud	2-16d	Blind and face nail
8. Stud to sole plate 2x4 Stud 2x6 Stud 2x8 Stud	4-8d 2-16d 6-8d 4-16d 8-8d 6-16d	Toenail End nail Toenail End nail Toenail End nail
9. Double studs	16d (box) at 24" O.C.	Face nail
10. Doubled top plates	16d (box) at 16" O.C.	Typical face nail
Double top plates	8-16d	Lap splice
11. Blocking between joist or rafters to top plate	3-8d	Toenail
12. Rim joist to top plate	8d at 6" O.C.	Toenail
13. Top plates, laps and intersections	2-16d	Face nail
14. Continuous header, two pieces	16d	16" O.C. along edge
15. Ceiling joists to plate	3-8d	Toenail
16. Continuous header to stud	4-8d	Toenail
17. Ceiling joists, laps over partitions	3-16d	Face nail
18. Ceiling joists to parallel rafters	3-16d	Face nail
19. Rafter to plate	3-8d	Toenail
20. 1" diagonal brace to each stud and plate	2-8d	Face nail
21. 1" x 8" sheathing to each bearing	3-8d	Face nail
22. Wider than 1" x 8" sheathing to each bearing	3-8d	Face nail
23. Built-up corner studs	16d	24" O.C. 16" O.C.
24. Built-up girder and beams	20d at 32" O.C.	Face nail at top & bottom staggered on opposite sides
	2-20d	Face nail at ends & ateach splice
25. 2" planks	16d	At each bearing
26. Collar tie to rafter	3-10d	Face nail
27. Jack rafter to hip	3-10d 2-16d	Toenail Face nail
28. Roof rafter to 2-by ridge beam	2-16d 2-16d	Toenail Face nail
29. Joist to band joist	3-16d	Face nail
30. Ledger strip	3-16d	Face nail

Notes: 1. Common nails shall be used (u.n.o.) 2. Joist can be either sawn lumber or i-joist per plan

DEFERRED SUBMITTALS

- 1. Elements of structure that are marked "by others" shall be excluded from this scope of work.
- 2. General contractor shall first submit separate drawings for the above elements to the EOR for their review and if approved, then submit to the building officials for their review and approval.
- 3. City approval shall be obtained prior to installation of element subjected to deferred approval.

SHOP DRAWINGS NOTES

- 1. Sufficient copies of shop drawings for any member or product designed by entity other than E.O.R. shall be submitted to E.O.R. prior to fabrication for review. Contractor shall submit shop drawings of reinforcement for concrete masonry walls, concrete components with compressive strength more than 2500 psi and structural steel to E.O.R. to review and obtain approval prior to fabrication. Shop Drawings shall be original drawings prepared for the project specific information, drawn accurately to scale. Direct copies and modified reproductions of the Contract Documents will not be accepted. Allow sufficient time from the receipt of complete submittal for review and processing by E.O.R..
- 2. Review of shop drawings by E.O.R. does not relieve the engineer responsible for the design or the contractor from compliance with Building Code.
- 3. E.O.R.s review of the shop drawings consists of checking general conformance with structural drawings. Design accuracy of such product, dimensions and quantity of the product is not reviewed by E.O.R..

SPECIAL INSPECTION:

SHEET INDEX

S-2

SD.0

SD.2

SSW1

General Notes & Requirements.

Foundation&Roof Framing Plan.

Retaining Wall Plan.

Typical Details.

Foundation Details.

Structural Details.

Anchorage Details.

SSW2 Farming Details.

- Special inspection shall be provided per CBC section 1704 & 1707,
- 2. All joist hangers shall be Simpson U hanger, all beam hangers shall be Simpson HU hangers 2. The owner shall employ one or more special inspectors to provide inspections during construction. The special inspector shall be a qualified person who shall demonstrate competence, to the satisfaction of the building official, for inspection of the particular type of construction or operation requiring special
 - and approved to perform such work without special inspection. Approved fabricators must submit a certificate of compliance for offsite fabrications such as structural steel, precast concrete, glued laminated
 - All inspections shall be performed by independent special inspectors. Job site visits by the structural engineer or building official do not constitute and are not a substitute for inspections by a special
 - All inspection reports shall be submitted to building official and E.O.R. The final reports by the special inspectors must certify that the entire structural system complies with the approved plans and
 - 6. It is solely the contractor's responsibility to see that these inspections are performed.
 - Work requiring special inspection shall be inspected by the special inspector who is present in the area where the work is performed and at the completion of work. Continuous inspection consists of full time inspection; Periodic inspection consists of part time or intermittent inspection.
 - 8. Structural wood, periodic special inspection is required for wood shearwalls, shear panels, and diaphragms, including nailing, bolting, anchoring, and other fastening of components of the seismic force resisting system, including wood shearwalls, wood diaphragms, drag struts, braces, shear panels, and holdowns, exception: special inspection is not required for wood shearwalls, shear panels and diaphragms, including nailing, bolting, anchoring and other fastening to other components of the seismic force resisting system, where the fastener spacing of the sheathing is more than 4 inches on center. Inspections shall be performed befor covering.

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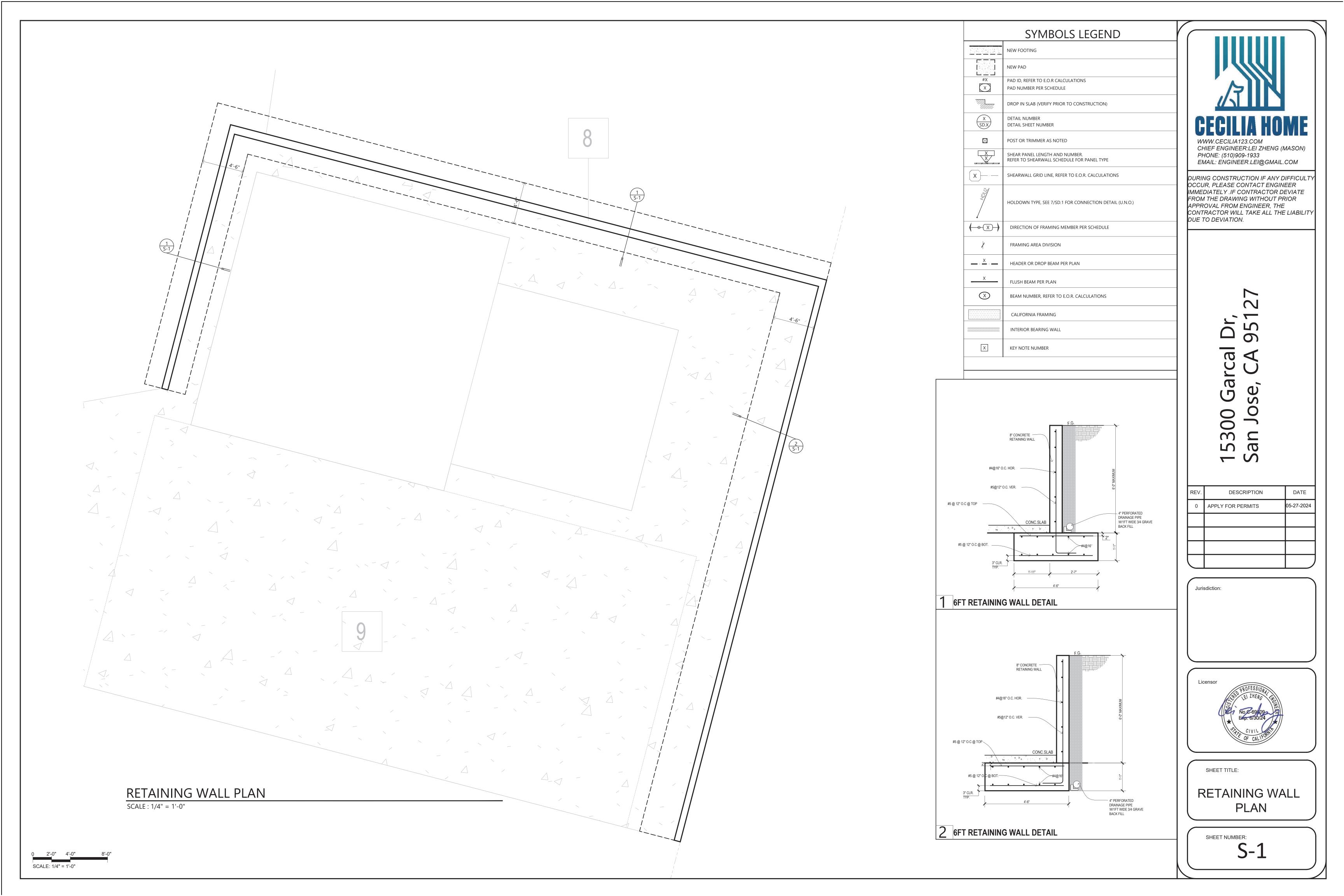
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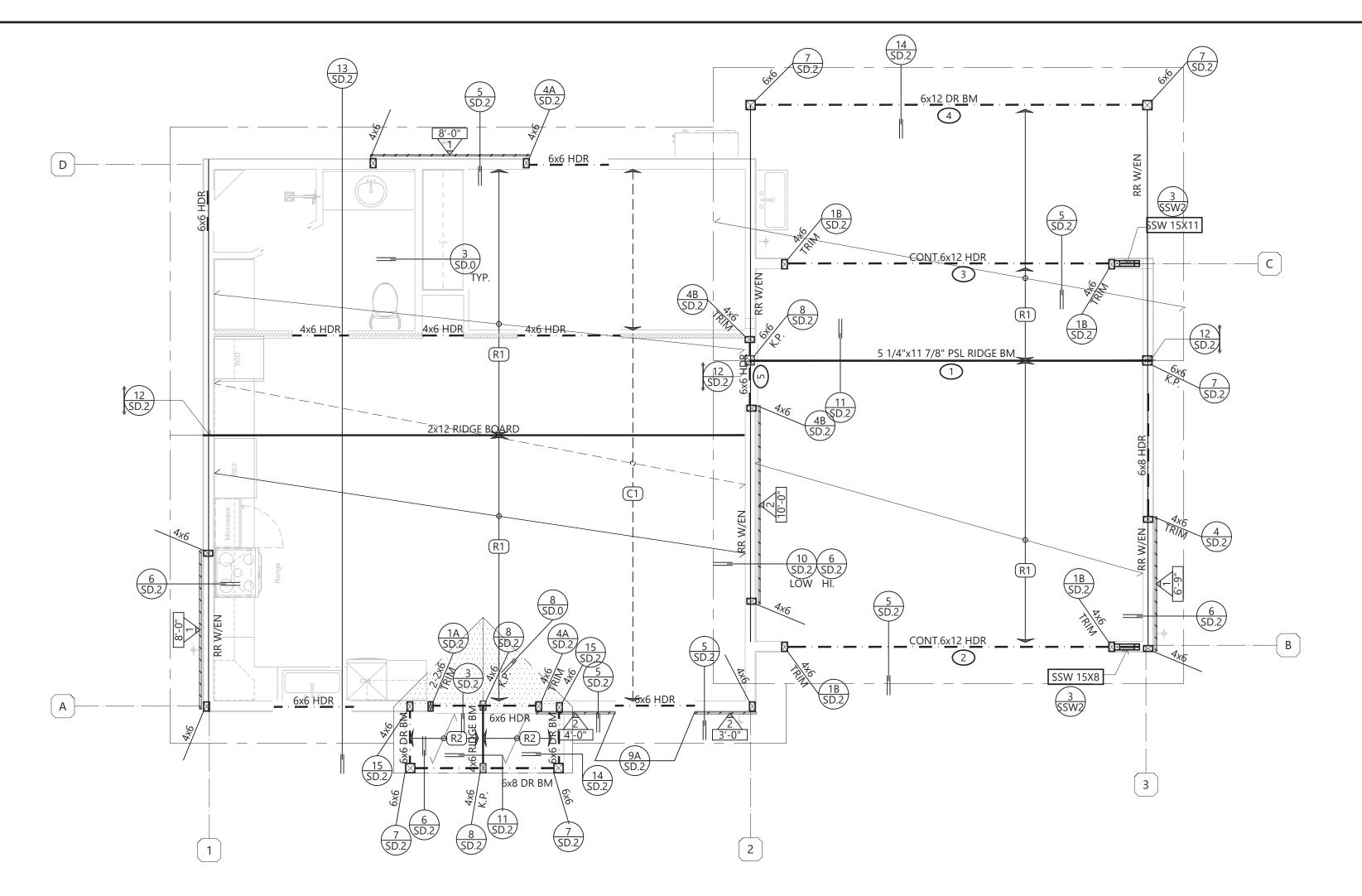
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SHEET TITLE:

GENERAL NOTES & REQUIREMENTS

SHEET NUMBER:



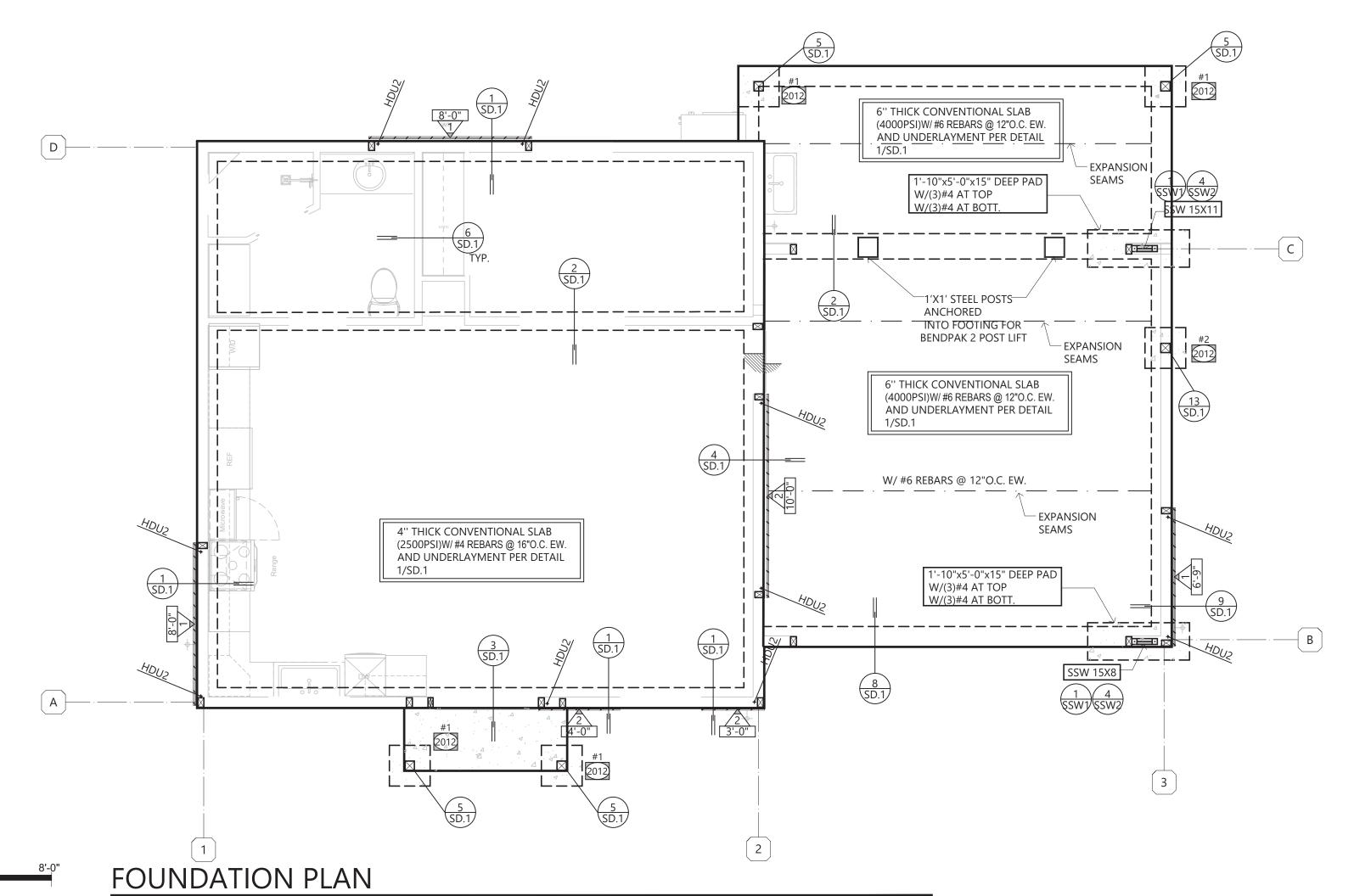


ROOF FRAMING PLAN

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

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

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



SHEAR WALL SCHEDULE 2022 CALIFORNIA BUILDING CODE

WALL	SHEATHING	BLK'G & STUD SIZE	JD SIZE NAILING T ADJ. ANEL EDGE (E.N.) FIELD		SHEAR CLIPS	SILL PLATE ATTACHMENT		ALLOWABLE
TYPE	APA-RATED	PANEL EDGES			,		CONCRETE	SHEAR (PLF)
1	3/8" sheathing	2x	8d @ 6" O.C.	8d @ 12" O.C.	@ 24" O.C.	1/4"øx6" SDS @ 16" O.C.	5/8" Ø A.B. @ 48" O.C.	260
2	3/8" sheathing	3x	8d @ 4" O.C.	8d @ 12" O.C.	@ 16" O.C.	1/4"øx6" SDS @ 12" O.C.	5/8" Ø A.B. @ 42" O.C.	380
3	3/8" sheathing	3x	8d @ 3" O.C.	8d @ 12" O.C.	@ 8" O.C.	1/4"øx6" SDS @ 8" O.C.	5/8" Ø A.B. @ 36" O.C.	490
4	3/8" sheathing	3x	8d @ 2" O.C.	8d @ 12" O.C.	@ 8" O.C.	1/4"¢x6" SDS @ 6" O.C.	5/8" Ø A.B. @ 24" O.C.	640
5	15/32" Struc. I	3x	10d @ 2" O.C.	10d @ 12" O.C.	@ 6" O.C.	1/4"øx6" SDS @ 5" O.C.	5/8" Ø A.B. @ 18" O.C.	870
3D	3/8" sheathing BOTH SIDES	3x	8d @ 3" O.C.	8d @ 12" O.C.	@ 4" O.C.	1/4"øx6" SDS @ 4" O.C.	5/8" Ø A.B. @ 18" O.C.	980
4D	3/8" sheathing BOTH SIDES	3x	8d @ 2" O.C.	8d @ 12" O.C.	@ 4" O.C.	1/4"øx6" SDS @ 3" O.C.	5/8" Ø A.B. @ 12" O.C.	1280
5D	15/32" Struc. I BOTH SIDES	3x	10d @ 2" O.C.	10d @ 12" O.C.	@ 3" O.C.	1/4"øx6" SDS @ 2.5" O.C.	5/8" Ø A.B. @ 9" O.C.	1740

(1) PROVIDE STAGGERED NAILING AT ALL PANEL EDGES.
 (2) STUDS ARE SPACED @ 16" O.C. MAX., UNO.

INSPECTION SCHEDULE							
INSPECTION ITEMS	CODE REFERENCE	REMARKS	REQ'D				
Soil condition	CBC Table 1705.6	See soils report for compliance					
Concrete work	CBC Table 1705.3		\square				
Shotcrete work	CBC Table 1705.3						
Reinforcing steel	CBC Table 1705.2.2, 1705.	3					
Post installed anchors/epoxy	CBC Table 1705.3	See also ICC approval					
Structural steel	CBC 1705.2						
Structural steel welding	CBC 1705.2						
High strength bolting	CBC 1705.2						
Massonry work	CBC 1705.4						
High load diaphragms	CBC 1705.1						
Structural wood	CBC 1705.10.1, 1705.11.2	See note #8, Special Inspection, sheet S-0	\square				
Cold formed steel	CBC 1705.10.2, 1705.11.3						
Driven deep foundation element	CBC Table 1705.7						
Cast in place deep foundation	CBC Table 1705.8						

Note: All special inspections need to follow the inspection schedule beside other notes on plan or details.

ESR 2508

FOUNDATION NOTES

- . REFER TO S-0 SHEET FOR MORE INFORMATION.
- REFER TO 5-0 SHEET FOR MORE INFORMATION.
 FOR SHEAR PANEL TYPES 3, 4 & 5 ON BOTH SIDES OF WALL, USE MIN. 3X6 SILL PLATES U.N.O.
 FOR NON-SHEAR WALLS, MASA/MASAP MUDSILL ANCHORS CAN BE USED IN LIEU OF ANCHOR BOLTS WITH END DISTANCE OF 4" MIN. PER ESR #2555.
- 4. TOP OF ALL EXTERIOR FOOTING, GRADE BEAM FOOTING, PAD FOOTING, OR FLAG POLE FOOTING TO BE MIN. 6" BELOW FINISH GRADE.
 5. HOLD DOWN HARDWARE MUST BE SECURED IN PLACE PRIOR TO FOUNDATION INSPECTION
 6. ALL HOLDOWNS AND POST ANCHORS TO BE INSTALLED ACCORDING TO MOST CURRENT

SIMPSON STRONG TIE SPECIFICATIONS AND REQUIREMENTS OF ICC-ER REPORTS & SHALL BE

- TIED IN PLACE PRIOR TO FOUNDATION INSPECTION. DIMENSIONS ARE NOT FURNISHED TO SIMPSON HOLDOWNS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR'S SUPERINTENDENT, THE FRAMING CONTRACTOR AND THE CONCRETE CONTRACTOR TO LOCATE THESE ANCHORS IN THE EXACT LOCATION. REFER TO DETAILS FOR PROPER INSTALLATION.

 7. MIN. CONCRETE WIDTH TO BE 8" FOR RECEIVING PA, HPA & STHD'S. VERIFY LOCATIONS OF HOLDOWNS AND ANCHOR BOLTS WITH ROUGH FRAMING TO ASSURE ACCURATE
 - N.

SHEARWALL NOTES

- REFER TO S-0 SHEET FOR MORE INFORMATION.
 SHEAR WALLS CANNOT BE USED AS PLUMBING WALLS, UNLESS APPROVED BY E.O.R IN WRITING.
 AT DOUBLE SIDED SHEAR WALLS, POST W/E.N. PER PLAN TO RECEIVE E.N. FROM BOTH SIDES.
 WHEN MULTIPLE STUDS ARE USED INSTEAD OF A SINGLE POST, PLYWOOD SHEAR WALL TO BE NAILED TO ALL STUDS RECEIVING HOLDOWNS.
- DO NOT BREAK SHEAR WALL AT PERPENDICULAR WALL LOCATIONS UNLESS SPECIFICALLY DETAILED ON PLANS. INSTALL SHEAR WALL PRIOR TO FRAMING OF PERPENDICULAR WALLS. CONTRACTOR IS RESPONSIBLE FOR VERIFYING HARDY FRAMES MATCH TOP PLATE HEIGHT & NOTIFY ENGINEER OF RECORD IF DIFFERENT THAN PLANS.

 ALL SHEAR PANELS SHALL HAVE CONTINUOUS SHEATHING MATERIAL FROM ONE END TO THE
- ALL SHEAR PANELS SHALL HAVE CONTINUOUS SHEATHING MATERIAL FROM ONE END TO THE OTHER AND FROM PLATE TO PLATE AS SPECIFIED ON THE DRAWINGS. CONTRACTOR SHALL COORDINATE FRAMING SUCH THAT CONTINUITY OF SHEAR PANELS IS ASSURED.

FRAMING NOTES

- REFER TO S-0 SHEET FOR MORE INFORMATION.
 USP CONNECTORS CAN BE USED IN LIEU OF SIMPSON STRONG TIE IN THIS PROJECT. CONTACT E.O.R. FOR CONVERSION TABLE OR SUBMIT SHOP DRAWINGS TO E.O.R. FOR REVIEW AND APPROVAL.
- USE 2x TRIMMER FOR HEADERS LESS THAN 6'-0" AND 2-2x TRIMMER FOR 6'-0" TO 10'-0" LONG SPAN IN BEARING WALLS, U.N.O. ON THE PLAN. SEE PLANS FOR HEADERS LARGER THAN 10'-0" LONG.

 TYPICAL HEADERS: USE 4x4 FOR OPENINGS LESS THAN 16" AT BEARING WALLS WITHOUT POINT
- LOADS. FOR NON-BEARING WALLS USE 2x4 FOR OPENINGS UP TO 3'-0" MAX. USE 2-2x4 FOR OPENINGS UP TO 6'-0" MAX. USE 4x6 FOR OPENINGS UP TO 12'-0" MAX. U.N.O.

 ALL LEDGERS SHOULD BE SPLICED WITH ST22 STRAP, U.N.O.

SYMBOLS LEGEND

	NEW FOOTING
	NEW PAD
#X	PAD ID, REFER TO E.O.R CALCULATIONS
(x)	PAD NUMBER PER SCHEDULE
7///	DROP IN SLAB (VERIFY PRIOR TO CONSTRUCTION)
X	DETAIL NUMBER
SD.X/	DETAIL SHEET NUMBER
	POST OR TRIMMER AS NOTED
XX	SHEAR PANEL LENGTH AND NUMBER. REFER TO SHEARWALL SCHEDULE FOR PANEL TYPE
x — —	SHEARWALL GRID LINE, REFER TO E.O.R. CALCULATIONS
+ HOV	HOLDOWN TYPE, SEE 7/SD.1 FOR CONNECTION DETAIL (U.N.O.)
$(\rightarrow \times)$	DIRECTION OF FRAMING MEMBER PER SCHEDULE
*	FRAMING AREA DIVISION
<u>X</u>	HEADER OR DROP BEAM PER PLAN
X	FLUSH BEAM PER PLAN
\otimes	BEAM NUMBER, REFER TO E.O.R. CALCULATIONS
	CALIFORNIA FRAMING
201100110111011110111	INTERIOR BEARING WALL
X	KEY NOTE NUMBER

PAD SCHEDULE

REBARS

	2012	2'-0" SQ. X 12" DEEP	(3) #4 E.W.
FRAMING SCH		FRAMING SC	HEDULE
	MARK	MEMBER TYPE	
	R1	2 X 10 ROOF RAFTERS @ 16" O.C.	
	R2	2 X 6 ROOF RAFTERS @ 16" O.C.	

PAD SIZE

2 X 8 CEILING JOISTS @ 16" O.C.

MARK



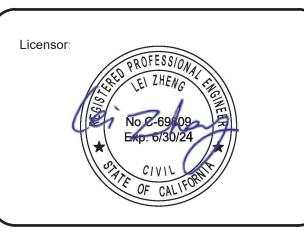
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15300 Garcal Dr, San Jose, CA 95127

REV.	DESCRIPTION	DATE
0	APPLY FOR PERMITS	05-27-2024

Jurisdiction:

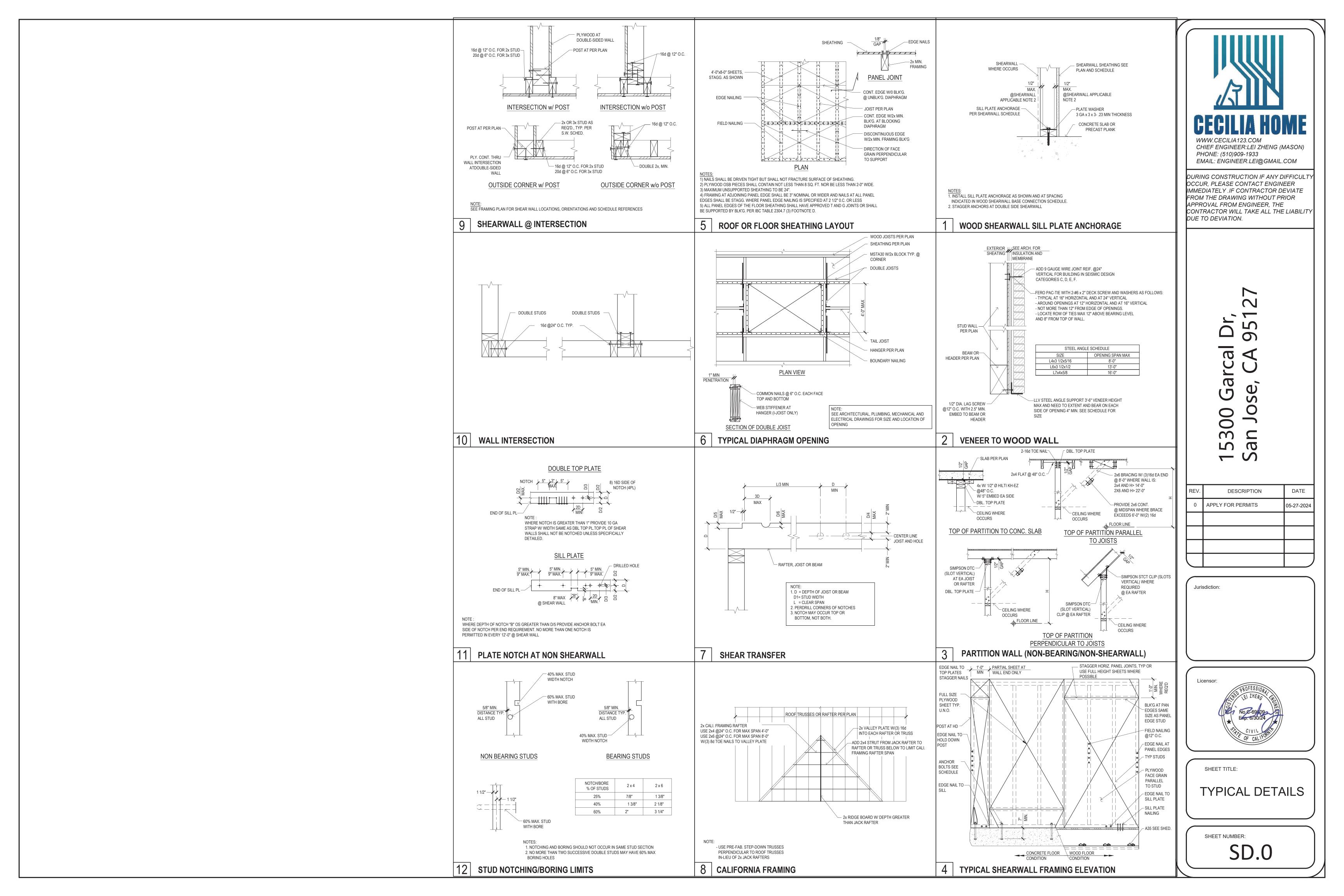


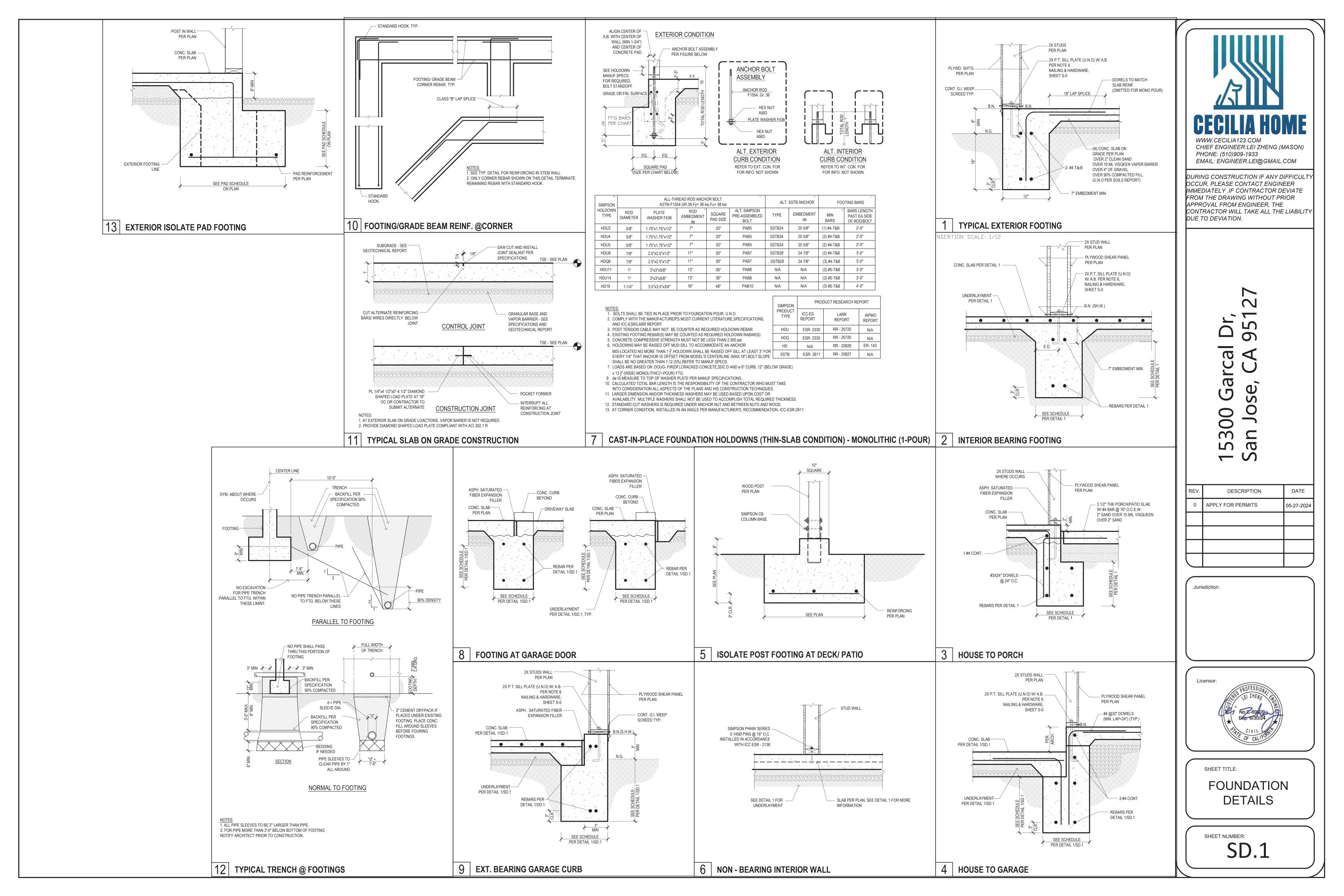
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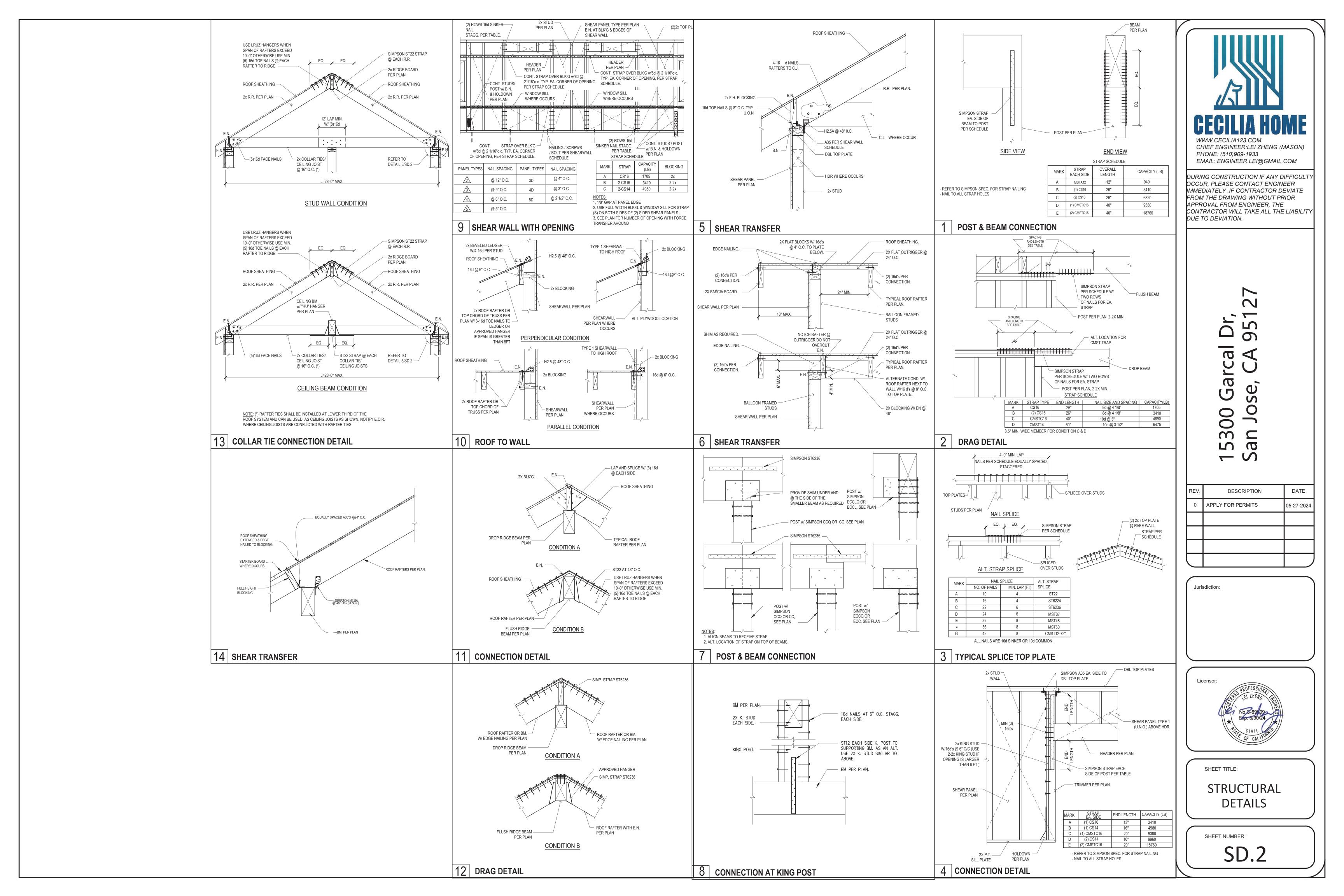
FOUNDATION PLAN

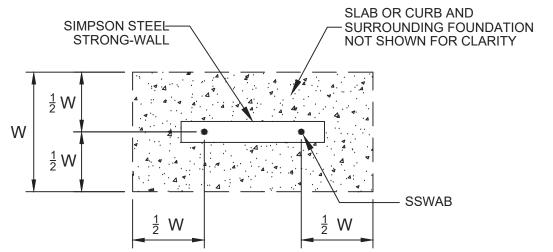
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S-1









SEE TABLES BELOW FOR DIMENSIONS FOUNDATION PLAN VIEW

			SSWAB 3/4	SSWAB 3/4" ANCHOR BOLT			SSWAB 1" ANCHOR BOLT		
DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)	ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)	
		CTANDADD	8,800	22	8	16,100	33	11	
	CDACKED	STANDARD	9,600	24	8	17,100	35	12	
	CRACKED	LUCH STDENCTH	18,500	36	12	33,000	51	17	
SEISMIC		HIGH STRENGTH	19,900	38	13	35,300	54	18	
SEISIVIIC		STANDARD	8,800	19	7	15,700	28	10	
	UNCRACKED		9,600	21	7	17,100	30	10	
		HIGH STRENGTH	18,300	31	11	32,300	44	15	
			19,900	33	11	35,300	47	16	
		STANDARD	5,100	14	6	6,200	16	6	
			7,400	18	6	11,400	24	8	
			9,600	22	8	17,100	32	11	
	CRACKED		11,400	24	8	21,100	36	12	
		HIGH STRENGTH	13,600	27	9	27,300	42	14	
			15,900	30	10	31,800	46	16	
MAINID			19,900	35	12	35,300	50	17	
WIND			5,000	12	6	6,400	14	6	
		STANDARD	7,800	16	6	12,500	22	8	
			9,600	19	7	17,100	28	10	
	UNCRACKED		12,500	22	8	21,900	32	11	
		HIGH STRENGTH	14,300	24	8	26,400	36	12	
		NIGH STRENGTH	17,000	27	9	31,500	40	14	
			19,900	30	10	35,300	43	15	

- 1. ANCHORAGE DESIGNS CONFORM TO ACI 318-11 APPENDIX D WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED
- 2. ANCHOR STRENGTH INDICATES REQUIRED GRADE OF SSWAB ANCHOR BOLT. STANDARD (ASTM F1554 GRADE 36) OR
- HIGH STRENGTH (HS) (ASTM A449). 3. SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY
- USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-11 SECTION D.3.3.4.
- 4. WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C. 5. FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
- 6. REFER TO 1/SSW1 FOR de.

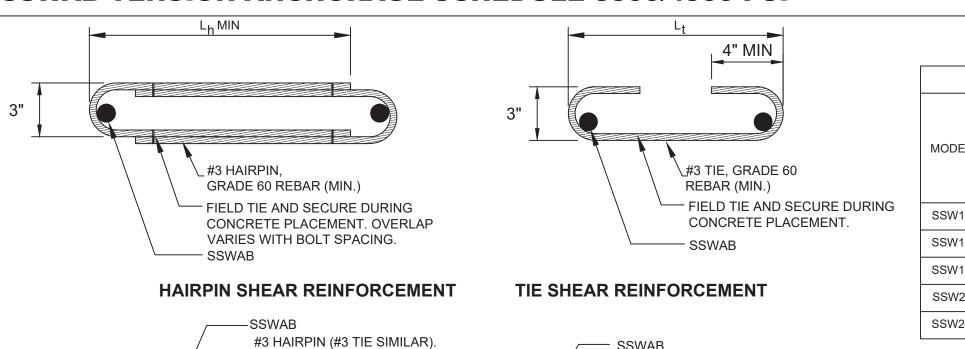
STEEL STRONG-WALL ANCHORAGE SOLUTIONS FOR 3500 PSI CONCRETE								
			SSWAB 3/	4" ANCHOR	BOLT	SSWAB 1"	ANCHOR	BOLT
DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)	ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)
		STANDARD	9,000	20	7	15,700	29	10
	CRACKED	STANDARD	9,600	21	7	17,100	31	11
	CRACKED	HIGH STRENGTH	18,200	32	11	33,000	46	16
SEISMIC		NIGH STRENGTH	19,900	34	12	35,300	48	16
SEISIVIIC		STANDARD	8,800	17	6	15,700	25	9
	UNCRACKED		9,600	19	7	17,100	27	9
		HIGH STRENGTH	18,600	28	10	32,600	40	14
			19,900	30	10	35,300	42	14
	CRACKED	STANDARD	6,000	14	6	7,300	16	6
			7,300	16	6	13,500	24	8
			9,600	20	7	17,100	29	10
		HIGH STRENGTH	11,800	22	8	22,700	34	12
			13,500	24	8	27,400	38	13
			17,000	28	10	32,300	42	14
WIND			19,900	32	11	35,300	45	15
VVIIND			6,000	12	6	7,500	14	6
		STANDARD	7,500	14	6	12,800	20	7
			9,600	17	6	17,100	25	9
	UNCRACKED		12,800	20	7	21,300	28	10
		HIGH STRENGTH	14,800	22	8	26,000	32	11
		NIGH STRENGTH	16,900	24	8	31,300	36	12
			19,900	27	9	35,300	39	13

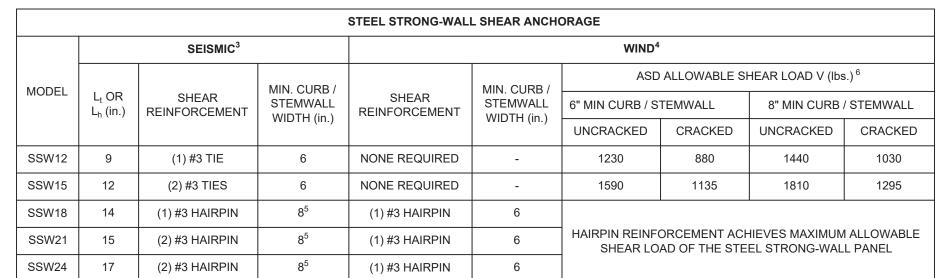
			SSWAB 3/4	4" ANCHOR	BOLT	SSWAB 1"	ANCHOR E	BOLT
DESIGN CRITERIA	CONCRETE CONDITION	ANCHOR STRENGTH	ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in)	ASD ALLOWABLE UPLIFT (lbs)	W (in)	de (in
		STANDARD	8,700	18	6	16,000	27	9
	CRACKED	OTANDAND	9,600	20	7	17,100	29	10
	CRACKED	HIGH STRENGTH	17,800	29	10	32,100	42	14
SEISMIC		NIGH STRENGTH	19,900	32	11	35,300	45	15
SEISMIC		STANDARD	9,100	16	6	15,700	23	8
	UNCRACKED		9,600	17	6	17,100	25	9
	UNCRACKED	HIGH STRENGTH	17,800	25	9	32,500	37	13
			19,900	27	9	35,300	39	13
		STANDARD	5,400	12	6	6,800	14	6
			8,300	16	6	11,600	20	7
			9,600	18	6	17,100	26	9
	CRACKED		11,600	20	7	21,400	30	10
		HIGH STRENGTH	13,400	22	8	25,800	34	12
			17,300	26	9	31,000	38	13
WIND			19,900	29	10	35,300	42	14
WIND			6,800	12	6	6,800	12	6
		STANDARD	8,500	14	6	12,400	18	6
			9,600	16	6	17,100	23	8
	UNCRACKED		12,400	18	6	21,600	26	9
		HIGH STRENGTH	14,500	20	7	26,700	30	10
		NIGH STRENGTH	16,800	22	8	32,200	34	12
			19,900	25	9	35,300	36	12

- ANCHORAGE DESIGNS CONFORM TO ACI 318-11 APPENDIX D WITH NO SUPPLEMENTARY REINFORCEMENT FOR CRACKED OR UNCRACKED CONCRETE AS NOTED.
- ANCHOR STRENGTH INDICATES REQUIRED GRADE OF SSWAB ANCHOR BOLT. STANDARD (ASTM FI554 GRADE 36) OR HIGH STRENGTH (HS) (ASTM A449). SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS. SEISMIC ANCHORAGE DESIGNS CONFORM TO ACI 318-11 SECTION D.3.3.4.
- WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B AND DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C FOUNDATION DIMENSIONS ARE FOR ANCHORAGE ONLY. FOUNDATION DESIGN (SIZE AND REINFORCEMENT) BY OTHERS. THE REGISTERED DESIGN PROFESSIONAL MAY SPECIFY ALTERNATE EMBEDMENT, FOOTING SIZE OR ANCHOR BOLT.
- 6. SEE 1/SSW1 AND 2/SSW1 FOR W AND de

SSWAB TENSION ANCHORAGE SCHEDULE 3500/4500 PSI

SEE TABLE FOR REQUIRED QUANTITY.





– #3 HAIRPIN (#3 TIE SIMILAR).

REGISTERED DESIGN PROFESSIONAL

IS PERMITTED TO MODIFY DETAILS

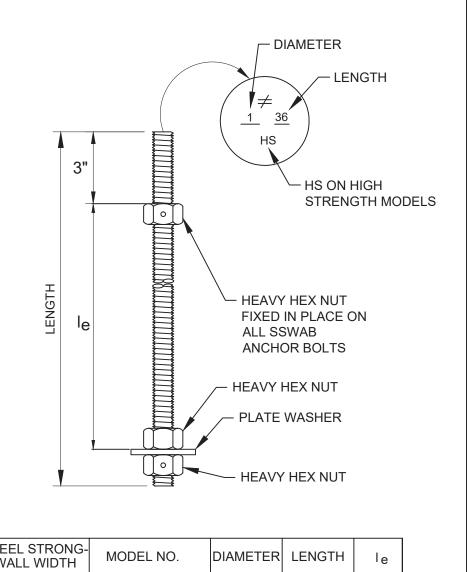
FOR SPECIFIC CONDITIONS.

SEE TABLE FOR REQUIRED QUANTITY.

- 1. SHEAR ANCHORAGE DESIGNS CONFORM TO ACI 318-11 AND ASSUME MINIMUM fc=2,500 PSI CONCRETE. SEE DETAILS 1/SSW1 TO 3/SSW1 FOR TENSION ANCHORAGE
- SHEAR REINFORCEMENT IS NOT REQUIRED FOR PANELS INSTALLED ON A WOOD FLOOR, INTERIOR FOUNDATION APPLICATIONS (PANEL INSTALLED AWAY FROM EDGE OF CONCRETE), OR BRACED WALL PANEL APPLICATIONS.
- SEISMIC INDICATES SEISMIC DESIGN CATEGORY C THROUGH F. DETACHED 1 AND 2 FAMILY DWELLINGS IN SDC C MAY USE WIND ANCHORAGE SOLUTIONS.
- WIND INCLUDES SEISMIC DESIGN CATEGORY A AND B.
- MINIMUM CURB/STEMWALL WIDTH IS 6" WHEN STANDARD STRENGTH SSWAB IS USED. USE (1) #3 TIE FOR SSW12 AND SSW15 WHEN THE STEEL STRONG-WALL PANEL DESIGN SHEAR FORCE EXCEEDS THE
- TABULATED ANCHORAGE ALLOWABLE SHEAR LOAD.
- 7. CONCRETE EDGE DISTANCE FOR ANCHORS MUST COMPLY WITH ACI 318-11 D.8.2.

STEEL STRONG-WALL ANCHOR BOLT SHEAR ANCHORAGE

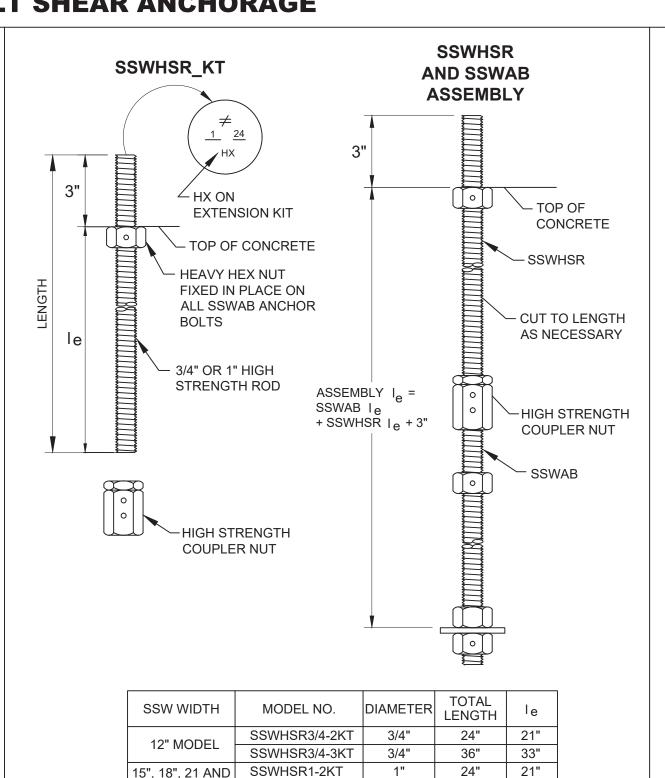
SECTION A-A

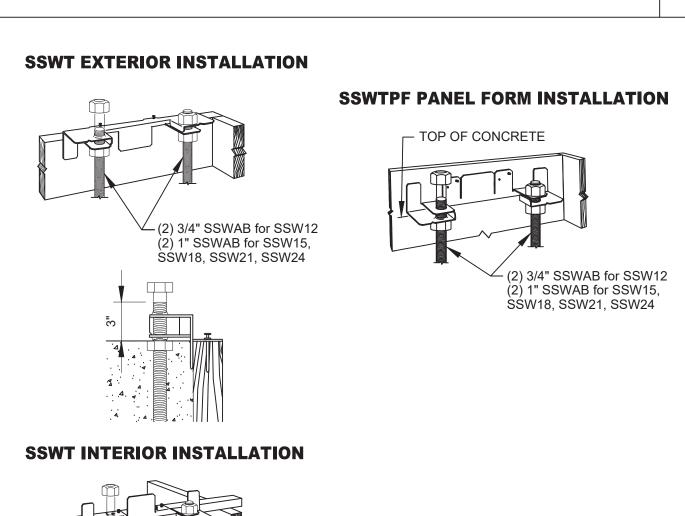


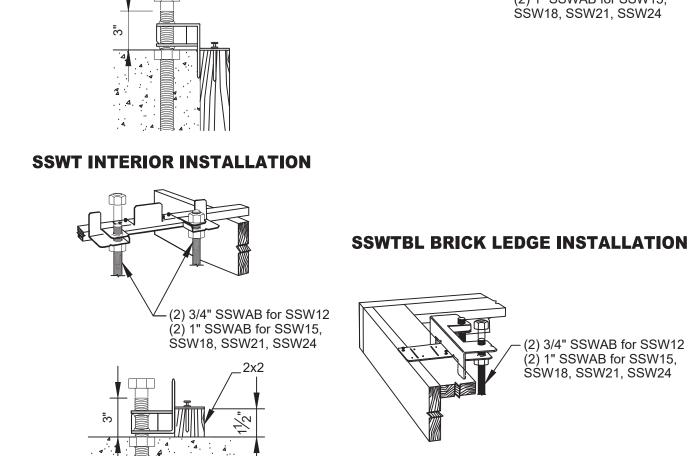
HAIRPIN INSTALLATION

(GARAGE CURB SHOWN. OTHER FOOTING TYPES SIMILAR.)

STEEL STRONG- WALL WIDTH	MODEL NO.	DIAMETER	LENGTH	le
VVALL VVIDITI	SSWAB3/4x24	3/4"	24"	19"
_	SSWAB3/4x24HS	3/4"	24"	19"
12" MODEL	SSWAB3/4x30	3/4"	30"	25"
	SSWAB3/4x30HS	3/4"	30"	25"
	SSWAB3/4x36HS	3/4"	36"	31"
	SSWAB1x24	1"	24"	19"
45" 40" 04 AND	SSWAB1x24HS	1"	24"	19"
15", 18", 21 AND 24" MODELS	SSWAB1x30	1"	30"	25"
Z+ WODELO	SSWAB1x30HS	1"	30"	25"
	SSWAB1x36HS	1"	36"	31"







NAME 4-16-2014 N.T.S. CHECKED

SSWAB TENSION ANCHORAGE SCHEDULE 2500 PSI

2 SSW ANCHOR BOLTS

SSW ANCHOR BOLT EXTENSION

SSWHSR1-3KT

24" MODELS

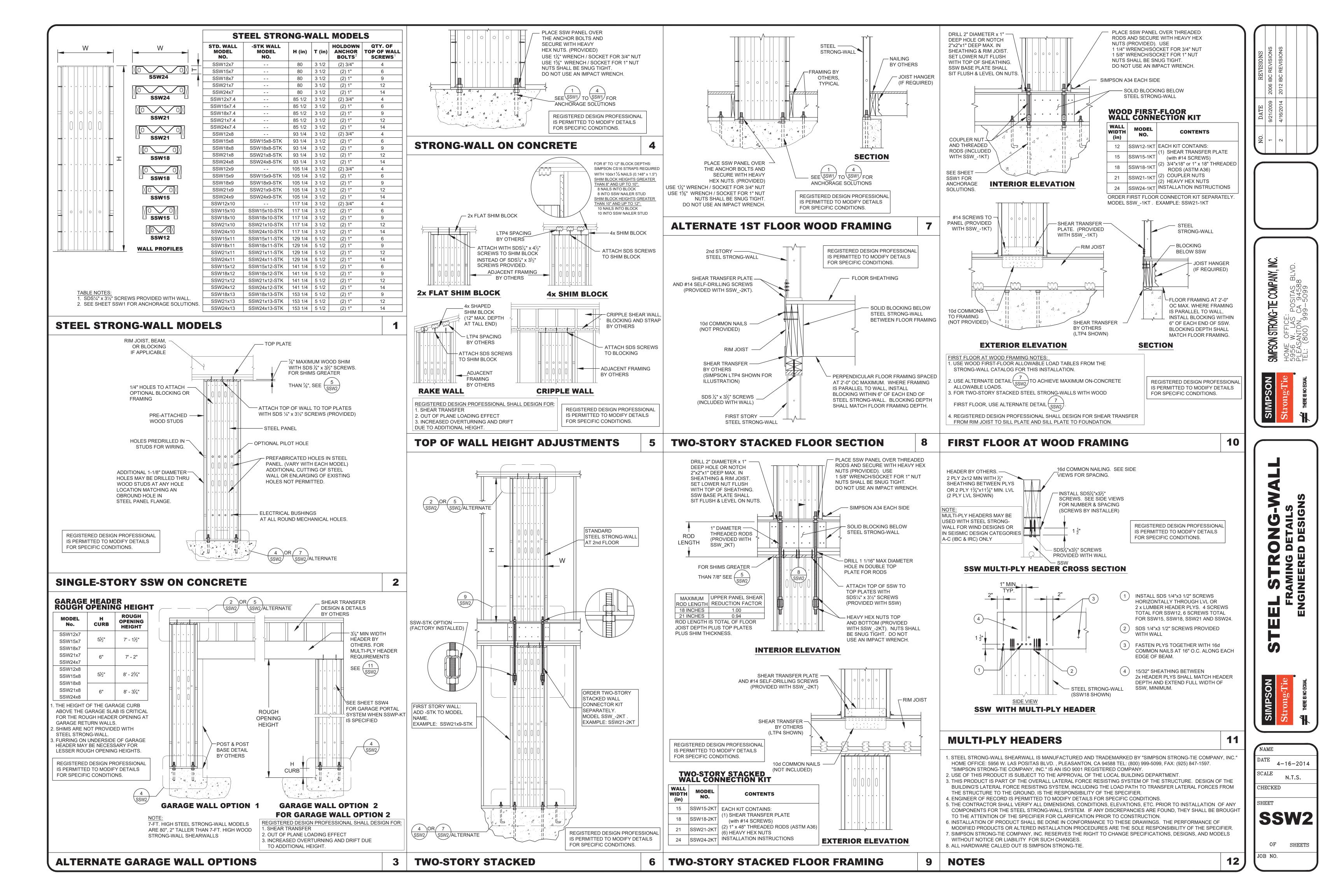
SSW ANCHOR BOLT TEMPLATES

COMPANY, INC.



SSW1

SHEETS



PRECISE GRADING PLAN

ACCESSORY DWELLING UNIT

15300 GARCAL DR, SAN JOSE, CA 95127

GENERAL NOTES

- 1. ALL CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE SOILS AND/OR GEOTECHNICAL REPORT PREPARED BY

 ________ DATED_______ THIS REPORT IS SUPPLEMENTED BY: 1) THESE PLANS AND
 SPECIFICATIONS, 2) THE COUNTY OF SANTA CLARA STANDARD DETAILS. 3) THE COUNTY OF SANTA CLARA STANDARD SPECS, 4) STATE OF
 CALIFORNIA STANDARD DETAILS, 5) STATE OF CALIFORNIA STANDARD SPECIFICATIONS. IN THE EVENT OF CONFLICT THE FORMER SHALL TAKE
 PRECEDENCE OVER THE LATTER. THE PERFORMANCE AND COMPLETION OF ALL WORK MUST BE TO THE SATISFACTION OF THE COUNTY.
- DEVELOPER IS RESPONSIBLE FOR INSTALLATION OF THE IMPROVEMENTS SHOWN ON THESE PLANS AND HE OR HIS SUCCESSOR PROPERTY OWNERS ARE RESPONSIBLE FOR THEIR CONTINUED MAINTENANCE.
- 3. DEVELOPER SHALL BE RESPONSIBLE FOR CORRECTION OF ANY ERRORS OR OMISSIONS IN THESE PLANS. THE COUNTY SHALL BE AUTHORIZED TO REQUIRE DISCONTINUANCE OF ANY WORK AND SUCH CORRECTION AND MODIFICATION OF PLANS AS MAY BE NECESSARY TO COMPLY WITH COUNTY STANDARDS OR CONDITIONS OF DEVELOPMENT APPROVAL.
- DEVELOPER SHALL OBTAIN ENCROACHMENT PERMITS FROM THE SANTA CLARA VALLEY WATER DISTRICT AND CALIFORNIA DEPARTMENT OF TRANSPORTATION WHERE NEEDED. COPIES OF THESE PERMITS SHALL BE KEPT AT THE JOB SITE FOR REVIEW BY THE COUNTY'S INSPECTOR.
 DEVELOPER SHALL REMOVE OR TRIM ALL TREES TO PROVIDE AN UNOBSTRUCTED FIFTEEN (15) FOOT VERTICAL CLEARANCE FOR ROADWAY
- AREA.

 6. THIS PLAN AUTHORIZES THE REMOVAL OF ONLY THOSE TREES WITH TRUNK DIAMETERS GREATER THAN 12 INCHES MEASURED 4.5 FEET ABOVE THE GROUND THAT ARE SHOWN TO BE REMOVED UNLESS AN AMENDED PLAN IS APPROVED OR A SEPARATE TREE REMOVAL PERMIT IS OBTAINED FROM THE PLANNING OFFICE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT REMOVAL OF ADDITIONAL TREES HAS
- BEEN PERMITTED.

 7. DEVELOPER SHALL PROVIDE ADEQUATE DUST CONTROL AS REQUIRED BY THE COUNTY INSPECTOR.
- 8. ALL PERSONS MUST COMPLY WITH SECTION 4442 OF THE PUBLIC RESOURCES CODE AND SECTION 13005 OF THE HEALTH AND SAFETY CODE RELATING TO THE USE OF SPARK ARRESTERS.
- 9. UPON DISCOVERING OR UNEARTHING ANY BURIAL SITE AS EVIDENCED BY HUMAN SKELETAL REMAINS OR ARTIFACTS, THE PERSON MAKING SUCH DISCOVERY SHALL IMMEDIATELY NOTIFY THE COUNTY CORONER AT (4008) 454-2520 AND LAND DEVELOPMENT ENGINEERING OFFICE AT (408) 299-5730. NO FURTHER DISTURBANCE OF THE SITE MAY BE MADE EXCEPT AS AUTHORIZED BY THE LAND DEVELOPMENT OFFICE IN ACCORD WITH PROVISIONS OF THIS ORDINANCE (COUNTY ORDINANCE CODE SECTION B6-18).
- 10. THESE PLANS ARE FOR THE WORK DESCRIBED IN THE SCOPE OF WORK ONLY. A SEPARATE PERMIT WILL BE REQUIRED FOR THE SEPTIC LINE CONSTRUCTION.
- 11. 11. ANY DEVIATION FROM THESE APPROVED PLANS SHALL BE RE-APPROVED IN WRITING BY THE COUNTY ENGINEER PRIOR TO CONSTRUCTION.

CONSTRUCTION STAKING

- 1. THE DEVELOPER'S ENGINEER IS RESPONSIBLE FOR THE INITIAL PLACEMENT AND REPLACEMENT OF CONSTRUCTION GRADE STAKES, THE STAKES ARE TO BE ADEQUATELY IDENTIFIED, LOCATED, STABILIZED, ETC. FOR THE CONVENIENCE OF CONTRACTORS. LATERAL OFFSET OF STAKES SET FOR CURBS AND GUTTERS SHALL NOT EXCEED 2 ½ FEET FROM BACK OF CURB.
- 2. ANY PROPERTY LINE STAKES OR ROAD MONUMENTS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED BY DEVELOPER'S ENGINEER AND LICENSED LAND SURVEYOR.
- 3. PROPERTY LINE STAKING MUST BE PERFORMED BY THE PROJECT ENGINEER OR LAND SURVEYOR TO ESTABLISH OR RE-ESTABLISH THE PROJECT BOUNDARY AND SHALL BE INSPECTED BY THE COUNTY INSPECTOR PRIOR TO THE BEGINNING OF THE WORK.
- 4. PROPER CONSTRUCTION STAKES SHALL BE SET IN THE FIELD BY THE PROJECT ENGINEER OR LAND SURVEYOR AND VERIFIED BY THE COUNTY INSPECTOR PRIOR TO THE COMMENCEMENT OF GRADING

CONSTRUCTION INSPECTION

- 1. CONTRACTOR SHALL NOTIFY PERMIT INSPECTION UNIT, SANTA CLARA COUNTY PRIOR TO COMMENCING WORK AND FOR FINAL INSPECTION OF WORK AND SITE.
- 2. THE COUNTY REQUIRES A MINIMUM OF 24 HOURS ADVANCE NOTICE FOR GENERAL INSPECTION, 48 HOURS FOR ASPHALT CONCRETE INSPECTION.
- 3. INSPECTION BY SANTA CLARA COUNTY SHALL BE LIMITED TO INSPECTION OF MATERIALS AND PROCESSES OF CONSTRUCTION TO OBSERVE THEIR COMPLIANCE WITH PLANS & SPECIFICATIONS BUT DOES NOT INCLUDE RESPONSIBILITY FOR THE SUPERINTENDENT OF CONSTRUCTION, SITE CONDITIONS, EQUIPMENT OR PERSONNEL. CONTRACTOR SHALL NOTIFY THE COUNTY LAND DEVELOPMENT INSPECTOR AT PHONE (408) 299-6868 AT LEAST 24 HOURS PRIOR TO COMMENCING WORK AND FOR FINAL INSPECTION OF WORK AND SITE.
- 4. DEVELOPER AND/OR HIS AUTHORIZED REPRESENTATIVE MUST SUBMIT WRITTEN REQUEST FOR FINAL INSPECTION AND ACCEPTANCE. SAID REQUEST SHALL BE DIRECTED TO THE INSPECTION OFFICE NOTED ON THE PERMIT FORM.
- 5. THE CONTRACTOR SHALL PROVIDE TO THE COUNTY CONSTRUCTION INSPECTOR WITH PAD ELEVATION AND LOCATION CERTIFICATES, PREPARED BY THE PROJECT ENGINEER OR LAND SURVEYOR, PRIOR TO COMMENCEMENT OF THE BUILDING FOUNDATION.

SITE PREPARATION (CLEARING AND GRUBBING

- 1. EXISTING TREES AUTHORIZED FOR REMOVAL, ROOTS, AND FOREIGN MATERIAL IN AREAS TO BE IMPROVED WILL BE REMOVED TO AN AUTHORIZED DISPOSAL SITE AS FOLLOWS:
 - A) TO A MINIMUM DEPTH OF TWO FEET BELOW THE FINISHED GRADE OF PROPOSED ROADWAYS (EITHER PRIVATE OR TO BE DEDICATED TO PUBLIC USE)
- B) FROM AREAS AFFECTED BY THE PROPOSED GRADING EXCEPT WHERE NOTED ON THE PLANS.

 2. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO MOVE OR RELOCATE UTILITY POLES AND OTHER OBSTRUCTIONS IN THE WAY OF

CONSTRUCTION.

UTILITY LOCATION, TRENCHING & BACKFILL

- 1. CONTRACTOR SHALL NOTIFY USA (UNDERGROUND SERVICE ALERT) AT 1-800-277-2600 A MINIMUM OF 24 HOURS BEFORE BEGINNING UNDERGROUND WORK FOR VERIFICATION OF THE LOCATION OF UNDERGROUND UTILITIES.
- ACCURATE VERIFICATION AS TO SIZE, LOCATION, AND DEPTH OF EXISTING UNDERGROUND CONDUITS OR FACILITIES SHALL BE THE INDIVIDUAL CONTRACTORS RESPONSIBILITY. PLAN LOCATIONS ARE APPROXIMATE AND FOR GENERAL INFORMATION ONLY.
 ALL UNDERGROUND INSTALLATIONS SHALL BE IN PLACE AND THE TRENCH BACKFILLED AND COMPACTED BEFORE PLACING AGGREGATE BASE
- MATERIAL OR SURFACE STRUCTURES. SURFACING MAY BE DONE IF THE UTILITY COMPANY CONCERNED INDICATES BY LETTER THAT IT WILL BORE. UNLESS SPECIFICALLY AUTHORIZED BY THE COUNTY, GAS AND WATER MAINS SHALL BE INSTALLED OUTSIDE THE PAVED AREAS.

 4. TRENCH BACKFILL IN EXISTING PAVEMENT AREAS SHALL BE SAND MATERIAL IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE STATE SPECIFICATIONS. THE STRUCTURAL SECTION FOR TRENCH REPLACEMENT SHALL CONSIST OF NOT LESS THAN 12 INCHES OF APPROVED AGGREGATE BASE MATERIAL COMPACTED TO A RELATIVE COMPACTION OF AT LEAST 95% AND 4 INCHES OF HOT ASPHALT
- COUNTY.

 5. TRENCH BACKFILL IN NEW CONSTRUCTION AREAS SHALL BE SAND MATERIAL COMPACTED TO A RELATIVE COMPACTION OF AT LEAST 90%. THE REQUIREMENT FOR SELECT MATERIAL MAY BE WAIVED BY COUNTY IF THE NATIVE SOIL IS SUITABLE FOR USE AS TRENCH BACKFILL BUT THE COMPACTION REQUIREMENTS WILL NOT BE THEREBY WAIVED.

CONCRETE PLACED IN TWO LIFTS. TRENCH RESTORATION FOR HIGHER TYPE PAVEMENTS SHALL BE MADE IN KIND OR AS DIRECTED BY THE

6. BACKFILL AND TRENCH RESTORATION REQUIREMENTS SHALL APPLY AS MINIMUM STANDARDS TO ALL UNDERGROUND FACILITIES INSTALLED BY OTHER FIRMS OR PUBLIC AGENCIES.

RETAINING WALL

- 1. REINFORCED CONCRETE AND CONCRETE MASONRY UNIT RETAINING WALLS SHALL HAVE FOUNDATION AND REINFORCEMENT INSPECTED BY THE COUNTY ENGINEERING INSPECTOR AND ENGINEER OF RECORD PRIOR TO POURING THE FOUNDATION AND FORMING THE WALL.
- 2. SEGMENTAL BLOCK RETAINING WALLS SHALL HAVE FOUNDATION AND REINFORCEMENT INSPECTED BY THE COUNTY ENGINEERING

GRADING NOTES

- 1. EXCAVATED MATERIAL SHALL BE PLACED IN THE FILL AREAS DESIGNATED OR SHALL BE HAULED AWAY FROM THE SITE TO A COUNTY APPROVED DISPOSAL SITE. WHERE FILL MATERIAL IS TO BE PLACED ON NATURAL GROUND, IS SHALL BE STRIPPED OF ALL VEGETATION. TO ACHIEVE A PROPER BOND WITH THE FILL MATERIAL, THE SURFACE OF THE GROUND SHALL BE SCARIFIED TO DEPTH OF 6" BEFORE FILL IS PLACED. WHERE NATURAL GROUND IS STEEPER THAN 5:1, IT SHALL BE BENCHED AND THE FILL KEYED IN TO ACHIEVE STABILITY. WHERE NEW FILL IS TO BE PLACED ON EXISTING FILL THE EXISTING FILL SHALL BE REMOVED UNTIL MATERIAL COMPACTED TO 90% RELATIVE COMPACTION IS EXPOSED. THEN THE NEW FILL MATERIAL SHALL BE PLACED IN UNIFORM LIFTS NOT EXCEEDING 6" IN UNCOMPACTED THICKNESS. BEFORE COMPACTION BEGINS, THE FILL SHALL BE BROUGHT TO A WATER CONTENT THAT WILL PERMIT PROPER COMPACTION BY EITHER 1) AERATING THE FILL IF IT IS TOO WET OR 2) MOISTEINING THE FILL WITH WATER IF IT IS TOO DRY. EACH LIFT SHALL BE THOROUGHLY MIXED BEFORE COMPACTION TO ENSURE A UNIFORM DISTRIBUTION OF MOISTURE.
- EXCESS CUT MATERIAL SHALL NOT BE SPREAD OR STOCKPILED ON THE SITE.
 SURPLUS EARTH FILL MATERIAL SHALL BE PLACED IN A SINGLE (8" MAX) THICK LAYER COMPACTED TO WITHSTAND WEATHERING IN THE
- AREA(S) DELINEATED ON THE PLAN.

 4. NO ORGANIC MATERIAL SHALL BE PLACED IN ANY FILL. NO TREES SHALL BE REMOVED OUTSIDE OF CUT, FILL OR ROADWAY AREAS.
- 5. THE UPPER 6" OF SUBGRADE BELOW DRIVEWAY ACCESS ROAD OR PARKING AREA SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY.
- 6. MAXIMUM CUT SLOPE SHALL BE 2 HORIZONTAL TO 1 VERTICAL. MAXIMUM FILL SLOPE SHALL BE 2 HORIZONTAL TO 1 VERTICAL. NOTE: FILL VOLUMES INCLUDE 10% SHRINKAGE. EXCESS MATERIAL SHALL BE OFF HAULED TO A COUNTY APPROVED DUMP SITE.

LOCATION	CUT (C.Y.)	FILL (C.Y.)	VERT. DEPTH
ADU & GARAGE	480	131	9.5'
POOL/HARDSCAPE	•	-	•
LANDSCAPE	-	-	-
DRIVEWAY	82	63	5.5'
OFF SITE IMPROVEMENTS	-	-	-
TOTAL			·

NOTE: FILL VOLUMES INCLUDE 10% SHRINKAGE.

562 194

- EXCESS MATERIAL SHALL BE OFF HAULED TO A COUNTY APPROVED DUMP SITE.
- 7. NOTIFY SOILS ENGINEER TWO (2) DAYS PRIOR TO COMMENCEMENT OF ANY GRADING WORK TO COORDINATE THE WORK IN THE FIELD.
- 8. ALL MATERIALS FOR FILL SHOULD BE APPROVED BY THE SOILS ENGINEER BEFORE IT IS BROUGHT TO THE SITE.
 9. THE UPPER 6" OF THE SUBGRADE SOIL SHALL BE SCARIFIED, MOISTURE CONDITIONED AND COMPACTED TO A MINIMUM RELATIVE COMPACTION
- OF 95%
- 10. ALL AGGREGATE BASE MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% RELATIVE COMPACTION.
 11. THE GEOTECHNICAL PLAN REVIEW LETTER MUST BE REVIEWED AND APPROVED BY THE COUNTY GEOLOGIST PRIOR TO FINAL APPROVAL BY
- THE COUNTY ENGINEER FOR BUILDING OCCUPANCY.

 12 THE PROJECT GEOTECHNICAL ENGINEER SHALL PERFORM COMPACTION TESTING AND PRESENT THE RESULTS TO THE COUNTY ENGINEERING
- 12. THE PROJECT GEOTECHNICAL ENGINEER SHALL PERFORM COMPACTION TESTING AND PRESENT THE RESULTS TO THE COUNTY ENGINEERING
- INSPECTOR PRIOR TO THE CONSTRUCTION OF ANY PAVED AREA.

 13. GRADING WORK BETWEEN OCTOBER 15TH AND APRIL 15TH IS AT THE DISCRETION OF THE SANTA CLARA COUNTY GRADING OFFICIAL.
- 13. GRADING WORK BETWEEN OCTOBER 15TH AND APRIL 15TH IS AT THE DISCRI
- 14. TOTAL DISTURBED AREA FOR THE PROJECT ______.

 15. WDID NO._____.
- 16. THE INSPECTOR MAY VERIFY THAT A VALID NOTICE OF INTENT (NOI) HAS BEEN ISSUED BY THE STATE AND THAT A CURRENT AND UP TO DATE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS AVAILABLE ON SITE.

ACCESS ROADS AND DRIVEWAYS

- 1. DRIVEWAY LOCATIONS SHALL BE AS SHOWN ON THE IMPROVEMENT PLANS WITH CENTERLINE STATIONING. THE MINIMUM CONCRETE THICKNESS SHALL BE 6 INCHES THROUGHOUT (WITH A MAXIMUM APPROACH SLOPE OF 1 1/4 INCHES PER FOOT).
- THICKNESS SHALL BE 6 INCHES THROUGHOUT (WITH A MAXIMUM APPROACH SLOPE OF 1 1/4 INCHES PER FOOT).

 2. ALL DRIVEWAY OR COMMON ACCESS ROAD SECTIONS IN EXCESS OF 15 LONGITUDINAL SLOPE MUST BE PAVED WITH A MINIMUM 2-INCH ASPHALT LIFT OR FULL DEPTH CONCRETE LIFT PRIOR TO ANY COMBUSTIBLE FRAMING.
- 3. THE OWNER AND PRIME CONTRACTOR ARE RESPONSIBLE FOR MAINTAINING PROJECT SITE ACCESS AND NEIGHBORHOOD ACCESS FOR EMERGENCY VEHICLES AND LOCAL RESIDENTS.
- 4. ROADWAYS DESIGNATED AS NOT COUNTY MAINTAINED ROADS AS SHOWN ON THE PLAN WILL NOT BE ELIGIBLE FOR COUNTY MAINTENANCE UNTIL THE ROADWAYS ARE IMPROVED (AT NO COST TO THE COUNTY) TO THE PUBLIC MAINTENANCE ROAD STANDARDS APPROVED BY THE BOARD OF SUPERVISORS AND IN EFFECT AT SUCH TIME THAT THE ROADWAYS ARE CONSIDERED FOR ACCEPTANCE INTO THE COUNTY'S ROAD SYSTEM.
- 5. ALL WORK IN THE COUNTY ROAD RIGHT-OF-WAY REQUIRES AN ENCROACHMENT PERMIT FROM THE ROADS AND AIRPORTS DEPARTMENT. EACH INDIVIDUAL ACTIVITY REQUIRES A SEPARATE PERMIT I.E. CABLE, ELECTRICAL, GAS, SEWER, WATER, RETAINING WALLS, DRIVEWAY APPROACHES, FENCES, LANDSCAPING, TREE REMOVAL, STORM DRAINAGE IMPROVEMENTS, ETC..

STREET LIGHTING

1. PACIFIC GAS & ELECTRIC ELECTROLIER SERVICE FEE SHALL BE PAID BY THE DEVELOPER AND/OR HIS AUTHORIZED REPRESENTATIVE.

SANITARY SEWER

- 1. THE SANITARY SEWER AND WATER UTILITIES SHOWN ON THESE PLANS ARE NOT PART OF THIS GRADING PERMIT AND ARE SHOWN FOR REFERENCE ONLY.
- 2. ALL MATERIALS AND METHODS OF CONSTRUCTION OF SANITARY SEWERS SHALL CONFORM TO THE SPECIFICATIONS OF THE JURISDICTION
- INVOLVED. INSPECTION OF SANITARY SEWER WORK SHALL BE DONE BY SAID JURISDICTION.

PORTLAND CEMENT CONCRETE

 CONCRETE USED FOR STRUCTURAL PURPOSES SHALL BE CLASS "A" (6 SACK PER CUBIC YARD) AS SPECIFIED IN THE STATE STANDARD SPECIFICATIONS. CONCRETE PLACED MUST DEVELOP A MINIMUM STRENGTH FACTOR OF 2800 PSI IN A SEVEN-DAY PERIOD. THE CONCRETE MIX DESIGN SHALL BE UNDER THE CONTINUAL CONTROL OF THE COUNTY INSPECTOR.

AS-BUILT PLANS STATEMENT

THIS IS A TRUE COPY OF THE AS-BUILT PLANS. THERE (___ WERE) (___ WERE NOT) MINOR FIELD CHANGES - MARKED WITH THE SYMBOL (^).
 THERE (___WERE) (___ WERE NOT) PLAN REVISIONS INDICATING SIGNIFICANT CHANGES REVIEWED BY THE COUNTY ENGINEER AND MARKED WITH THE SYMBOL Δ.

DATE	SIGNATURE	_

2. NOTE: THIS STATEMENT IS TO BE SIGNED BY THE PERSON AUTHORIZED BY THE COUNTY ENGINEER TO PERFORM THE INSPECTION WORK. A REPRODUCIBLE COPY OF THE AS-BUILT PLANS MUST BE FURNISHED TO THE COUNTY ENGINEER AFTER CONSTRUCTION.

SHEET INDEX

TITLE SHEET
PRECISE GRADING & DRAINAGE PLAN
SECTIONS AND DETAILS
EROSION CONTROL PLAN

OWNER

DAVID POPE ADDRESS: 15300 GARCAL DR, SAN JOSE, CA 95127 PHONE: 408-307-0375 EMAIL: davidepope@gmail.com

ARCHITECTURAL DESIGNER

NAME: LEI ZHENG PHONE: (510) 909-1933 EMAIL: ENGINEER.LEI@GMAIL.COM

STRUCTURAL ENGINEER PROVIDER

NAME: LEI ZHENG PHONE: (510) 909-1933

EMAIL: ENGINEER.LEI@GMAIL.COM

CIVIL ENGINEER

NAME: LEI ZHENG PHONE: (510) 909-1933 EMAIL: engineer.lei@gmail.com

<u>SURVEYOR</u>

MISSION ENGINEERS, INC. ADDRESS: 2355 De La Cruz Blvd, Santa Clara, CA 95050 PHONE: (405) 727-8262 EMAIL: mission@missionengineersinc.com



C-2



WWW.CECILIA123.COM
CHIEF ENGINEER:LEI ZHENG (MASON)
PHONE: (510)909-1933
EMAIL: ENGINEER.LEI@GMAIL.COM

DURING CONSTRUCTION IF ANY DIFFICULTY OCCUR, PLEASE CONTACT ENGINEER IMMEDIATELY .IF CONTRACTOR DEVIATE FROM THE DRAWING WITHOUT PRIOR APPROVAL FROM ENGINEER, THE CONTRACTOR WILL TAKE ALL THE LIABILITY DUE TO DEVIATION.

15300 GARCAL DR, SAN JOSE, CA 95127

REV.	DESCRIPTION	DATE
0	APPLY FOR PERMITS	05-27-2024

Jurisdiction:



SHEET TITLE:

TITLE SHEET

SHEET NUMBER:

C-1



CONSTRUCTION NOTE

- 1 INSTALL 6" DIA. DRAIN NDS 40 W/RISER AND ADAPTOR OR EQUAL.
- 2 INSTALL 4" DIA. PVC SCHEDULE 40 OR SDR 35 PIPE DRAIN SYSTEM.
- 3 INSTALL NDS 9" SQUARE CATCH BASIN WITH FILTER (NDS PART NO. 900FF) AND 4" DIA. OUTLET.
- 4 CONSTRUCT NEW DRIVEWAY PER DETAIL 2/C-3
- 5 INSTALL BOTTOMLESS TRENCH DRAIN PER DETAIL 4/C-3..
- 6 INSTALL CHANNEL DRAIN PER DETAIL 5/C-3.

NOTE

SEPARATE ENCROACHMENT PERMIT IS REQUIRED FOR ALL WORK DONE IN THE PUBLIC

- ALL DRAINAGE SHALL BE DIRECTED TOWARD THE STREET, APPROVED DRAINAGE
- SYSTEM, OR NATURAL WATERCOURSE.
- PER 2022 C.B.C. 1804.4, ALL SURFACES IMMEDIATELY ADJACENT TO FOUNDATIONS SHALL SLOPE AWAY AT A
- MINIMUM 2% FOR IMPERVIOUS SURFACES AND 5% FOR PERVIOUS SURFACES.

 CONTRACTOR TO PROVIDE LANDSCAPING ON SLOPE AREA AT THE REAR OF THE PROPERTY FOR EROSION
- CONTROL PURPOSE.
 SEE ARCHITECTURAL PLANS FOR SITE DEMOLITION INFORMATION.
- ALL WALLS UNDER SEPARATE PERMIT.
- TOTAL FOOTING DEPTH = DEEPENED FOOTING DEPTH (DF) + MINIMUM FOOTING EMBEDMENT

LEGEND

— 100 — EXISTING CONTOUR

100FS SPOT ELEVATION

PROPOSED CONCRETE AREA
PROPERTY LINE

X.X% SURFACE SLOPE

S=X.X STORM DRAIN SLOPE

PAD PROPOSED PAD ELEVATION

FS PROPOSED FINISHED SURFACE FG PROPOSED FINISHED GROUND

SCALE 1"= 10'

FF PROPOSED FINISHED FLOOR

INV INVERT OF PIPE TG TOP OF GRATE

PL PROPERTY LINE TW TOP OF WALL

HP HIGH POINT EXIST EXISTING

CECILIA HOME

WWW.CECILIA123.COM CHIEF ENGINEER:LEI ZHENG (MASON) PHONE: (510)909-1933 EMAIL: ENGINEER.LEI@GMAIL.COM

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15300 GARCAL DR, SAN JOSE, CA 95127

REV.	DESCRIPTION	DATE
0	APPLY FOR PERMITS	05-27-202

Jurisdiction:

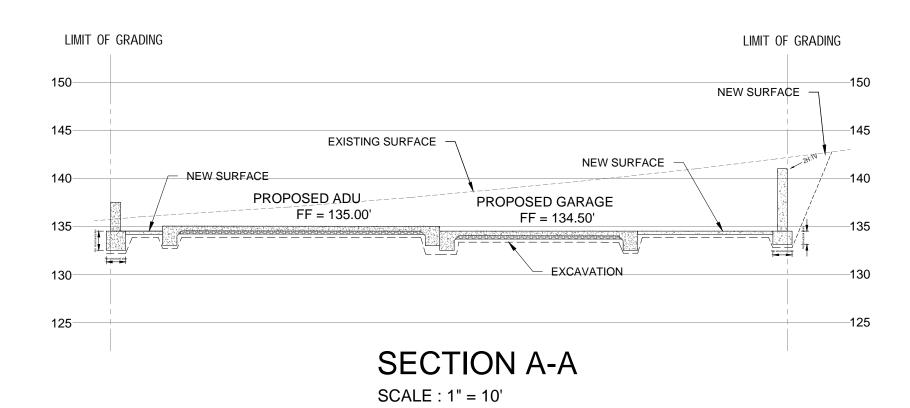


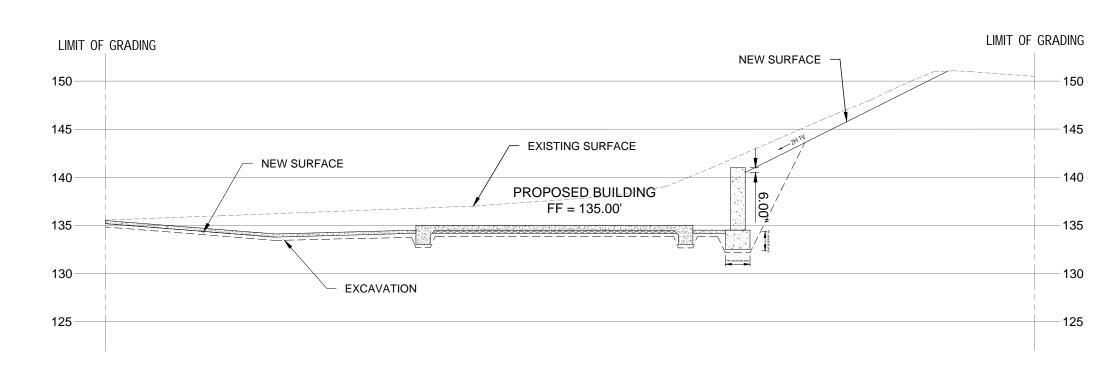
SHEET TITLE:

GRADING & DRAINAGE PLAN

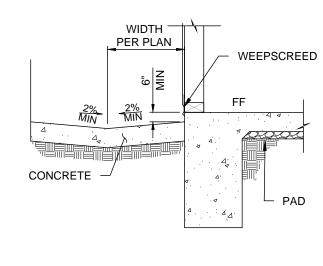
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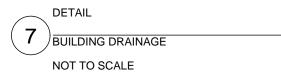
C-2

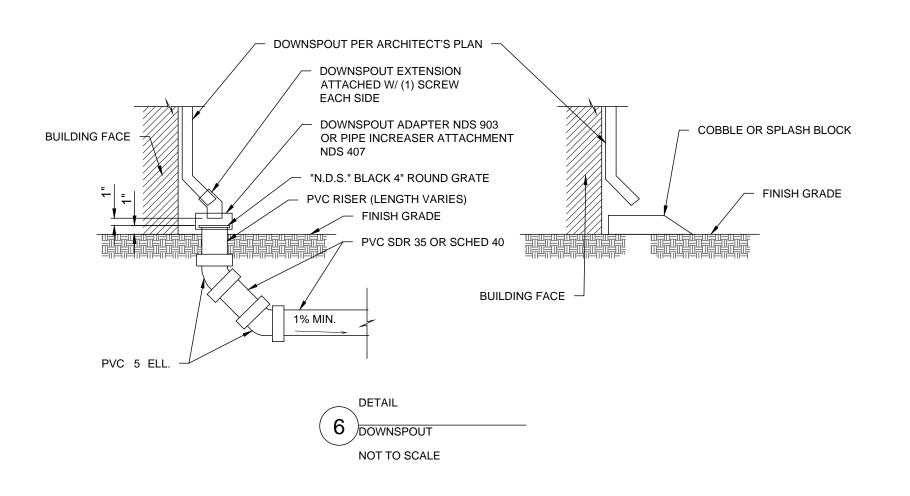


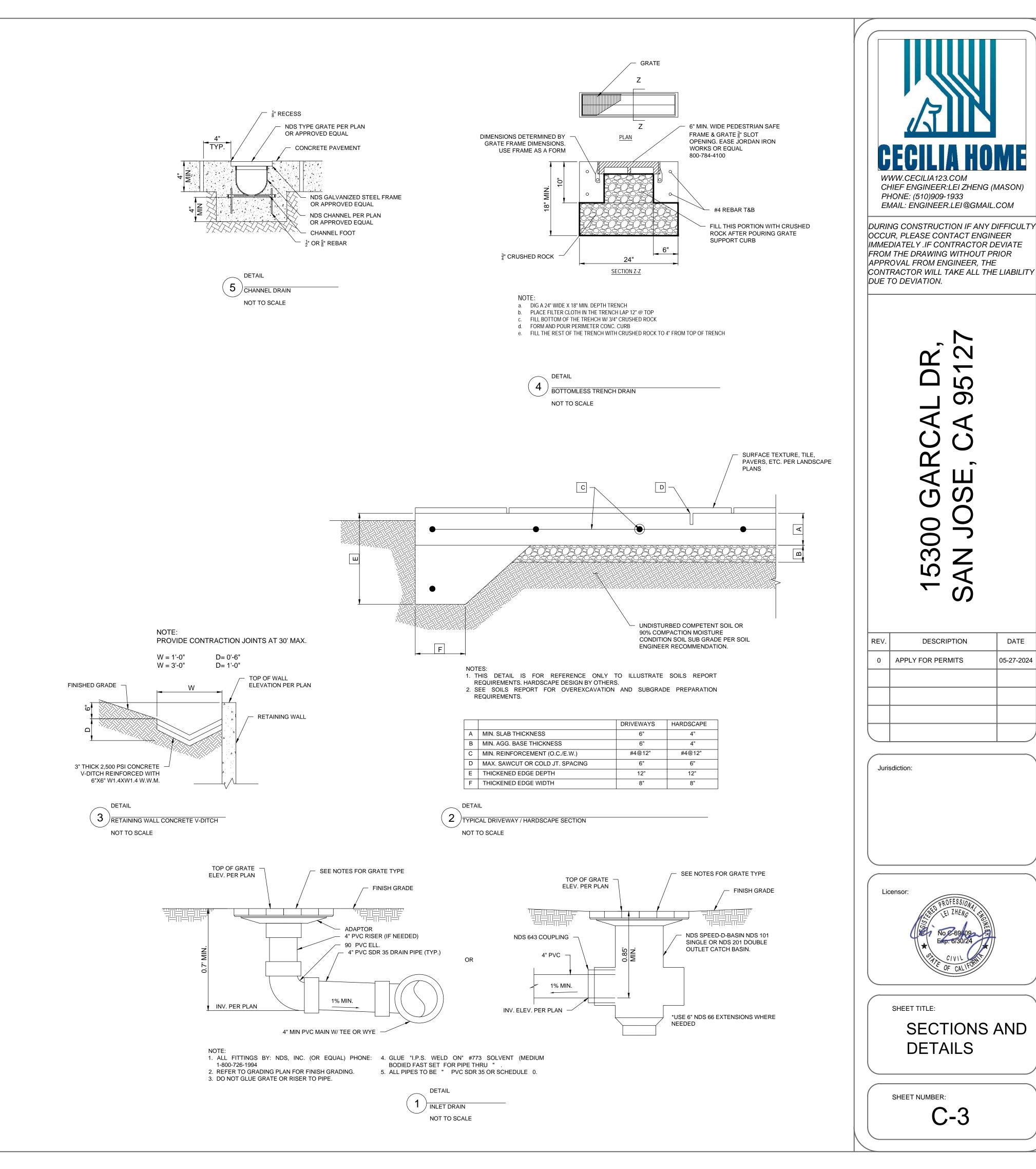


SECTION B-B SCALE : 1" = 10'









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CHIEF ENGINEER:LEI ZHENG (MASON)

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300

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Licensor:

SHEET TITLE:

SHEET NUMBER:

SECTIONS AND

DETAILS

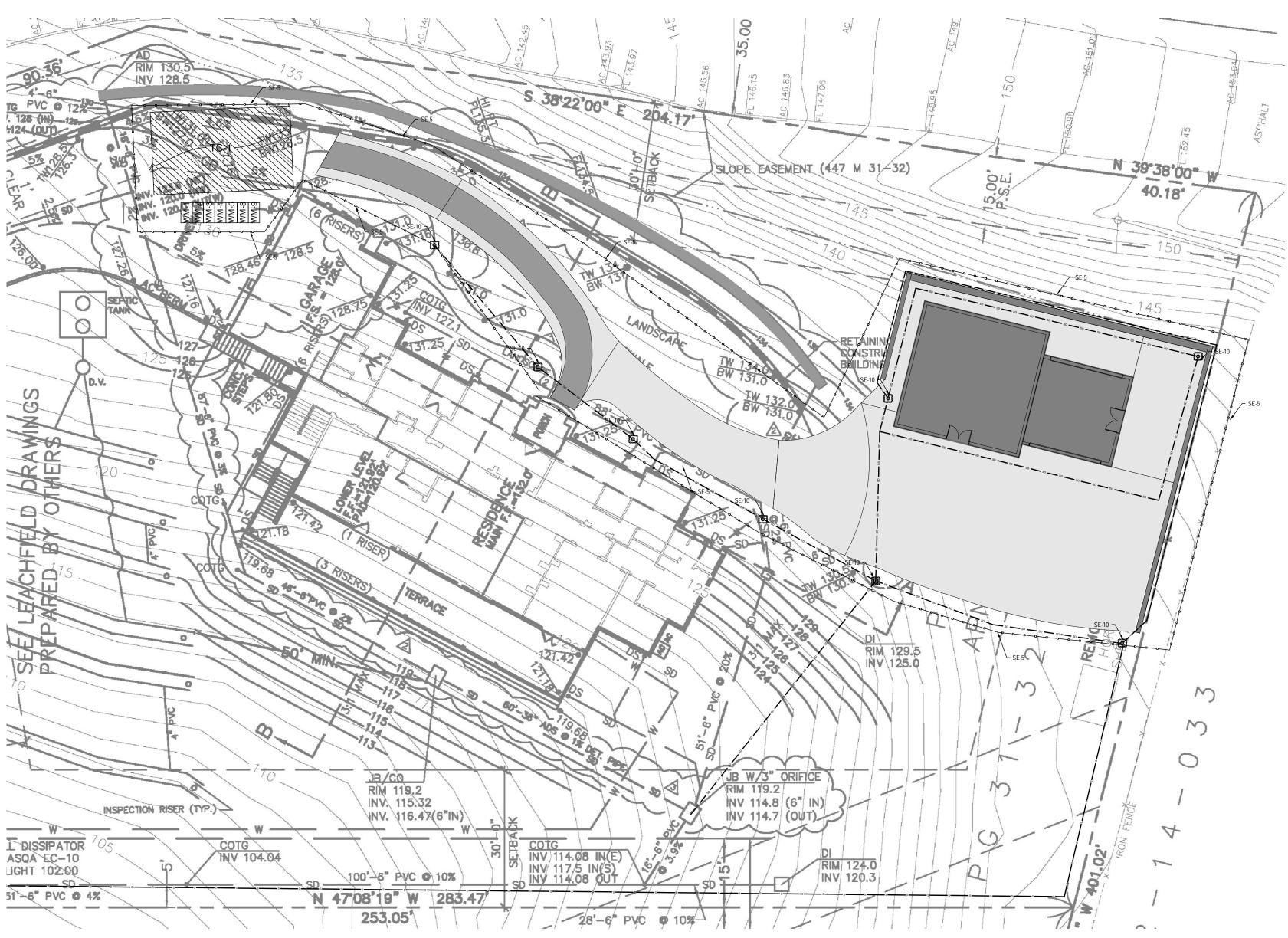
C-3

DESCRIPTION

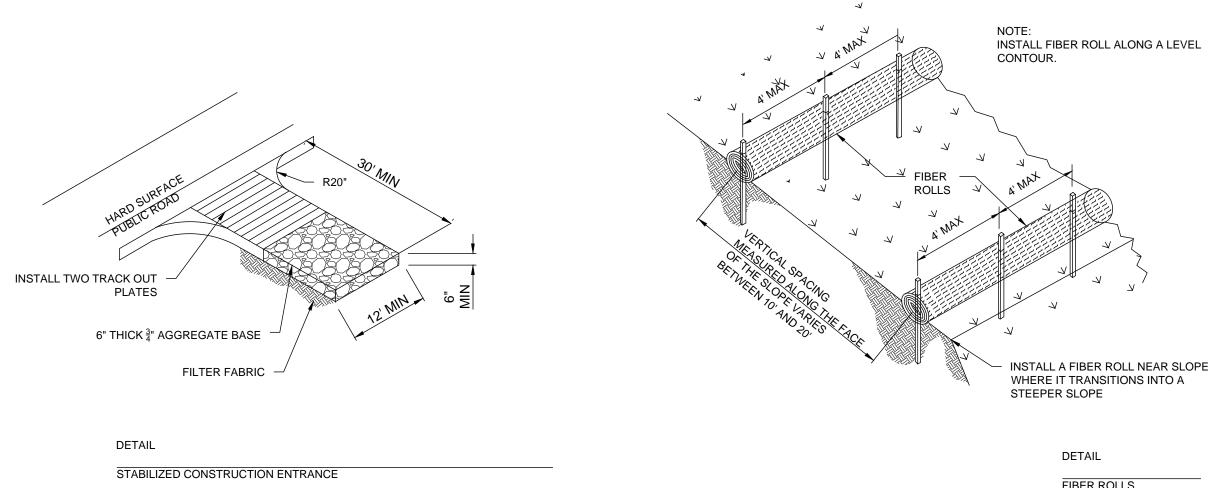
DATE

05-27-2024

EMAIL: ENGINEER.LEI@GMAIL.COM



EROSION CONTROL PLAN



NOT TO SCALE

- INSTALL A FIBER ROLL NEAR SLOPE WHERE IT TRANSITIONS INTO A STEEPER SLOPE DETAIL FIBER ROLLS NOT TO SCALE

EROSION CONTROL BMPS

EC-1 SCHEDULING SCHEDULE PREPARED BY CONTRACTOR SHALL BE ON-SITE DURING CONSTRUCTION.

TEMPORARY SEDIMENT CONTROL

	•	
SE-5	FIBER ROLLS	INSTALL WHERE SHOWN ON PLAN.
SE-7	STREET SWEEPING AND VACUUMING	STREET SHALL BE SWEEPED, SEDIMENT COLLECTED, AND DISPOSED OF OFF-SITE ON A DAILY BASIS.
SE-10	STORM WATER INLET PROTECTION	ONCE INLET RISERS ARE CONSTRUCTED, SURROUND RISERS WITH GRAVEL BAGS OR CAP THE RISER TO REDUCE SEDIMENT INTRODUCTION TO THE AREA DRAIN SYSTEM.

WIND EROSION CONTROL BMPS

WATER OR COVER MATERIAL SHALL BE USED TO ALLEVIATE DUST NUISANCE ON THE ROUGH GRADED PADS AND ANY STOCKPILE AREAS. WE-1 WIND EROSION CONTROL

TRACKING CONTROL

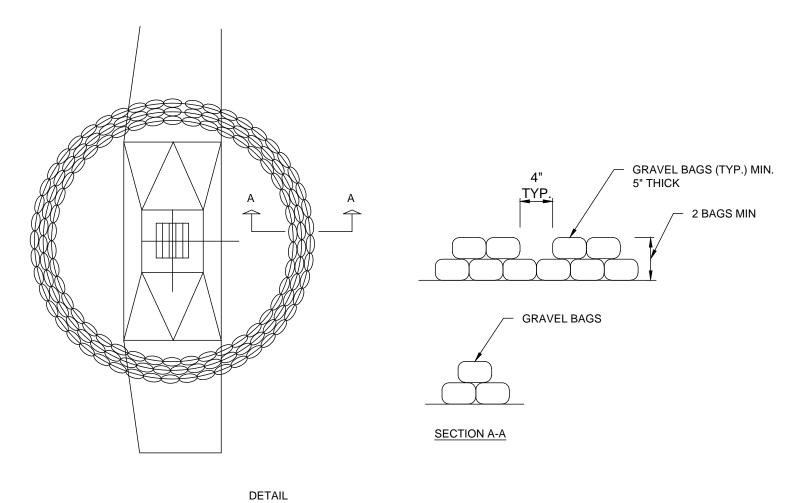
RUMBLE RACK SHALL BE PLACED ON THE DRIVEWAY TO ENSURE THAT ALL VEHICLES LEAVING THE SITE TC-1 STABILIZED CONSTRUCTION EXIT

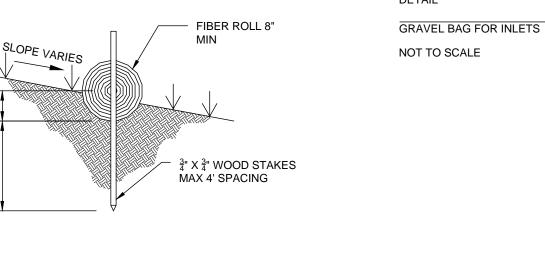
NON-STORMWATER MANAGEMENT

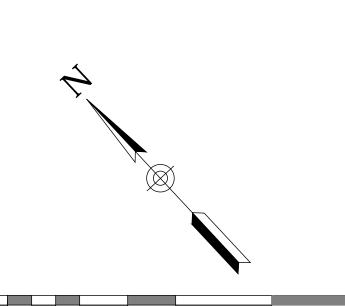
NS-1	WATER CONSERVATION PRACTICES	MAINTAIN WATER EQUIPMENT TO PREVENT NON-STORMWATER DISCHARGES.	
NS-3	PAVING AND GRADING OPERATIONS	APPLY PARAMETER CONTROLS AND VACUUMING TO PREVENT NON-STORMWATER DISCHARGE. CONTRACTOR SHALL REPORT ILLICIT CONNECTIONS OR ILLEGALLY DUMPED MATERIALS ON SITE TO THE RESIDENT ENGINEER IMMEDIATELY AND CONTRACTOR SHALL TAKE NO FURTHER ACTION UNTIL THE RESIDENT ENGINEER PROVIDE A RESPONSE/	
NS-6	ILLICIT CONNECTION / ILLEGAL DISCHARGE		
NS-7	POTABLE WATER / IRRIGATION	EXCISE CARE DURING CONSTRUCTION TO PREVENT NON-STORMWATER DISCHARGES.	
NS-8	VEHICLE AND EQUIPMENT CLEANING	ALL VEHICLES AND EQUIPMENT WILL BE CLEANED OFF-SITE.	
NS-9	VEHICLE AND EQUIPMENT FUELING	ALL VEHICLES AND EQUIPMENT WILL BE FUELED OFF-SITE.	
NS-10	VEHICLE AND EQUIPMENT MAINTENANCE	ALL VEHICLES AND EQUIPMENT WILL BE MAINTAINED OFF-SITE.	
NS-12	CONCRETE CURING	APPLIES TO ALL CONCRETE CONSTRUCTION.	
NS-13	CONCRETE FINISHING	APPLIES TO ALL CONCRETE CONSTRUCTION.	

WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL

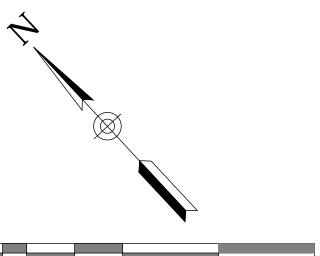
WM-1	MATERIAL DELIVERY AND STORAGE	MATERIALS SHALL BE STORED ON-SITE IN ORIGINAL MARKED CONTAINERS AND COVERED FROM RAIN AND WIND. MATERIAL INVENTORY SHALL CONSIST OF SUPPLY REQUIRED FOR A FEW DAYS.		
WM-2	MATERIAL USE	MATERIALS FOR CONSTRUCTION SHALL BE USED IN ACCORDANCE WITH PRODUCT DIRECTION.		
WM-3	STOCKPILE MANAGEMENT	MATERIALS STOCKPILES SHALL BE SURROUNDED BY A TEMPORARY SEDIMENT BARRIER AND COVERED TO MAINTAIN DUST CONTROL.		
WM-4	SPILL PREVENTION AND CONTROL	AMPLE CLEAN-UP SUPPLIES FOR STORED MATERIALS SHALL BE KEPT ON-SITE. EMPLOYEE SHALL BE EDUCATED ON THE CLASSIFICATION OF SPILLS AND APPROPRIATE RESPONSES.		
WM-5	SOLID WASTE MANAGEMENT	SOLID WASTE FROM CONSTRUCTION ACTIVITIES SHALL BE STORED IN APPROPRIATE CONTAINERS. FULL CONTAINERS SHALL BE DISPOSED OF PROPERLY.		
WM-8	CONCRETE WASTE MANAGEMENT	AN ON-SITE CONCRETE WASHOUT AREA SHALL BE CONSTRUCTED, USED, AND DISPOSED OF IN A MANNER WHICH MEETS THE REQUIREMENT OF THE CITY.		
WM-9	SANITARY / SEPTIC WASTE MANAGEMENT	ON-SITE FACILITY SHALL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE PROJECT.		







SCALE 1"= 16'



SHEET TITLE:

EROSION CONTROL PLAN

SHEET NUMBER:

C-4



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	0	APPLY FOR PERMITS	05-27-2024			



