A NEW ACCESSORY DWELLING UNIT PROJECT FOR:

SACRAMENTO COUNTY
PERMIT READY ADU (ACCESSORY DWELLING UNIT) PLAN
MODEL A2 **WILLOW**

SCOPE OF WORK:

CONSTRUCT NEW 460 S.F. ACCESSORY DWELLING UNIT.

- SLAB ON GRADE FOUNDATION
- 2X6 EXTERIOR WALLS W/ STUCCO OR FIBER CEMENT LAP SIDING EXTERIOR FINISH
- STICK FRAMED AND TRUSS ROOF WITH COMPOSITE SHINGLES
- VINYL WINDOWS
- HYBRID ELECTRIC WATER HEATER

UTILITY NOTES:

- NO GAS TO BE INSTALLED IN ADU
- PROPOSED ADU TO TIE INTO (E) MAIN WATER LINE
- PROPOSED ADU TO TIE INTO (E) S.F.R. SEWER SERVICE. NOTE: SEWER TIE-IN MUST BE OUTSIDE OF ADU FOOTPRINT.
- ELECTRICAL SERVICE TO TIE INTO (E) S.F.R. OR CUSTOMER TO COORDINATE W/ UTILITY COMPANY TO OBTAIN (N) ELECTRICAL SERVICE AND METER

PROJECT SPECIFIC NOTES:

- MODIFICATIONS TO THIS PLAN SET ARE NOT ALLOWED; THESE PLANS MAY BE USED ONLY FOR CONSTRUCTION ON LOTS WITHIN THE UNINCORPORATED COUNTY OF SACRAMENTO AND ONLY IF THE PROPERTY OWNER EXECUTES A HOLD HARMLESS AGREEMENT TO THE SATISFACTION OF THE COUNTY OF SACRAMENTO.

DEFERRED SUBMITTALS:

- FIRE SPRINKLERS (AS NEEDED)

SITE PLAN REQUIREMENTS:

NOTE: APPLICANT IS REQUIRED TO PROVIDE A SITE PLAN (INCLUDING ALL EXISTING AND PROPOSED STRUCTURES, SIZES, LOCATIONS, USES, PLANNING DEPT SETBACKS AND ANY PUBLIC UTILITY EASEMENT(S) LOCATIONS, MAIN DWELLING ELECTRICAL PANEL LOCATION FOR A.D.U. SUB-PANEL SITUATIONS, SEWER LINE SIZE AND LOCATION ON SITE WITH CONNECTION LOCATION OF PRIMARY DWELLING SEWER MAIN, WATER SUPPLY LINE SIZE, LOCATION AND CONNECTION) AND INCORPORATE IT INTO THIS PLAN SET PRIOR TO SUBMITTING PLANS

SEE ELEVATION SHEETS FOR ADDITIONAL INFORMATION/REQUIREMENTS TO PROVIDE DWELLING ADDRESS PER 2022 CRC R3119

FIRE SPRINKLER REQUIREMENTS:

PER R313.2 AN AUTOMATIC RESIDENTIAL FIRE SPRINKLER SYSTEM SHALL NOT BE REQUIRED IN ACCESSORY DWELLING UNITS, PROVIDED ALL OF THE FOLLOWING ARE MET:

- THE UNIT MEETS THE DEFINITION OF AN ACCESSORY DWELLING UNIT AS DEFINED IN THE GOVERNMENT CODE SECTION 65852.2.

- THE EXISTING PRIMARY RESIDENCE DOES NOT HAVE AUTOMATIC FIRE SPRINKLERS.

- THE ACCESSORY DETACHED DWELLING UNIT DOES NOT EXCEED 1,200 SQUARE FEET IN SIZE.

- THE UNIT IS ON THE SAME LOT AS THE PRIMARY RESIDENCE.

FINAL DETERMINATION OF FIRE SPRINKLER REQUIREMENT WILL BE MADE BY LOCAL FIRE JURISDICTION

SEE ALSO FIRE SPRINKLER INFORMATION BLOCK NOTE @ RIGHT OF THIS SHEET.

SHEET INDEX:

PROJECT DATA:

CUSTOMER ADDRESS: _____

APN: _____

JURISDICTION: SACRAMENTO COUNTY

S.F. OF PROPOSED ADU: 460 S.F.

COVERED PORCH: 122 S.F.

FOUNDATION: SLAB

OCCUPANCY: R-3

CONSTRUCTION: TYPE V-B

CODES: 2022 CALIFORNIA RESIDENTIAL BUILDING CODE
2022 CALIFORNIA ELECTRICAL CODE
2022 CALIFORNIA MECHANICAL CODE
2022 CALIFORNIA PLUMBING CODE
2022 CALIFORNIA ENERGY CODE
2022 CALGREEN CODE

PROJECT CONTACTS:

OWNER/CONTRACTOR:
ADDRESS AND CONTACT
INFORMATION _____

ARCHITECT: LAURA MILLER DESIGN
CONTACT: LAURA MILLER
889 EMBARCADERO DRIVE, STE 102
EL DORADO HILLS, CA 95762
916.607.3321

STRUCTURAL ENGINEER: WCD ASSOCIATES
CONTACT: WESLEY CULLUMBER
6930 DESTINY DRIVE, STE 300
ROCKLIN, CA 95677

GENERAL NOTES:

- THE INFORMATION ON THIS SET OF CONSTRUCTION DOCUMENTS IS RELATED TO THE BASIC DESIGN INTENT OF THE PROJECT. THEY ARE INTENDED AS A CONSTRUCTION AID, NOT A SUBSTITUTE FOR GENERALLY ACCEPTED GOOD BUILDING PRACTICES AND COMPLIANCE WITH CURRENT CALIFORNIA STATE BUILDING CODES. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING STANDARD CONSTRUCTION DETAILS AND PROCEDURES TO ENSURE A PROFESSIONALLY FINISHED, STRUCTURALLY SOUND, AND WEATHERPROOF COMPLETED PROJECT.

- THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL WORK AND CONSTRUCTION MEETS ALL CURRENT FEDERAL, STATE, COUNTY, AND LOCAL CODES, ORDINANCES, REGULATIONS, ETC. THESE CODES ARE TO BE CONSIDERED PART OF THE SPECIFICATIONS FOR THIS BUILDING AND SHOULD BE ADHERED TO EVEN IF THEY ARE IN VARIANCE OF THE PLAN.

- DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE DRAWING (DO NOT SCALE DRAWING.)

-THE ARCHITECT HAS NOT BEEN ENGAGED FOR CONSTANT CONSTRUCTION SUPERVISION AND ASSUMES NO RESPONSIBILITY FOR CONSTRUCTION COORDINATING WITH THESE PLANS, NOR RESPONSIBILITY FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCE, OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THERE ARE NO WARRANTIES FOR A SPECIFIC USE EXPRESSED OR IMPLIED IN THE USE OF THESE PLANS.

GRADING & DRAINAGE NOTES:

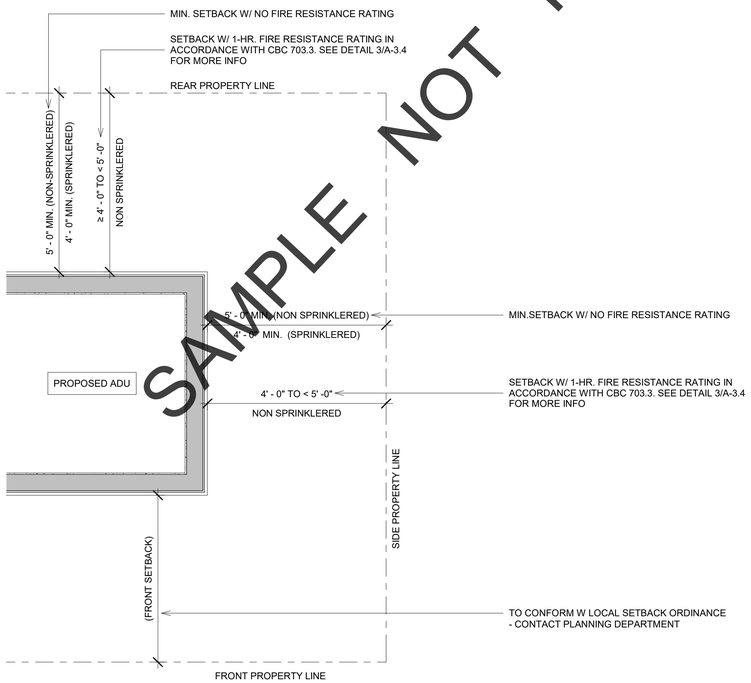
- GRADE SHALL FALL A MINIMUM OF 6" IN THE FIRST 10 FEET AWAY FROM NEW FOUNDATION WALLS WHERE THERE IS NO PAVING PER CRC 401.3. WHERE DISTANCE IS LESS THAN 10' WATER SHALL SLOPE AWAY FROM FOUNDATION

- IMPERVIOUS SURFACES WITHIN 10 FEET OF THE BUILDING FOUNDATION SHALL BE SLOPED A MINIMUM OF 2 PERCENT AWAY FROM THE BUILDING.

SETBACK REQUIREMENTS:

NOTE: ADU FOOTPRINT AND ALL ROOF OVERHANGS MAY NOT PROJECT INTO ANY PUBLIC UTILITY EASEMENTS.

NOTE: "SEE SHEET A-3.4 FOR FIRE SEPARATION (TO REAL AND ASSUMED PROPERTY LINES) REQUIREMENTS TABLE R302.1(1) AND R302.1(2) BETWEEN A.D.U. AND DWELLING / OR PROPERTY LINES.



2 SETBACK KEY
N.T.S.

ROOF OVERHANG REQUIREMENTS:

FIREBLOCKING NOTES:

- FIREBLOCKING SHALL BE PROVIDED IN WOOD-FRAMED CONSTRUCTION IN THE FOLLOWING LOCATIONS:

- IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS, AS FOLLOWS:

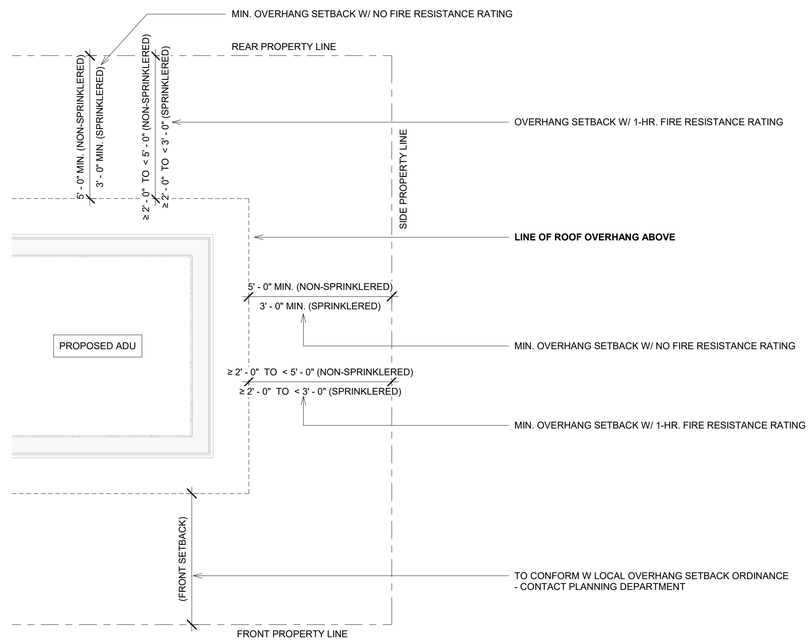
1. VERTICALLY AT THE CEILING AND FLOOR LEVELS.
2. HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET (3048 MM).

- AT INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS AND COVE CEILINGS.

- IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN. ENCLOSED SPACES UNDER STAIRS SHALL COMPLY WITH SECTION R302.7.

- AT OPENINGS AROUND VENTS, PIPES, DUCTS, CABLES AND WIRES AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION.

-FIREBLOCKING MATERIALS SHALL COMPLY WITH R302.11.1



3 OVERHANG KEY
N.T.S.

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REN. 4/30/25
STATE OF CALIFORNIA

SACRAMENTO COUNTY
PERMIT READY ADU (ACCESSORY DWELLING UNIT) PLANS
MODEL A2

No.	Date	Description

Sheet Name: TITLE SHEET

Scale: N.T.S.
Date: MAR 2024
Drawn By: IS
Approved By: LM
Sheet Number:

A-0.0

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2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
RESIDENTIAL MANDATORY MEASURES, SHEET 1 (January 2023)

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

Y	N/A	RESPON. PARTY

CHAPTER 3
GREEN BUILDING
SECTION 301 GENERAL

301.1 SCOPE. Buildings shall be designed to include the green building measures specified as mandatory in the application checklists contained in this code. Voluntary green building measures are also included in the application checklists and may be included in the design and construction of structures covered by this code, but are not required unless adopted by a city, county, or city and county as specified in Section 101.7.

301.1.1 Additions and alterations. [HCD] The mandatory provisions of Chapter 4 shall be applied to additions or alterations of existing residential buildings where the addition or alteration increases the building's conditioned area, volume, or size. The requirements shall apply only to and/or within the specific area of the addition or alteration.

The mandatory provision of Section 4.106.4.2 may apply to additions or alterations of existing parking facilities or the addition of new parking facilities serving existing multifamily buildings. See Section 4.106.4.3 for application.

Note: Repairs including, but not limited to, resurfacing, restriping and repairing or maintaining existing lighting fixtures are not considered alterations for the purpose of this section.

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. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

301.2 LOW-RISE AND HIGH-RISE RESIDENTIAL BUILDINGS. [HCD] The provisions of individual sections of CALGreen may apply to either low-rise residential buildings high-rise residential buildings, or both. Individual sections will be designated by banners to indicate where the section applies specifically to low-rise only (LR) or high-rise only (HR). When the section applies to both low-rise and high-rise buildings, no banner will be used.

SECTION 302 MIXED OCCUPANCY BUILDINGS

302.1 MIXED OCCUPANCY BUILDINGS. In mixed occupancy buildings, each portion of a building shall comply with the specific green building measures applicable to each specific occupancy.

Exceptions:

1. [HCD] Accessory structures and accessory occupancies serving residential buildings shall comply with Chapter 4 and Appendix A4, as applicable.
2. [HCD] For purposes of *CALGreen*, live/work units, complying with Section 419 of the *California Building Code*, shall not be considered mixed occupancies. Live/Work units shall comply with Chapter 4 and Appendix A4, as applicable.

DIVISION 4.1 PLANNING AND DESIGN

ABBREVIATION DEFINITIONS:

HCD	Department of Housing and Community Development
BSC	California Building Standards Commission
DSA-SS	Division of the State Architect, Structural Safety
OSHPD	Office of Statewide Health Planning and Development
LR	Low Rise
HR	High Rise
AA	Additions and Alterations
N	New

CHAPTER 4
RESIDENTIAL MANDATORY MEASURES

SECTION 4.102 DEFINITIONS

4.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

FRENCH DRAIN. A trench, hole or other depressed area loosely filled with rock, gravel, fragments of brick or similar pervious material used to collect or channel drainage or runoff water.

WATTLES. Wattles are used to reduce sediment in runoff. Wattles are often constructed of natural plant materials such as hay, straw or similar material shaped in the form of tubes and placed on a downflow slope. Wattles are also used for perimeter and inlet controls.

4.106 SITE DEVELOPMENT

X ☐ GC/OWNER — **4.106.1 GENERAL.** Preservation and use of available natural resources shall be accomplished through evaluation and careful planning to minimize negative effects on the site and adjacent areas. Preservation of slopes, management of storm water drainage and erosion controls shall comply with this section.

X ☐ GC/OWNER — **4.106.2 STORM WATER DRAINAGE AND RETENTION DURING CONSTRUCTION.** Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.

1. Retention basins of sufficient size shall be utilized to retain storm water on the site.
2. Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency.
3. Compliance with a lawfully enacted storm water management ordinance.

Note: Refer to the State Water Resources Control Board for projects which disturb one acre or more of soil, or are part of a larger common plan of development which in total disturbs one acre or more of soil.

(Website: https://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.html)

X ☐ GC/OWNER — **4.106.3 GRADING AND PAVING.** Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

1. Swales
2. Water collection and disposal systems
3. French drains
4. Water retention gardens
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.

Exception: Additions and alterations not altering the drainage path.

☐ X — **4.106.4 Electric vehicle (EV) charging for new construction.** New construction shall comply with Sections 4.106.4.1 or 4.106.4.2 to facilitate future installation and use of EV chargers. Electric vehicle supply equipment (EVSE) shall be installed in accordance with the *California Electrical Code,* Article 625.

Exceptions:

1. On a case-by-case basis, where the local enforcing agency has determined EV charging and infrastructure are not feasible based upon one or more of the following conditions:
   1.1 Where there is no local utility power supply or the local utility is unable to supply adequate power.
   1.2 Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 4.106.4, may adversely impact the construction cost of the project.
2. Accessory Dwelling Units (ADU) and Junior Accessory Dwelling Units (JADU) without additional parking facilities.

☐ X — **4.106.4.1 New one- and two-family dwellings and townhouses with attached private garages.** For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or other enclosure in close proximity to the proposed location of an EV charger. Raceways are required to be continuous at enclosed, inaccessible or concealed areas and spaces. The service panel and/or subpanel shall provide capacity to install a 40-ampere 208/240-volt minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device.

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 accordance with the *California Electrical Code*.

4.106.4.1.1 Identification. The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging as "EV CAPABLE". The raceway termination location shall be permanently and visibly marked as "EV CAPABLE".

Y	N/A	RESPON. PARTY

☐ X — **4.106.4.2 New multifamily dwellings, hotels and motels and new residential parking facilities.**
When parking is provided, parking spaces for new multifamily dwellings, hotels and motels shall meet the requirements of Sections 4.106.4.2.1 and 4.106.4.2.2. Calculations for spaces shall be rounded up to the nearest whole number. A parking space served by electric vehicle supply equipment or designed as a future EV charging space shall count as at least one standard automobile parking space only for the purpose of complying with any applicable minimum parking space requirements established by a local jurisdiction. See Vehicle Code Section 22511.2 for further details.

☐ X — **4.106.4.2.1Multifamily development projects with less than 20 dwelling units; and hotels and motels with less than 20 sleeping units or guest rooms.**
The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.

1.EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes.

The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

Exceptions:

1.When EV chargers (Level 2 EVSE) are installed in a number equal to or greater than the required number of EV capable spaces.

2.When EV chargers (Level 2 EVSE) are installed in a number less than the required number of EV capable spaces, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed.

Notes:

a.Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.

b.There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use.

2.EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.

Exception: Areas of parking facilities served by parking lifts.

☐ X — **4.106.4.2.2 Multifamily development projects with 20 or more dwelling units, hotels and motels with 20 or more sleeping units or guest rooms.**
The number of dwelling units, sleeping units or guest rooms shall be based on all buildings on a project site subject to this section.

1.EV Capable. Ten (10) percent of the total number of parking spaces on a building site, provided for all types of parking facilities, shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE. Electrical load calculations shall demonstrate that the electrical panel service capacity and electrical system, including any on-site distribution transformer(s), have sufficient capacity to simultaneously charge all EVs at all required EV spaces at a minimum of 40 amperes.

The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

Exception: When EV chargers (Level 2 EVSE) are installed in a number greater than five (5) percent of parking spaces required by Section 4.106.4.2.2, Item 3, the number of EV capable spaces required may be reduced by a number equal to the number of EV chargers installed over the five (5) percent required.

Notes:

a.Construction documents shall show locations of future EV spaces.

b.There is no requirement for EV spaces to be constructed or available until receptacles for EV charging or EV chargers are installed for use.

2.EV Ready. Twenty-five (25) percent of the total number of parking spaces shall be equipped with low power Level 2 EV charging receptacles. For multifamily parking facilities, no more than one receptacle is required per dwelling unit when more than one parking space is provided for use by a single dwelling unit.

Exception: Areas of parking facilities served by parking lifts.

3.EV Chargers. Five (5) percent of the total number of parking spaces shall be equipped with Level 2 EVSE. Where common use parking is provided, at least one EV charger shall be located in the common use parking area and shall be available for use by all residents or guests.

When low power Level 2 EV charging receptacles or Level 2 EVSE are installed beyond the minimum required, an automatic load management system (ALMS) may be used to reduce the maximum required electrical capacity to each space served by the ALMS. The electrical system and any on-site distribution transformers shall have sufficient capacity to deliver at least 3.3 kW simultaneously to each EV charging station (EVCS) served by the ALMS. The branch circuit shall have a minimum capacity of 40 amperes, and installed EVSE shall have a capacity of not less than 30 amperes. ALMS shall not be used to reduce the minimum required electrical capacity to the required EV capable spaces.

4.106.4.2.2.1 Electric vehicle charging stations (EVCS).
Electric vehicle charging stations required by Section 4.106.4.2.2, Item 3, shall comply with Section 4.106.4.2.2.1.

Exception: Electric vehicle charging stations serving public accommodations, public housing, motels and hotels shall not be required to comply with this section. See California Building Code, Chapter 11B, for applicable requirements.

4.106.4.2.2.1.1 Location.
EVCS shall comply with at least one of the following options:

1.The charging space shall be located adjacent to an accessible parking space meeting the requirements of the California Building Code, Chapter 11A, to allow use of the EV charger from the accessible parking space.

2.The charging space shall be located on an accessible route, as defined in the California Building Code, Chapter 2, to the building.

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 4.106.4.2.2.1.2, Item 3.

4.106.4.2.2.1.2 Electric vehicle charging stations (EVCS) dimensions.
The charging spaces shall be designed to comply with the following:

1.The minimum length of each EV space shall be 18 feet (5486 mm).

2.The minimum width of each EV space shall be 9 feet (2743 mm).

3.One in every 25 EV spaces, but not less than one, shall also have an 8-foot (2438 mm) wide minimum aisle. A 5-foot (1524 mm) wide minimum aisle shall be permitted provided the minimum width of the EV space is 12 feet (3658 mm).

a.Surface slope for the EV space and the aisle shall not exceed 1 unit vertical in 48 units horizontal (2.083 percent slope) in any direction.

4.106.4.2.2.2 Accessible EV spaces.
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 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 1109A.

4.106.4.2.3 EV space requirements.
1.Single EV space required. Install a listed raceway capable of accommodating a 208/240-volt dedicated branch circuit. The raceway shall not be less than trade size 1 (nominal 1-inch inside diameter). The raceway shall originate at the main service or subpanel and shall terminate into a listed cabinet, box or enclosure in close proximity to the location or the proposed location of the EV space. Construction documents shall identify the raceway 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 installed, or space(s) reserved to permit installation of a branch circuit overcurrent protective device.

Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the location or the proposed location of the EV space, at the time of original construction in accordance with the California Electrical Code.

2.Multiple EV spaces required. Construction documents shall indicate the raceway termination point and the 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 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 concealed areas and spaces shall be installed at the time of original construction.

Y	N/A	RESPON. PARTY

Exception: A raceway is not required if a minimum 40-ampere 208/240-volt dedicated EV branch circuit is installed in close proximity to the location or the proposed location of the EV space at the time of original construction in accordance with the California Electrical Code.

4.106.4.2.4 Identification.
The service panel or subpanel circuit directory shall identify the overcurrent protective device space(s) reserved for future EV charging purposes as "EV CAPABLE" in accordance with the California Electrical Code.

4.106.4.2.5 Electric Vehicle Ready Space Signage.
Electric vehicle ready spaces shall be identified by signage or pavement markings, in compliance with Caltrans Traffic Operations Policy Directive 13-01 (Zero Emission Vehicle Signs and Pavement Markings) or its successor(s).

☐ X — **4.106.4.3 Electric vehicle charging for additions and alterations of parking facilities serving existing multifamily buildings.**
When new parking facilities are added, or electrical systems or lighting of existing parking facilities are added or altered and the work requires a building permit, ten (10) percent of the total number of parking spaces added or altered shall be electric vehicle charging spaces (EV spaces) capable of supporting future Level 2 EVSE.

Notes:

1.Construction documents are intended to demonstrate the project's capability and capacity for facilitating future EV charging.

2.There is no requirement for EV spaces to be constructed or available until EV chargers are installed for use.

DIVISION 4.2 ENERGY EFFICIENCY

4.201 GENERAL

4.201.1 SCOPE. For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards.

DIVISION 4.3 WATER EFFICIENCY AND CONSERVATION

4.303 INDOOR WATER USE

X ☐ GC/OWNER — **4.303.1 WATER CONSERVING PLUMBING FIXTURES AND FITTINGS.** Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the sections 4.303.1.1, 4.303.1.2, 4.303.1.3, and 4.303.4.4.

Note: All noncompliant plumbing fixtures in any residential real property shall be replaced with water-conserving plumbing fixtures. Plumbing fixture replacement is required prior to issuance of a certificate of final completion, certificate of occupancy, or final permit approval by the local building department. See Civil Code Section 1101.1, et seq., for the definition of a noncompliant plumbing fixture, types of residential buildings affected and other important enactment dates.

4.303.1.1 Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Tank-type Toilets.

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

4.303.1.2 Urinals. The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush. The effective flush volume of all other urinals shall not exceed 0.5 gallons per flush.

4.303.1.3 Showerheads.

4.303.1.3.1 Single Showerhead. Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specification for Showerheads.

4.303.1.3.2 Multiple showerheads serving one shower. When a shower is served by more than one showerhead, the combined flow rate of all the showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the shower shall be designed to only allow one shower outlet to be in operation at a time.

Note: A hand-held shower shall be considered a showerhead.

4.303.1.4 Faucets.

4.303.1.4.1 Residential Lavatory Faucets. The maximum flow rate of residential lavatory faucets shall not exceed 1.2 gallons per minute at 60 psi. The minimum flow rate of residential lavatory faucets shall not be less than 0.8 gallons per minute at 20 psi.

4.303.1.4.2 Lavatory Faucets in Common and Public Use Areas. The maximum flow rate of lavatory faucets installed in common and public use areas (outside of dwellings or sleeping units) in residential buildings shall not exceed 0.5 gallons per minute at 60 psi.

4.303.1.4.3 Metering Faucets. Metering faucets when installed in residential buildings shall not deliver more than 0.2 gallons per cycle.

4.303.1.4.4 Kitchen Faucets. The maximum flow rate of kitchen faucets shall not exceed 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

4.303.1.4.5 Pre-rinse spray valves.
When installed, shall meet the requirements in the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations), Sections 1605.1 (h)(4) Table H-2, Section 1605.3 (h)(4)(A), and Section 1607 (d)(7) and shall be equipped with an integral automatic shutoff.

FOR REFERENCE ONLY: The following table and code section have been reprinted from the *California Code of Regulations*, Title 20 (Appliance Efficiency Regulations),Section 1605.1 (h)(4) and Section 1605.3 (h)(4)(A).

TABLE H-2

STANDARDS FOR COMMERCIAL PRE-RINSE SPRAY VALVES MANUFACTURED ON OR AFTER JANUARY 28, 2019

PRODUCT CLASS [spray force in ounce force (ozf)]	MAXIMUM FLOW RATE (gpm)
Product Class 1 (≤ 5.0 ozf)	1.00
Product Class 2 (> 5.0 ozf and ≤ 8.0 ozf)	1.20
Product Class 3 (> 8.0 ozf)	1.28

Title 20 Section 1605.3 (h)(4)(A): Commercial prerinse spray values manufactured on or after January 1, 2006, shall have a minimum spray force of not less than 4.0 ounces-force (ozf)[113 grams-force(gf)]

☐ X — **4.303.2 Submeters for multifamily buildings and dwelling units in mixed-used residential/commercial buildings.**
Submeters shall be installed to measure water usage of individual rental dwelling units in accordance with the *California Plumbing Code*.

X ☐ GC/OWNER — **4.303.3 Standards for plumbing fixtures and fittings.** Plumbing fixtures and fittings shall be installed in accordance with the *California Plumbing Code*, and shall meet the applicable standards referenced in Table 1701.1 of the *California Plumbing Code*.

NOTE:
THIS TABLE COMPILES THE DATA IN SECTION 4.303.1, AND IS INCLUDED AS A CONVENIENCE FOR THE USER.

TABLE - MAXIMUM FIXTURE WATER USE

FIXTURE TYPE	FLOW RATE
SHOWER HEADS (RESIDENTIAL)	1.8 GMP @ 80 PSI
LAVATORY FAUCETS (RESIDENTIAL)	MAX. 1.2 GPM @ 60 PSI MIN. 0.8 GPM @ 20 PSI
LAVATORY FAUCETS IN COMMON & PUBLIC USE AREAS	0.5 GPM @ 60 PSI
KITCHEN FAUCETS	1.8 GPM @ 60 PSI
METERING FAUCETS	0.2 GAL/CYCLE
WATER CLOSET	1.28 GAL/FLUSH
URINALS	0.125 GAL/FLUSH

Y	N/A	RESPON. PARTY

4.304 OUTDOOR WATER USE

4.304.1 OUTDOOR POTABLE WATER USE IN LANDSCAPE AREAS. Residential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.

NOTES:

1. The Model Water Efficient Landscape Ordinance (MWELO) is located in the *California Code Regulations*, Title 23, Chapter 2.7, Division 2. MWELO and supporting documents, including water budget calculator, are available at: https://www.water.ca.gov/

DIVISION 4.4 MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE

X ☐ GC/OWNER — **4.406.1 RODENT PROOFING.** Annular spaces around pipes, electric cables, conduits or other openings in sole/bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.

4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

X ☐ GC/OWNER — **4.408.1 CONSTRUCTION WASTE MANAGEMENT.** Recycle and/or salvage for reuse a minimum of 65 percent of the non-hazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4, or meet a more stringent local construction and demolition waste management ordinance.

Exceptions:

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.
3. The enforcing agency may make exceptions to the requirements of this section when isolated jobsites are located in areas beyond the haul boundaries of the diversion facility.

X ☐ GC/OWNER — **4.408.2 CONSTRUCTION WASTE MANAGEMENT PLAN**. Submit a construction waste management plan in conformance with Items 1 through 5. The construction waste management plan shall be updated as necessary and shall be available during construction for examination by the enforcing agency.

1. Identify the construction and demolition waste materials to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.
2. Specify if construction and demolition waste materials will be sorted on-site (source separated) or bulk mixed (single stream).
3. Identify diversion facilities where the construction and demolition waste material collected will be taken.
4. Identify construction methods employed to reduce the amount of construction and demolition waste generated.
5. Specify that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

X ☐ GC/OWNER — **4.408.3 WASTE MANAGEMENT COMPANY.** Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1.

Note: The owner or contractor may make the determination if the construction and demolition waste materials will be diverted by a waste management company.

X ☐ GC/OWNER — **4.408.4 WASTE STREAM REDUCTION ALTERNATIVE [LR].** Projects that generate a total combined weight of construction and demolition waste disposed of in landfills, which do not exceed 3.4 lbs./sq.ft. of the building area shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

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 per square foot of the building area, shall meet the minimum 65% construction waste reduction requirement in Section 4.408.1

X ☐ GC/OWNER — **4.408.5 DOCUMENTATION**. Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, items 1 through 5, Section 4.408.3 or Section 4.408.4..

Notes:

1. Sample forms found in "A Guide to the California Green Building Standards Code (Residential)" located at www.hcd.ca.gov/CALGreen.html may be used to assist in documenting compliance with this section.
2. Mixed construction and demolition debris (C & D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

4.410 BUILDING MAINTENANCE AND OPERATION

X ☐ — **4.410.1 OPERATION AND MAINTENANCE MANUAL.** At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building:

1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.
2. Operation and maintenance instructions for the following:
   a. Equipment and appliances, including water-saving devices and systems, HVAC systems, photovoltaic systems, electric vehicle chargers, water-heating systems and other major appliances and equipment.
   b. Roof and yard drainage, including gutters and downspouts.
   c. Space conditioning systems, including condensers and air filters.
   d. Landscape irrigation systems.
   e. Water reuse systems.
3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
4. 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 and what methods an occupant may use to maintain the relative humidity level in that range.
6. Information about water-conserving landscape and irrigation design and controllers which conserve water.
7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.
8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.
9. Information about state solar energy and incentive programs available.
10. A copy of all special inspections verifications required by the enforcing agency or this code.
11. Information from the Department of Forestry and Fire Protection on maintenance of defensible space around residential structures.
12. Information and/or drawings identifying the location of grab bar reinforcements.

☐ X — **4.410.2 RECYCLING BY OCCUPANTS.** Where 5 or more multifamily dwelling units are constructed on a building site, provide readily accessible area(s) that serves all buildings on the site and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waster, and metals, or meet a lawfully enacted local recycling ordinance, if more restrictive.

Exception: Rural jurisdictions that meet and apply for the exemption in Public Resources Code Section 42649.82 (a)(2)(A) et seq. are note required to comply with the organic waste portion of this section.

DIVISION 4.5 ENVIRONMENTAL QUALITY

SECTION 4.501 GENERAL

4.501.1 Scope
The provisions of this chapter shall outline means of reducing the quality of air contaminants that are odorous, irritating and/or harmful to the comfort and well being of a building's installers, occupants and neighbors.

SECTION 4.502 DEFINITIONS

5.102.1 DEFINITIONS
The following terms are defined in Chapter 2 *(and are included here for reference)*

AGRIFIBER PRODUCTS. Agrifiber products include wheatboard, strawboard, panel substrates and door cores, not including furniture, fixtures and equipment (FF&E) not considered base building elements.

COMPOSITE WOOD PRODUCTS. Composite wood products include hardwood plywood, particleboard and medium density fiberboard. "Composite wood products" does not include hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-joists or finger-jointed lumber, all as specified in California Code of regulations (CCR), title 17, Section 93120.1.

DIRECT-VENT APPLIANCE. A fuel-burning appliance with a sealed combustion system that draws all air for combustion from the outside atmosphere and discharges all flue gases to the outside atmosphere.

DISCLAIMER: *THIS DOCUMENT IS PROVIDED AND INTENDED TO BE USED AS A MEANS TO INDICATE AREAS OF COMPLIANCE WITH THE CALIFORNIA GREEN BUILDING STANDARDS (CALGREEN) CODE. DUE TO THE VARIABLES BETWEEN BUILDING DEPARTMENT JURISDICTIONS, THIS CHECKLIST IS TO BE USED ON AN INDIVIDUAL PROJECT BASIS AND MAY BE MODIFIED BY THE END USER TO MEET THOSE INDIVIDUAL NEEDS. THE END USER ASSUMES ALL RESPONSIBILITY ASSOCIATED WITH THE USE OF THIS DOCUMENT, INCLUDING VERIFICATION WITH THE FULL CODE.*

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LICENSED ARCHITECT
LAURA A. MILLER
No. C-35317
REN. 4/30/25
STATE OF CALIFORNIA

SACRAMENTO COUNTY
PERMIT READY ADU (ACCESSORY DWELLING UNIT) PLANS
MODEL A2

No.	Date	Description

Sheet Name:
CALGREEN CHECKLIST

Scale:

Date:
MAR 2024
Drawn By:
JMS
Approved By:
LM

Sheet Number:
A-0.1

4/8/2024 12:03:07 PM

2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
RESIDENTIAL MANDATORY MEASURES, SHEET 2 (January 2023)

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

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 and 94701.

MOISTURE CONTENT. The weight of the water in wood expressed in percentage of the weight of the oven-dry wood.

PRODUCT-WEIGHTED MIR (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 ozone formation in the troposphere.

VOC. A volatile organic compound (VOC) broadly defined as a chemical compound based on carbon chains or rings with vapor 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 FIREPLACES

□ X **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

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

X □ GC/OWNER **4.504.2 FINISH MATERIAL POLLUTANT CONTROL.** Finish materials shall comply with this section.

X □ GC/OWNER **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 trichloroethylene), except for aerosol products, as specified in Subsection 2 below.
2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of *California Code of Regulations*, Title 17, commencing with section 94507.

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

X □ GC/OWNER **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 8, Rule 49.

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

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

TABLE 4.504.1 - ADHESIVE VOC LIMIT[1,2]
(Less Water and Less Exempt Compounds in Grams per Liter)

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

1. IF AN ADHESIVE IS USED TO BOND DISSIMILAR SUBSTRATES TOGETHER, THE ADHESIVE WITH THE HIGHEST VOC CONTENT SHALL BE ALLOWED.

2. FOR ADDITIONAL INFORMATION REGARDING METHODS TO MEASURE THE VOC CONTENT SPECIFIED IN THIS TABLE, SEE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1168.

TABLE 4.504.2 - SEALANT VOC LIMIT
(Less Water and Less Exempt Compounds in Grams per Liter)

SEALANTS	VOC LIMIT
ARCHITECTURAL	250
MARINE DECK	760
NONMEMBRANE ROOF	300
ROADWAY	250
SINGLE-PLY ROOF MEMBRANE	450
OTHER	420
SEALANT PRIMERS	
ARCHITECTURAL	
NON-POROUS	250
POROUS	775
MODIFIED BITUMINOUS	500
MARINE DECK	760
OTHER	750

TABLE 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS[1,2,3]
GRAMS OF VOC PER LITER OF COATING, LESS WATER & LESS EXEMPT COMPOUNDS

COATING CATEGORY	VOC LIMIT
FLAT COATINGS	50
NON-FLAT COATINGS	100
NONFLAT-HIGH GLOSS COATINGS	150
SPECIALTY COATINGS	
ALUMINUM ROOF COATINGS	400
BASEMENT SPECIALTY COATINGS	400
BITUMINOUS ROOF COATINGS	50
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
INDUSTRIAL MAINTENANCE COATINGS	250
LOW SOLIDS COATINGS[3]	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 & UNDERCOATERS	100
STAINS	250
STONE CONSOLIDANTS	450
SWIMMING POOL COATINGS	340
TRAFFIC MARKING COATINGS	100
TUB & TILE REFINISH COATINGS	420
WATERPROOFING MEMBRANES	250
WOOD COATINGS	275
WOOD PRESERVATIVES	350
ZINC-RICH PRIMERS	340

1. GRAMS OF VOC PER LITER OF COATING, INCLUDING WATER & EXEMPT COMPOUNDS
2. THE SPECIFIED LIMITS REMAIN IN EFFECT UNLESS REVISED LIMITS ARE LISTED IN SUBSEQUENT COLUMNS IN THE TABLE.
3. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED BY THE CALIFORNIA AIR RESOURCES BOARD, ARCHITECTURAL COATINGS SUGGESTED CONTROL MEASURE, FEB. 1, 2008. MORE INFORMATION IS AVAILABLE FROM THE AIR RESOURCES BOARD.

TABLE 4.504.5 - FORMALDEHYDE LIMITS[1]
MAXIMUM FORMALDEHYDE EMISSIONS IN PARTS PER MILLION

PRODUCT	CURRENT LIMIT
HARDWOOD PLYWOOD VENEER CORE	0.05
HARDWOOD PLYWOOD COMPOSITE CORE	0.05
PARTICLE BOARD	0.09
MEDIUM DENSITY FIBERBOARD	0.11
THIN MEDIUM DENSITY FIBERBOARD[2]	0.13

1. VALUES IN THIS TABLE ARE DERIVED FROM THOSE SPECIFIED 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 93120.12.
2. THIN MEDIUM DENSITY FIBERBOARD HAS A MAXIMUM THICKNESS OF 5/16" (8 MM).

DIVISION 4.5 ENVIRONMENTAL QUALITY (continued)

X □ GC/OWNER **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 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

X □ GC/OWNER **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.

X □ GC/OWNER **4.504.3.2 Carpet adhesive.** All carpet adhesive shall meet the requirements of Table 4.504.1.

X □ GC/OWNER **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.

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

X □ GC/OWNER **4.504.5 COMPOSITE WOOD PRODUCTS.** Hardwood plywood, particleboard and medium density fiberboard composite wood products used in 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

X □ GC/OWNER **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:

1. Product certifications and specifications.
2. Chain of custody certifications.
3. 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 Engineered Wood Association, the Australian AS/NZS 2269, European 636 3S standards, and Canadian CSA 0121, CSA 0151, CSA 0153 and CSA 0325 standards.
5. Other methods acceptable to the enforcing agency.

4.505 INTERIOR MOISTURE CONTROL

4.505.1 General. Buildings shall meet or exceed the provisions of the *California Building Standards Code*.

□ GC/OWNER **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.

X □ GC/OWNER **4.505.2.1 Capillary break.** A capillary break shall be installed in compliance with at least one of the following:

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, ACI 302.2R-06.
2. Other equivalent methods approved by the enforcing agency.
3. A slab design specified by a licensed design professional.

X □ GC/OWNER **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 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.

Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying recommendations prior to enclosure.

4.506 INDOOR AIR QUALITY AND EXHAUST

X □ GC/OWNER **4.506.1 Bathroom exhaust fans.** Each bathroom shall be mechanically ventilated and shall comply with the following:

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 humidity control.
   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 adjustment.
   b. A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in)

Notes:

1. For the purposes of this section, a bathroom is a room which contains a bathtub, shower or tub/shower combination.
2. Lighting integral to bathroom exhaust fans shall comply with the *California Energy Code*.

4.507 ENVIRONMENTAL COMFORT

X □ GC/OWNER **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 acceptable.

CHAPTER 7
INSTALLER & SPECIAL INSPECTOR QUALIFICATIONS

702 QUALIFICATIONS

X □ GC/OWNER **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 responsibility 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.
2. Public utility training programs.
3. Training programs sponsored by trade, labor or statewide energy consulting or verification organizations.
4. Programs sponsored by manufacturing organizations.
5. Other programs acceptable to the enforcing agency.

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

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

Notes:

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

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

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

X □ GC/OWNER **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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REN. 4/30/25
STATE OF CALIFORNIA

SACRAMENTO COUNTY
ACCESSORY DWELLING UNIT) PLANS
PERMIT READY ADU (ACCES
MODEL A2

No.	Date	Description

Sheet Name:
CALGREEN CHECKLIST (CONT)

Scale:

Date:
MAR 2024

Drawn By:
JMS

Approved By:
LM

Sheet Number:
A-0.2

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AGING IN PLACE DESIGN AND FALL PROTECTION (2022 CRC R327):

1. INTERIOR DOORS

- AT LEAST ONE BATHROOM AND ONE BEDROOM ON THE ENTRY LEVEL SHALL PROVIDE A DOORWAY WITH A NET CLEAR OPENING OF NOT LESS THAN 32 INCHES, MEASURED WITH THE DOOR POSITIONED AT AN ANGLE OF 90 DEGRESS FROM THE CLOSED POSITION; OR, IN THE CASE OF A TWO- OR THREE-STORY SINGLE FAMILY DWELLING, ON THE SECOND OR THIRD FLOOR OF THE DWELLING IF A BATHROOM OR BEDROOM IS NOT LOCATED ON THE ENTRY LEVEL, PER 2022 CRC R327.1.3

2. DOORBELL BUTTONS

- DOORBELL BUTTONS OR CONTROLS, WHEN INSTALLED, SHALL NOT EXCEED 48 INCHES ABOVE EXTERIOR FLOOR OR LANDING, MEASURED FROM THE TOP OF THE DOORBELL BUTTON ASSEMBLY. WHERE DOORBELL BUTTONS INTEGRATED WITH OTHER FEATURES ARE REQUIRED TO BE INSTALLED ABOVE 48 INCHES MEASURED FROM THE EXTERIOR FLOOR OR LANDING, A STANDARD DOORBELL BUTTON OR CONTROL SHALL ALSO BE PROVIDED AT A HEIGHT NO EXCEEDING 48 INCHES ABOVE EXTERIOR FLOOR OR LANDING, MEASURED FROM THE TOP OF THE DOORBELL BUTTON OR CONTROL, PER 2022 CRC R327.1.4

3. ELECTRICAL RECEPTACLE OUTLET, SWITCH, AND CONTROL HEIGHTS

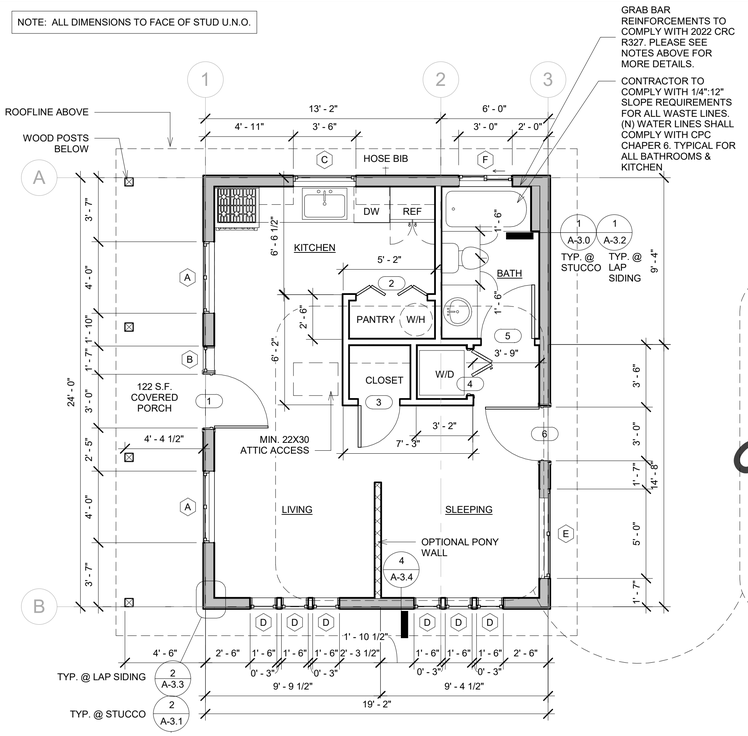
- ALL ELECTRICAL RECEPTACLE OUTLET, SWITCH AND CONTROL HEIGHTS TO BE LOCATED NO MORE THAN 48 INCHES MEASURED FROM THE TOP OF THE OUTLET BOX AND NOT LESS THAN 15 INCHES ABOVE THE FINISH FLOOR, PER 2022 CRC R327.1.2

4. REINFORCEMENT FOR GRAB BARS

- AT LEAST ONE BATHROOM ON THE ENTRY LEVEL SHALL BE PROVIDED WITH REINFORCEMENT INSTALLED IN ACCORDANCE WITH THIS SECTION. WHERE THERE IS NO BATHROOM ON THE ENTRYL LEVEL, AT LEASET ONE BATHROOM ON THE SECOND OR THIRD FLOOR OF THE DWELLING SHALL COMPLY WITH THIS SECTION.

A. REINFORCEMENT SHALL BE SOLID LUMBER OR OTHER CONSTRUCTION MATERIALS APPROVED BY THE ENFORCING AGENCY.
B. REINFORCMENT SHALL NOT BE LESS THAN 2 BY 8 INCH NOMINAL LUMBER OR OTHER CONSTRUCTION MATERIAL PROVIDING EQUAL HEIGHT AND LOAD CAPACITY. REINFORCEMENT SHALL BE LOCATED BETWEEN 32 INCHES AND 39 1/4 INCHES ABOVE THE FINISHED FLOOR FLUSH WITH THE WALL FRAMING.
C. WATER CLOSET REINFORCEMENT SHALL BE INSTALLED ON BOTH SIDE WALLS OF THE FIXTURE OR ONE SIDE WALL AND THE BACK WALL.
D. SHOWER REINFORCEMENT SHALL BE CONTINUOUS WHERE WALL FRAMING IS PROVIDED.
E. BATHTUB AND COMBINATION BATHTUB/SHOWER REINFORCEMENT SHALL BE CONTINUOUS ON EACH END OF THE BATHTUB AND THE BACK WALL. ADDITIONALLY, BACK WALL REINFORCEMENT FOR A LOWER GRAB BAR SHALL BE PROVIDED WITHT HE BOTTOM EDGE LOCATED NO MORE THAN 6 INCHES ABOVE THE BATHTUB RIM

NOTE: ALL DIMENSIONS TO FACE OF STUD U.N.O.

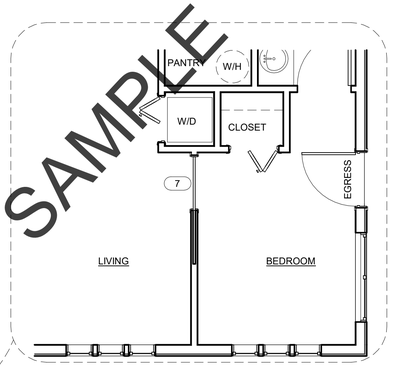


1 MODEL A2 FLOOR PLAN
1/4" = 1'-0"

2X6 EXTERIOR WALL: 3 COAT STUCCO EXTERIOR - FINE SAND FINISH, GYP. BOARD INTERIOR. NOTE: HARDIE LAP SIDING IS A NON-COMBUSTIBLE SIDING MATERIAL AND COMPLIES WITH THE REQUIREMENTS OF R337.7.3

2X4 INTERIOR WALL: GYP. BOARD BOTH SIDES.

WALL LEGEND
1/4" = 1'-0"



2 1 BEDROOM FLOOR PLAN OPTION
1/4" = 1'-0"

Door Schedule							
Mark	Width	Height	Location	Description	Application	Hardware	Glazing
1	3' - 0"	6' - 8"	ENTRY		EXTERIOR	ENTRY	
2	4' - 0"	7' - 0"	PANTRY	BI-FOLD	INTERIOR		
3	2' - 4"	6' - 8"	CLOSET		INTERIOR		
4	2' - 6"	7' - 0"	LAUNDRY	BI-FOLD (LOUVERED)	INTERIOR		
5	3' - 0"	6' - 8"	BATHROOM	FLAT PANEL	INTERIOR	PRIVACY	
6	3' - 0"	6' - 8"	REAR ENTRY		EXTERIOR	ENTRY	OBSCURE GLASS
7	3' - 0"	6' - 8"	OPTIONAL BEDROOM	POCKET	INTERIOR	PRIVACY	

Window Schedule					
Type Mark	Count	Width	Height	Sill Height	Operation
A	2	4' - 0"	4' - 0"	3' - 0"	SINGLE HUNG (DOUBLE)
B	1	1' - 6"	6' - 8"	0' - 3"	FIXED
C	1	3' - 6"	3' - 6"	3' - 6"	SINGLE HUNG
D	6	1' - 6"	1' - 6"	5' - 6"	FIXED
E	1	5' - 0"	4' - 0"	3' - 0"	SINGLE HUNG (DOUBLE)
F	1	3' - 0"	1' - 6"	5' - 6"	SLIDER

- WASHER/DRYER CLOSET DOOR NOTE: A MINIMUM OF ONE SQUARE INCH OF OPENING SHALL BE PROVIDED PER 1,000 BTU'S OF EQUIPMENT INPUT. A MINIMUM OF ONE 100 S.I. OPENING WITHIN 12 INCHES OF THE FLOOR AND WITHIN 12 INCHES FROM THE TOP OF THE DOOR SHALL BE PROVIDED. (CMC 701.5)

EXTERIOR DOOR NOTES:

- ENTRY/EXIT DOOR MUST OPEN OVER A LANDING NOT MORE THAN 1.5" BELOW THE THRESHOLD (CRC311.3.1)

- THERE SHALL BE A LANDING OR FLOOR ON EACH SIDE OF EACH EXTERIOR DOOR. THE WIDTH OF EACH LANDING SHALL NOT BE LESS THAN THE DOOR SERVED.

- EVERY LANDING SHALL HAVE A MIN. DIMENSION OF 36 INCHES MEASURED IN THE DIRECTION OF TRAVEL (CRC311.3)

WINDOW NOTES:

- ALL WINDOWS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS, INCLUDING FLASHING

- WINDOWS IN BEDROOMS SHALL MEET ALL OF THE FOLLOWING EMERGENCY ESCAPE AND RESCUE REQUIREMENTS (CRC310.1):
  MIN 5.7 S.F. OF OPENABLE AREA (5.0 S.F. FOR GRADE LEVEL BEDROOMS)
  MIN 20" CLEAR WIDTH AND 24" CLEAR HEIGHT WHEN OPEN
  MAX SILL HEIGHT OF 44" FROM FINISHED FLOOR TO BOTTOM OF THE CLEAR OPENING

BATH & KITCHEN NOTES:

- PROVIDE AN APPROVED DISHWASHER AIR GAP FITTING AS PER CPC 807.4

- MAX FLOW RATE OF KITCHEN FAUCETS SHALL NOT EXCEED 1.8 GALLONS PER MIN AT 60 PSI (CAL GREEN 4.303.1.4.4)

- WHERE A FIXTURE COMES IN CONTACT WITH THE WALL OR FLOOR, THE JOINT BETWEEN THE FIXTURE AND THE WALL OR FLOOR SHALL BE MADE WATER TIGHT AS PER CPC 402.2

- THE INSTALLATION OF A LISTED COOKING APPLIANCE OR MICROWAVE OVEN OVER A LISTED COOKING APPLIANCE SHALL CONFORM TO THE CONDITIONS OF THE UPPER APPLIANCE'S LISTING AND THE MANUF. INSTALLATION INSTRUCTIONS.

- FIXTURES SHALL BE SPACED IN ACCORDANCE WITH THE CALIFORNIA PLUMBING CODE.

- NO WATER CLOSET OR BIDET SHALL BE SET CLOSER THAN 15 INCHES FROM ITS CENTER TO A SIDE WALL OR OBSTRUCTION NOR CLOSER THAN 30 INCHES CENTER TO CENTER TO A SIMILAR FIXTURE. THE CLEAR SPACE IN FRONT OF A WATER CLOSET, LAVATORY, OR BIDET SHALL BE NOT LESS THAN 24 INCHES.

- BATHTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FURNISHED WITH A NONABSORBENT SURFACE. SUCH SURFACES SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 6 FT ABOVE THE FLOOR (CRC 307.2).

WATER HEATER NOTES:

- MANUFACTURE'S INSTALLATION INSTRUCTIONS FOR THE WATER HEATER AND ALL OTHER LISTED APPLIANCES SHALL BE AVAILABLE TO THE FIELD INSPECTOR AT THE TIME OF INSPECTIONS PER 2022 CRC SEC. R106.

- PER CF1R: NEEA RATED WATER HEATER HEAT PUMP MODEL, RHEEM PROPH 40T2R H37515

WINDOW INFORMATION:

FRAME: VINYL
U VALUE: .29
SHGC: .21
ENERGY STAR CERTIFIED: YES
LOW E GLASS: YES

LIGHT & VENTILATION CALCULATIONS

- ALL HABITABLE ROOMS ARE REQUIRED TO HAVE NATURAL LIGHT SIZED TO A MIN. OF 8% OF THE FLOOR AREA AND VENTILATION SIZED TO A MIN OF 4% OF THE FLOOR AREA.

STUDIO:
460 S.F. X .08 = 36.8 S.F. NATURAL LIGHT AREA REQ'D ; 94.65 S.F. PROVIDED
460 S.F. X .04 = 18.4 S.F. VENTILATION AREA REQ'D ; 46.5 S.F. PROVIDED

OPTIONAL BEDROOM 1:
108 S.F. X .08 = 8.64 S.F. NATURAL LIGHT AREA REQ'D ; 20 S.F. PROVIDED
108 S.F. X .04 = 4.32 S.F. VENTILATION AREA REQ'D ; 5 S.F. PROVIDED VIA OPERATIONAL WINDOW

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REN. 4/30/25
STATE OF CALIFORNIA

SACRAMENTO COUNTY PERMIT READY ADU (ACCESSORY DWELLING UNIT) PLANS MODEL A2

No.	Date	Description

Sheet Name: FLOOR PLAN
Scale: 1/4" = 1'-0"
Date: MAR 2024
Drawn By: IS
Approved By: LM
Sheet Number: A-1.0

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NOTE: UNITS WILL BE FULLY ELECTRIC

PROVIDE POWER FOR MINI-SPLIT CONDENSER PER MANUF. SPECS

PROVIDE POWER FOR ELEC. WATER HEATER PER MANUF. SPECS

ELECTRICAL DISCONNECT

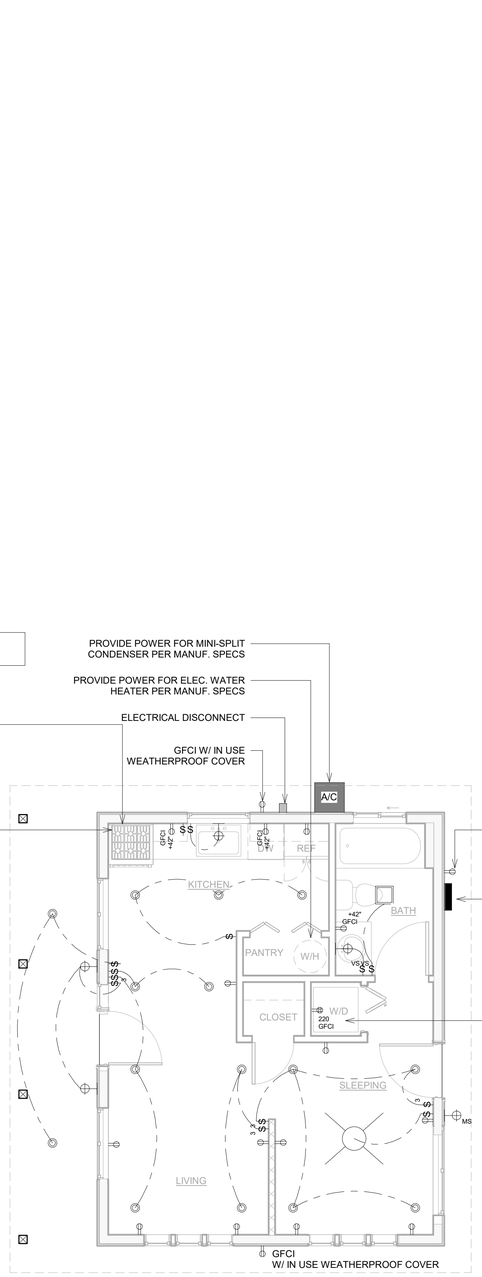
PROVIDE POWER FOR ELEC. RANGE

GFCI W/ IN USE WEATHERPROOF COVER

PROVIDE POWER FOR MICRO HOOD PER MANUF. SPECS. KITCHEN HOOD SHALL DELIVER VENTILATION AIRFLOW AT 100 OR MORE CFM

NOTE: EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS OF MORE THAN 50 VOLTS SHALL HAVE A POSITIVE MEANS OF DISCONNECT ADJACENT TO AND IN SIGHT FROM THE EQUIPMENT SERVED. A 120 VOLT RECEPTACLE SHALL BE LOCATED WITHIN 25 FEET OF THE EQUIPMENT FOR SERVICE AND MAINTENANCE PURPOSES.

IF NEW ELECTRIC SERVICE PROPOSED OWNER TO COORDINATE W/ UTILITY COMPANY



GFCI W/ IN USE WEATHERPROOF COVER

225 AMP MAIN ELECTRICAL PANEL OR 225 MINIMUM BUSBAR FOR SUBPANEL AT ADU

NOTE: DRYER EXHAUST SHALL COMPLY WITH CMC 504.4

NOTE: ALL ELECTRICAL RECEPTACLE OUTLET, SWITCH AND CONTROL HEIGHTS TO BE LOCATED NO MORE THAN 48 INCHES MEASURED FROM THE TOP OF THE OUTLET BOX AND NOT LESS THAN 15 INCHES ABOVE THE FINISH FLOOR, PER 2022 CRC R327.1.2

1 MODEL A2 POWER PLAN
1/4" = 1'-0"

S	SMOKE DETECTOR/CARBON MONOXIDE ALARM NOTE: WHERE ALARM IS INSTALLED WITHIN 20' OF A COOKING APPLIANCE PROVIDE A PHOTOELECTRIC ALARM PER CRC 314.3.3
$	SINGLE POLE SWITCH NOTE: PROVIDE DIMMER IN KITCHEN BEDROOMS & LIVING AREAS
$VS	SINGLE POLE VACANCY SENSOR SWITCH
$3	3-WAY SWITCH
	DUPLEX OUTLET, ARCH FAULT PROTECTED & TAMPER PROOF
	220 VOLT OUTLET
GFCI	GFCI DUPLEX OUTLET, ARC FAULT & TAMPER PROOF. NOTE: PROVIDE WEATHER-PROOF COVER FOR ALL EXTERIOR OUTLETS.
	6" RECESSED LED CAN
W	SUITABLE FOR WET LOCATION 6" RECESSED LED CAN
	WALL MOUNTED LIGHT FIXTURE
MS	WALL MOUNTED LIGHT FIXTURE W/ MOTION SENSOR
	CEILING MOUNTED LIGHT FIXTURE
	CEILING FAN/LIGHT COMBINATION 'W' DENOTES WET LOCATION RATED FAN
	PANASONIC WHISPER CEILING VENTILATION FAN/LIGHT COMBO W/ HUMIDISTAT. NOTE: NEWLY INSTALLED BATHROOM EXHAUST FANS SHALL BE ENERGY STAR COMPLIANT AND SHALL BE DUCTED TO TERMINATE TO THE OUTSIDE OF THE BUILDING. BATHROOM EXHAUST FAN SHALL DELIVER VENTILATION AIRFLOW AT 50 OR MORE CFM

POWER PLAN LEGEND
1/4" = 1'-0"

ELECTRICAL NOTES:

1. PROVIDE 2 OR MORE 20-AMP SMALL APPLIANCE BRANCH CIRCUITS TO SERVE ALL COUNTERTOP, WALL AND FLOOR RECEPTACLES IN THE KITCHEN, PANTRY, BREAKFAST ROOM, DINING ROOM, OR SIMILAR AREAS. RECEPTACLE OUTLETS SHALL BE INSTALLED AT EACH WALL, ISLAND, AND PENINSULA COUNTER SPACE IN KITCHENS AND DINING ROOMS. SUCH CIRCUITS SHALL HAVE NO OTHER OUTLETS.

2. PROVIDE GFCI PROTECTION TO ALL 125 VOLT, 15 AND 20 AMP RECEPTACLES SERVING COUNTERTOP SURFACES IN KITCHENS, WITHIN 6 FEET OF LAUNDRY, UTILITY AND WET BAR SINKS, IN BATHROOMS, GARAGES AND ACCESSORY BUILDINGS, CRAWL SPACES, UNFINISHED BASEMENTS AND BOATHOUSES.

3. RECEPTACLE OUTLETS SHALL BE INSTALLED SO THAT NO POINT ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN 6 FEET MEASURED HORIZONTALLY, FROM AN OUTLET IN THAT SPACE. RECEPTACLE OUTLETS ARE REQUIRED IN WALLS 2 FEET OR GREATER. HALLWAYS OF 10 FEET OR MORE IN LENGTH SHALL HAVE AT LEAST ONE RECEPTACLE OUTLET.

4. NEW 120-VOLT, SINGLE PHASE, 15- AND 20 AMPERE BRANCH CIRCUITS SUPPLYING OUTLETS OR DEVICES INSTALLED IN DWELLING UNIT KITCHEN, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED ARC-FAULT CIRCUIT INTERRUPTER (AFCI), COMBINATION-TYPE, INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT. REFERENCE CEC ART. 210.12(A).

5.DWELLINGS WITH DIRECT GRADE LEVEL ACCESS SHALL HAVE AT LEAST ONE RECEPTACLE OUTLET WITHIN 6.5 FEET OF GRADE LEVEL AT THE FRONT AND BACK OF THE DWELLING. ALL 125 VOLT, 15 AND 20 AMP, RECEPTACLES INSTALLED OUTDOORS SHALL BE GFCI PROTECTED. RECEPTACLES INSTALLED OUTDOORS IN AN EXTERIOR WET LOCATION SHALL HAVE AN ENCLOSURE THAT IS WEATHERPROOF WHETHER OR NOT THE ATTACHMENT PLUG CAP IS INSERTED.

6. AT LEAST ONE WALL SWITCH-CONTROLLED LIGHTING OUTLET SHALL BE INSTALLED IN EVERY HABITABLE ROOM, IN BATHROOM, HALLWAYS, STAIRWAYS, ATTACHED GARAGES, DETACHED GARAGES WITH ELECTRIC POWER, AND AT OUTDOOR ENTRANCES OR EXITS.

7. LOCATION AND INSTALLATION REQUIREMENTS FOR LUMINARIES SHALL COMPLY WITH ALL APLLICABLE PROVISIONS OF THE 2022 CALIFORNIA ELECTRICAL CODE ARTICLE 410. FIXTURES SHALL BE SECURELY SUPPORTED.

8. A FIXTURE THAT WEIGHS MORE THAN 6 POUNDS OR EXCEEDS 16 INCHES IN ANY DIMENSION SHALL NOT BE SUPPORTED BY THE SCREW SHELL OF A LAMP HOLDER.

9. OUTLET BOXES OR OUTLET BOX SYSTEMS USED AS THE SOLE SUPPORT OF A CEILING-SUSPENDED FAN SHALL BE LISTED AND MARKED BY THE MANUF. AS SUITABLE FOR THIS PURPOSE. THE REQUIRED MARKING SHALL INCLUDE THE MAX. WEIGHT TO BE SUPPORTED FOR CEILING FANS THAT WEIGH MORE THAN 35 LBS.

10. TYPE NM AND NMS CABLES SHALL NOT BE PERMITTED IN WET OR DAMP LOCATIONS.

11. FLEXIBLE METAL CONDUIT (FMC) IS NOT PERMITTED IN A WET LOCATION

12. LUMINAIRES INSTALLED IN WET OR DAMP LOCATIONS SHALL BE INSTALLED SUCH THAT WATER CANNOT ENTER OR ACCUMULATE IN WIRING COMPARTMENTS, LAMPHOLDERS, OR OTHER ELECTRICAL PARTS. ALL LUMINAIRES INSTALLED IN WET LOCATIONS SHALL BE MARKED, "SUITABLE FOR WET LOCATIONS." ALL LUMINAIRES INSTALLED IN DAMP LOCATIONS SHALL BE MARKED "SUITABLE FOR WET LOCATIONS" OR "SUITABLE FOR DAMP LOCATIONS."

13. ALL 15 AND 20 AMPERE, 120 AND 125 VOLT EXTERIOR RECEPTACLES SHALL BE PROTECTED BY AN "IN-USE" WEATHERPROOF COVER.

14. BATHROOM RECEPTACLES WILL BE SUPPLIED BY AT LEAST ONE 20 AMP BRANCH CIRCUITS.

15. ALL NEW NON-LOCKING-TYPE 125-VOLT, 15- AND 20-AMPERE RECEPTACLES SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES

16. COUNTER TOP RECEPTACLES IN THE KITCHEN, NOOK PANTRIES, DINING ROOMS AND SIMILAR AREAS SHALL BE SPACED SUCH THAT ANY POINT ALONG THE WALL AT THE COUNTER LEVEL IS NOT MORE THAN 2 FEET FROM A RECEPTACLE. ANY COUNTER SPACE MORE THAN 12"" WIDE SHALL BE PROVIDED WITH A RECEPTACLE. PENINSULA OR ISLAND COUNTERS ARE TO BE PROVIDED WITH AT LEAST ONE RECEPTACLE, WHERE A RANGE, COUNTER-MOUNTED COOKING UNIT, OR SINK IS INSTALLED IN THE ISLAND WITH LESS THAN 12" OF COUNTER SPACE BEHIND THE FIXTURES, THE ISLAND OR PENINSULAR IS CONSIDERED AS TWO COUNTER SPACES. THESE RECEPTACLES ARE TO BE LOCATED NO MORE THAN 12" BELOW THE COUNTERTOP WHERE THE COUNTERTOP DOES NOT EXTEND MORE THAN 6" BEYOND ITS SUPPORT BASE. COUNTERTOPS INTERRUPTED BY RANGES, SINKS, OR OTHER APPLIANCES SHALL BE CONSIDERED SEPARATE COUNTERS.

17. GFIC PROTECTION IS REQUIRED FOR ALL 15A AND 20A, 125V RECEPTACLES INSTALLED IN THE FOLLWING LOCATIONS PER 2019 CEC ART 210.8(A)
- SINKS - GFCI PROTECTION FOR RECEPTACLES IN REQUIRED WITHIN AN ARC MEASUREMENT OF 6FT. FROM THE OUSIDE EDGE OF A SINK.
- BATH TUBS OR SHOWER STALLS - GFCI PROTECTION IS REQUIRED FOR RECEPTACLES LOCATED WITHIN 6FT. OF THE OUTSIDE EDGE OF A BATHTUB OR SHOWER STALL.
- LAUNDRY AREAS - RECEPTACLES INSTALLED IN LAUNDRY AREAS OF A DWELLING UNIT SHALL BE GFCI PROTECTED.
- DWELLING UNIT DISHWASHERS - OUTLETS (NOT REQUIRED FOR A HARDWIRED APPLIANCE) SUPPLYING DISHWASHERS IN A DWELLING UNIT MUST BE GFCI PROTECTED PER 2019 CEC ART. CEC 210.8

18. ALL PERMANENTLY INSTALLED LUMINAIRES IN DWELLING UNITS SHALL BE HIGH EFFICACY AND HAVE MANUAL ON/OFF CONTROLS AND VACANCY SENSORS OR DIMMERS EXCEPT FOR HALLWAYS & CLOSETS LESS THAN 70 SQ. FT.

19. EXHAUST FANS MUST BE SWITCHED SEPARATE FROM LIGHTING OR UTILIZE A DEVICE WHERE LIGHTING CAN BE TURNED OFF WHILE THE FAN IS RUNNING. EXCLUDES KITCHEN EXHAST HOODS.

20. UNDER CABINET MUST BE SWITCHED SEPARATE FROM ALL OTHER LIGHTING.

21. PERMANENTLY INSTALLED LIGHTING IN CABINETS MUST BE HIGH EFFICACY.

22. LIGHTING IN BATHROOMS, GARAGES, LAUNDRY ROOMS, AND UTILITY ROOMS MUST HAVE AT LEAST ONE LUMINAIR CONTROLLED BY VACANCY SENSORS.

23. PERMANENTLY INSTALLED OUTDOOR LIGHTING ATTACHED TO RESIDENCE OR OTHER BUILDING MUST BE HIGH EFFICACY AND MUST BE CONTROLLED BY A MANUAL ON AND OFF SWITCH AND ONE OF THESE CONTROL TYPES:
- PHOTO-CONTROL AND MOTION SENSOR OR
- PHOTO-CONTROL AND AUTOMATIC TIME SWITCH CONTROL OR ASTRONOMICAL TIME CLOCK THAT AUTOMATICALLY TURNS OUTDOOR LIGHTING OFF DURING DAYLIGHT HOURS OR
- ENERGY MANAGMENT CONTROL SYSTEM (EMCS) THAT PROVIDES THE FUNCTIONALITY OF AN ASTRONOMICAL TIME CLOCK.

SMOKE ALARM NOTES:

1. ALL SMOKE ALARMS SHALL BE LISTED IN ACCORDANCE WITH UL 217 AND INSTALLED IN ACCORDANCE WITH CODE SECTION R314 AND THE HOUSEHOULD FIRE WARNING EQUIPMENT PROVISIONS OF NFPA 72.

2. SMOKE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:
- IN EACH SLEEPING ROOM.
- OUTSIDE EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS.

3. WHEN MORE THAN ONE SMOKE ALARM IS REQUIRED TO BE INSTALLED WITHIN AN INDIVIDUAL DWELLING UNIT THE ALARM DEVICES SHALL BE INTERCONNECTED IN SUCH A MANNER THAT THE ACTUATION OF ONE ALARM WILL ACTIVATE ALL OF THE ALARMS INTHE INDIVIDUAL UNIT.

4. SMOKE ALARMS SHALL RECEIVE THEIR PRIMARY POWER FROM THE BUILDING WIRING PROVIDED THAT SUCH WIRING IS FROM A COMMERICAL SOURCE AND SHALL BE EQUIPPED WITH A BACKUP BATTERY.

CARBON MONOXIDE ALARM NOTES:

1. SINGLE AND MULTIPLE STATION CARBON MONOXIDE ALARMS SHALL BE LISTED AS COMPLYING WITH THE REQUIREMENTS OF UL2034. CARBON MONOXIDE DETECTORS SHALL BE LISTED AS COMPLYING WITH THE REQUIREMENTS OF UL2075. CARBON MONOXIDE ALARMS AND DETECTORS SHALL BE INSTALLED IN ACCORDANCE WITH R315, THE CURRENT EDITION OF NFPA 720, AND THE MANUF. INSTALLATION INSTRUCTIONS.

2. CARBON MONOXIDE ALARMS SHALL BE INSTALLED IN THE FOLLOWING LOCATIONS:
- OUTSIDE EACH SEPARATE DWELLING UNIT SLEEPING AREA IN THE IMMEDIATE VICINITY OF BEDROOMS.
- ON EVERY LEVEL OF A DWELLING UNIT INCLUDING BASEMENTS.

3. WHERE MORE THAN ONE CARBON MONOXIDE ALARM IS REQUIRED TO BE INSTALLED WITHIN THE DWELLING UNIT OR WITHIN A SLEEPING UNIT THE ALARM SHALL BE INTERCONNECTED IN A MANNER THAT ACTIVATION OF ONE ALARM SHALL ACTIVATE ALL OF THE ALARMS IN THE INDIVIDUAL UNIT.

4. CARBON MONOXIDE ALARMS SHALL RECEIVE THEIR PRIMARYNPOWER FROM THE BUILDING WIRING PROVIDED THAT SUCH WIRING IS FROM A COMMERICAL SOURCE AND SHALL BE EQUIPPED WITH A BACKUP BATTERY.

5. CARBON MONOXIDE ALARMS COMBINED WITH SMOKE ALARMS SHALL COMPLY WITH SECTION R315, ALL APPLICABLE STANDARDS, AND REQUIREMENTS FOR LISTING AND APPROVAL BY THE OFFICE OF THE STATE FIRE MARSHALL, FOR SMOKE ALARMS.

ENERGY COMPLIANCE:

- SOLAR READY BUILDINGS, SHALL MEET THE REQUIREMENTS OF SECTION 110.10 APPLICABLE TO THE BUILDING PROJECT

- ENERGY STORAGE SYSTEMS (ESS) READY. ALL SINGLE FAMILY RESIDENCES THAT INCLUDE ONE OR TWO DWELLING UNITS SHALL MEET THE FOLLOWING. ALL ELECTRICAL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE:

1. AT LEAST ONE OF THE FOLLOWING SHALL BE PROVIDED:
A. ESS READY INTERCONNECTION EQUIPMENT WITH A MINIMUM BACKED-UP CAPACITY OF 60 AMPS AND A MINIMUM OF FOUR ESS-SUPPLIED BRANCH CIRCUITS, OR
B. A DEDICATED RACEWAY FROM THE MAIN SERVICE TO A PANELBOARD (SUBPANEL) THAT SUPPLIES THE BRANCH CIRCUITS IN SECTION 150.0(S)(2). ALL BRANCH CIRCUITS ARE PERMITTED TO BE SUPPLIED BY THE MAIN SERVICE PANEL PRIOR TO THE INSTALLATION OF AN ESS. THE TRADE SIZE OF THE RACEWAY SHALL BE NOT LESS THAN 1 INCH. THE PANELBOARD THAT SUPPLIES THE BRANCH CIRCUITS (SUBPANEL) MUST BE LABELED "SUBPANEL" SHALL INCLUDE ALL BACKED-UP LOAD CIRCUITS.

2. A MINIMUM OF FOUR BRANCH CIRCUITS SHALL BE IDENTIFIED AND HAVE THERE SOURCE OF SUPPLY COLLOCATED AT A SINGLE PANELBOARD SUITABLE TO BE SUPPLIED BY THE ESS. AT LEAST ONE CIRCUIT SHALL SUPPLY THE REFRIGERATOR, ONE LIGHTING CIRCUIT SHALL BE LOCATED NEAR THE PRIMARY EGRESS AND AT LEAST ONE CIRCUIT SHALL SUPPLY A SLEEPING ROOM RECEPTACLE OUTLET.

3. THE MAIN PANELBOARD SHALL HAVE A MINIMUM BUSBAR RATING OF 225 AMPS

4. SUFFICIENT SPACE SHALL BE RESERVED TO ALLOW FUTURE INSTALLATION OF A SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH WITHIN 3 FEET OF MAIN PANELBOARD. RACEWAYS SHALL BE INSTALLED BETWEEN THE PANELBOARD AND THE SYSTEM ISOLATION EQUIPMENT/TRANSFER SWITCH LOCATION TO ALLOW THE CONNECTION OF BACKUP POWER SOURCE.

- ELECTRIC COOKTOP READY. SYSTEMS USING GAS OR PROPANE COOKTOP TO SERVE INDIVIDUAL DWELLING UNITS SHALL INCLUDE THE FOLLOWING:

1. A DEDICATED 240 VOLT BRANCH CIRCUIT WIRING SHALL BE INSTALLED WITHIN 3 FEET FROM THE COOKTOP AND ACCESSIBLE TO THE COOKTOP WITH NO OBSTRUCTIONS. THE BRANCH CIRCUIT CONDUCTORS SHALL BE RATED AT 50 AMPS MINIMUM. THE BLANK COVER SHALL BE INDENTIFIED AS "240V READY." ALL ELECTRICAL COMPONENTS SHALL BE INSTALLED IN ACCORDANCE WITH THE CALIFORNIA ELECTRICAL CODE.

2. THE MAIN ELECTRICAL SERVICE PANEL SHALL HAVE A RESERVED SPACE TO ALLOW FOR THE INSTALLATION OF A DOUBLE POLE CIRCUIT BREAKER FOR A FUTURE ELECTRIC COOKTOP INSTALLATION. THE RESERVED SPACE SHALL BE PERMANENTLY MARKED AS "FOR FUTURE 240V USE."

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SACRAMENTO COUNTY PERMIT READY ADU (ACCESSORY DWELLING UNIT) PLANS MODEL A2

No.	Date	Description

Sheet Name: POWER PLAN

Scale: 1/4" = 1'-0"
Date: MAR 2024
Drawn By: IS
Approved By: LM

Sheet Number: A-1.1

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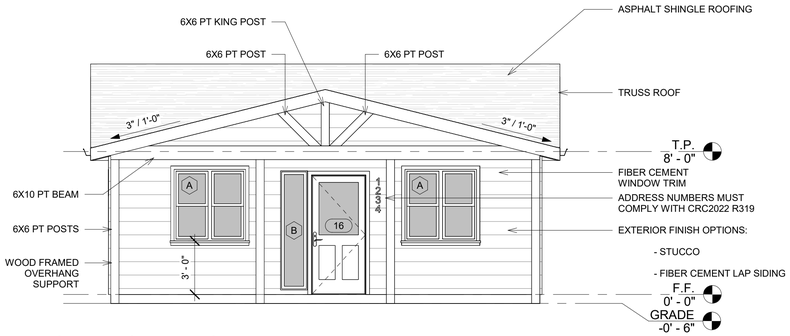
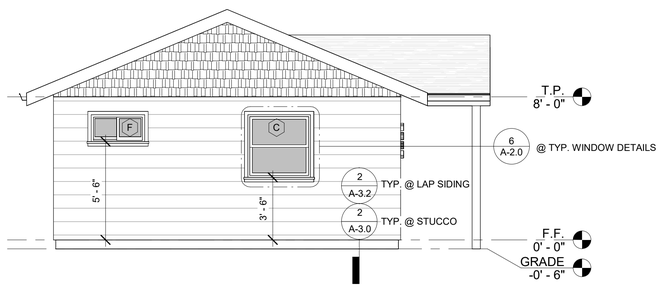


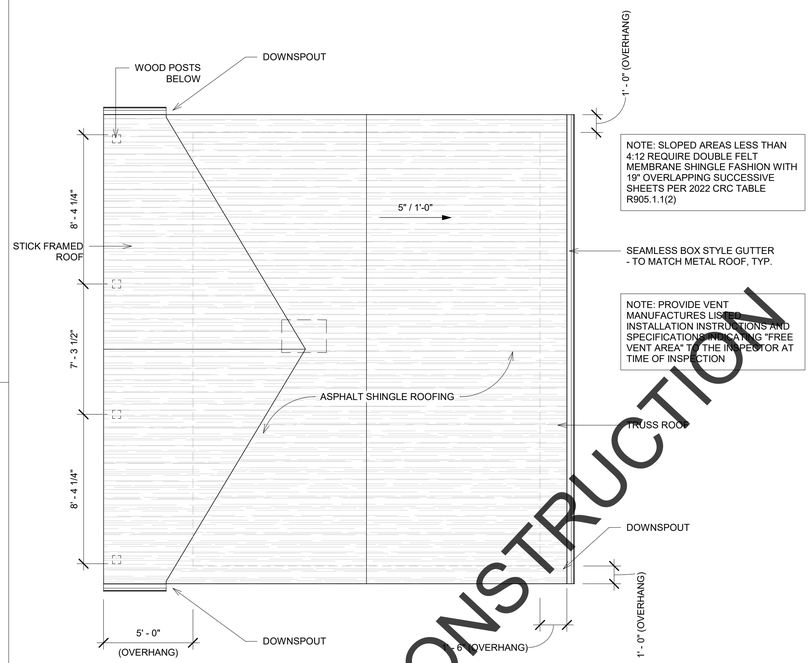
1 MODEL A2 FRONT ELEVATION
1/4" = 1'-0"

2 MODEL A2 REAR ELEVATION
1/4" = 1'-0"

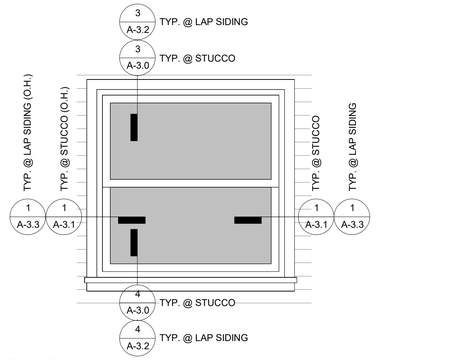
3 MODEL A2 SIDE (RIGHT) ELEVATION
1/4" = 1'-0"



4 MODEL A2 SIDE (LEFT) ELEVATION
1/4" = 1'-0"



5 MODEL A2 ROOF PLAN
1/4" = 1'-0"



6 WINDOW DETAIL KEY
3/4" = 1'-0"

ADDRESS NUMBER NOTES:

- THE ADDRESS IDENTIFICATION SHALL BE LEGIBLE AND PLACED IN A POSITION THAT IS VISIBLE FROM THE STREET OR ROAD FRONTING THE PROPERTY.

- ADDRESS IDENTIFICATION CHARACTERS SHALL CONTRAST WITH THEIR BACKGROUND.

- ADDRESS NUMBERS SHALL BE ARABIC NUMBERS OR ALPHABETICAL LETTERS. NUMBERS SHALL NOT BE SPELLED OUT.

- EACH CHARACTER SHALL BE NOT LESS THAN 4 INCHES IN HEIGHT WITH A STROKE WIDTH OF NOT LESS THAN 0.5 INCH.

- WHERE REQUIRED BY THE FIRE CODE OFFICIAL, ADDRESS IDENTIFICATION SHALL BE PROVIDED IN ADDITIONAL APPROVED LOCATIONS TO FACILITATE EMERGENCY RESPONSE.

- WHERE ACCESS IS BY MEANS OF A PRIVATE ROAD AND THE BUILDING ADDRESS CANNOT BE VIEWED FROM THE PUBLIC WAY, A MONUMENT, POLE OR OTHER SIGN OR MEANS SHALL BE USED TO IDENTIFY THE STRUCTURE. ADDRESS IDENTIFICATION SHALL BE MAINTAINED. CRC 2022 R319

ROOF PLAN NOTES:

- THE MIN. NET FREE VENTILATION AREA SHALL BE 1/150 OF THE AREA OF THE VENTED SPACE.

ENCLOSED RAFTER AREA:
460 S.F./150 = 3.06 S.F. = 440.64 S.I. NET FREE VENTILATION AREA REQUIRED

ASPHALT SHINGLE ROOFING VENTILATION PROVIDED

UPPER ROOF VENTILATION: RIDGE VENT
24'-3" (24.25') LINEAR FEET OF RIDGE VENT
VENT AREA OF RIDGE VENT: 12.5 S.I. PER LINEAR FOOT
24.25' X 12.5 = 303.1 S.I. VENTILATION FROM A 24'-3" LONG RIDGE VENT

LOWER ROOF VENTILATION: O'HAGIN LOW PROFILE ROOF VENTS
137.54 S.I./72 S.I. PER VENT = 1.9 = 2 ROOF VENTS NEEDED
144 S.I. VENTILATION FROM 2 ROOF VENTS

TOTAL VENTILATION PROVIDED = 447.1 S.I. OF NET FREE VENTILATION

ROOFING NOTES:

- ROOFING MATERIAL TO BE ASPHALT SHINGLE. THE INSTALLATION OF ASPHALT SHINGLE ROOFING SHALL COMPLY WITH THE PROVISIONS OF R905.2

- ASPHALT SHINGLE UNDERLAYMENT TYPE SHALL BE ONE OF THE FOLLOWING:

- ASTM D226 TYPE I
- ASTM D4869 TYPE I
- ASTM D6757

- GUTTERS & DOWNSPOUTS TO BE BOX STYLE. COLOR TO MATCH EXTERIOR TRIM.

- UPPER ROOF VENTILATION TO BE PROVIDED BY OWENS CORNING VENTSURE RIDGE VENT RIGID ROLL WITH WEATHER PROTECTOR MOISTURE BARRIER OR APPROVED EQUAL.

- LOWER VENTILATION TO BE PROVIDED BY O'HAGIN LOW PROFILE ROOF VENTS OR APPROVED EQUAL.

- ATTIC ACCESS OPENINGS TO ATTIC AREAS SHALL HAVE A VERTICAL UNOBSTRUCTED HEAD HEIGHT OF 30 INCHES OR GREATER OVER AN AREA OF NOT LESS THAN 30 SQUARE FEET. VERTICAL HEIGHT SHALL BE MEASURED FROM THE TOP OF THE CEILING FRAMING MEMBERS TO THE UNDERSIDE OF THE ROOF FRAMING MEMBERS. THE ROUGH-FRAMED OPENING SHALL BE NOT LESS THAN 22 INCHES BY 30 INCHES AND SHALL BE LOCATED IN A HALLWAY OR OTHER LOCATION WITH READY ACCESS. WHERE LOCATED IN A WALL, THE OPENING SHALL BE NOT LESS THAN 22 INCHES WIDE BY 30 INCHES HIGH.

- NOTE: PROVIDE VENT MANUFACTURES LISTED INSTALLATION INSTRUCTIONS AND SPECIFICATIONS INDICATING "FREE VENT AREA" TO THE INSPECTOR AT TIME OF INSPECTION.

EXPOSED TRUSS NOTES:

NATURALLY DURABLE OR PRESERVATIVE TREATED WOOD SHALL BE UTILIZED FOR THOSE PORTIONS OF BUILDINGS, BALCONIES, PORCHES OR SIMILAR PERMANENT BUILDING APPURTENANCES WHERE MEMBERS EXPOSED TO WEATHER WITHOUT ADEQUATE PROTECTION FROM A ROOF, EAVE, OVERHANG OR OTHER COVERING TO PREVENT MOISTURE OR WATER ACCUMULATION ON THE SURFACE OR AT JOINTS BETWEEN MEMBERS INCLUDING:

1. HORIZONTAL MEMBERS SUCH AS GIRDERS, JOISTS, AND DECKING

2. VERTICAL MEMBERS SUCH AS POSTS, POLES AND COLUMNS

3. BOTH HORIZONTAL AND VERTICAL MEMBERS. 2022 CRC R317.1.3

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SACRAMENTO COUNTY
PERMIT READY ADU (ACCESSORY DWELLING UNIT) PLANS
MODEL A2

No.	Date	Description

Sheet Name:
ROOF PLAN
AND
ELEVATIONS

Scale:
As indicated
Date:
MAR 2024
Drawn By:
IS
Approved By:
LM
Sheet Number:

A-2.0

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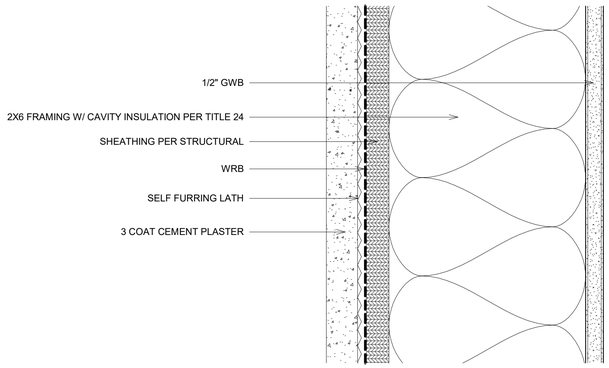
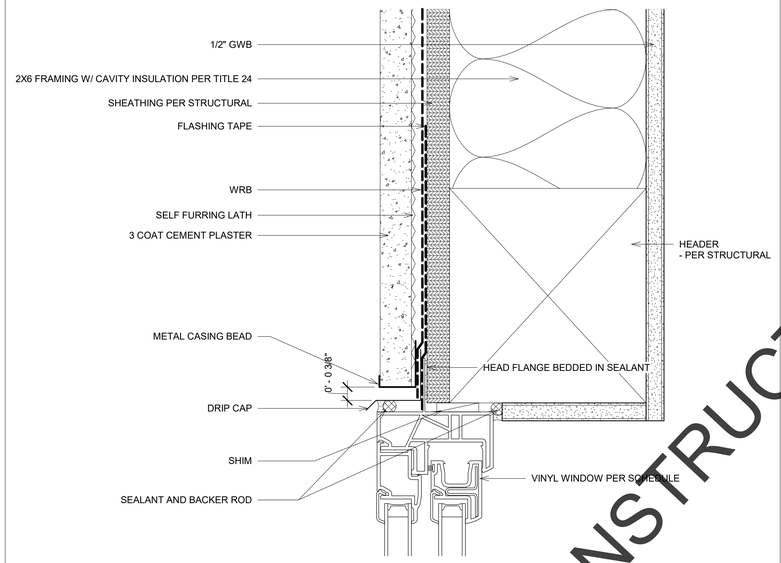
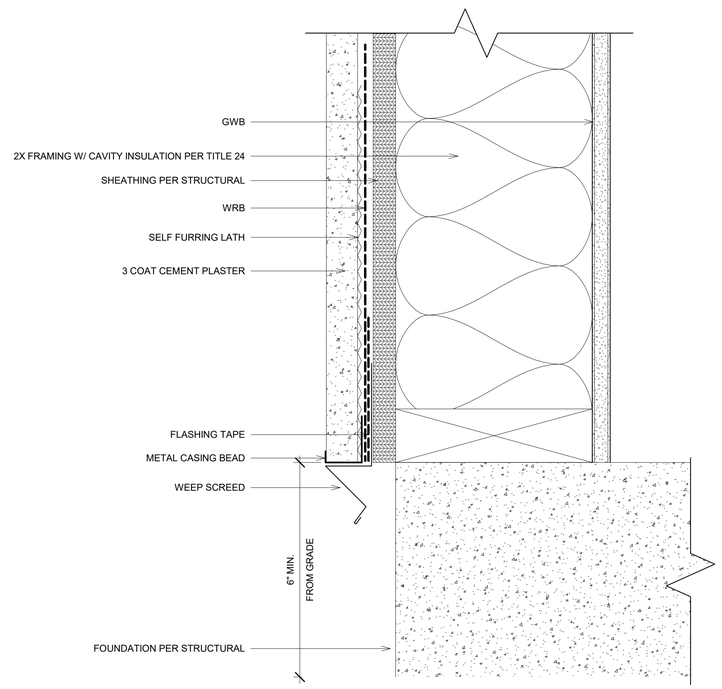


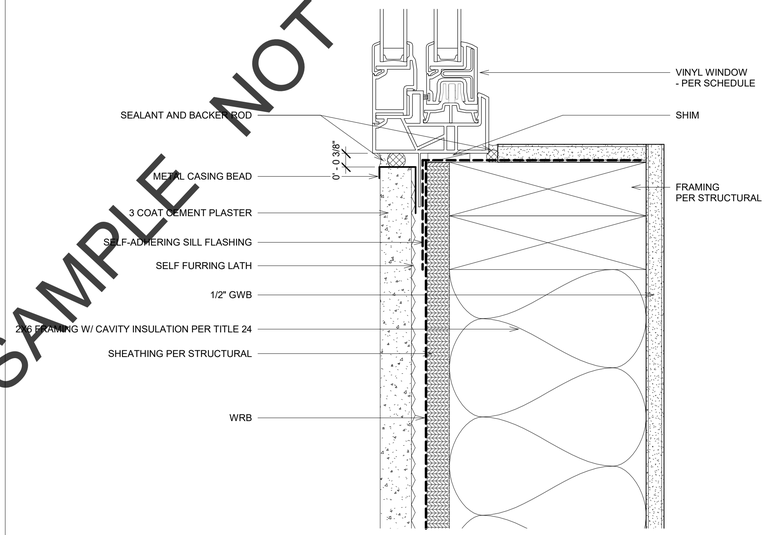
1 STUCCO WALL SECTION
6" = 1'-0"



3 STUCCO @ VINYL WINDOW HEAD
6" = 1'-0"



2 STUCCO @ WALL BASE
6" = 1'-0"



4 STUCCO @ VINYL WINDOW SILL
6" = 1'-0"

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MODEL A2

No.	Date	Description

Sheet Name:
STUCCO SECTION DETAILS

Scale: 6" = 1'-0"
Date: MAR 2024
Drawn By: JMS
Approved By: LM
Sheet Number:

A-3.0

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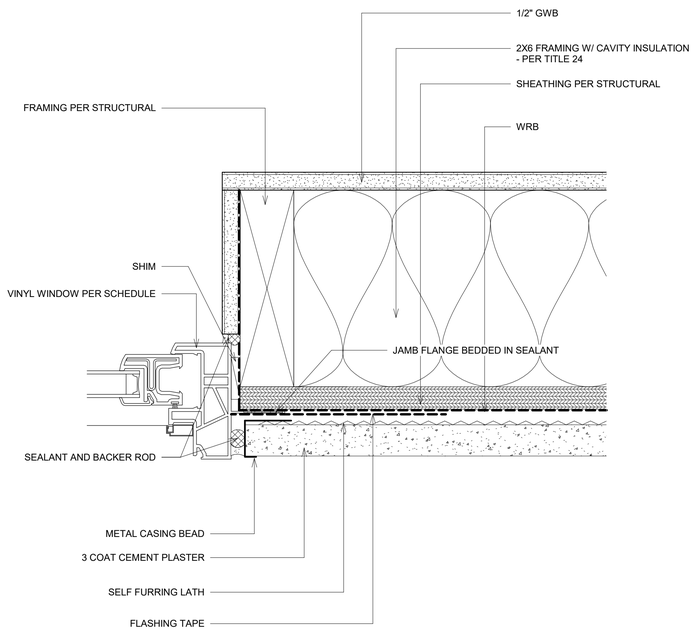
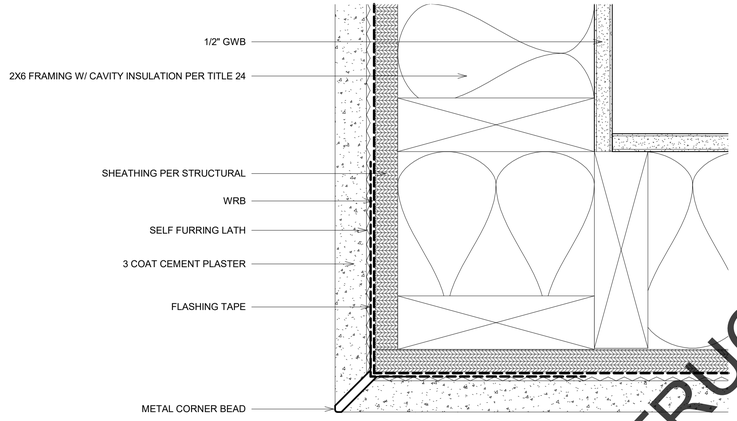


1 STUCCO @ VINYL WINDOW JAMB
6" = 1'-0"



2 STUCCO @ OUTSIDE CORNER
6" = 1'-0"

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MODEL A2

No.	Date	Description

Sheet Name:
STUCCO PLAN DETAILS

Scale:
6" = 1'-0"

Date:
MAR 2024

Drawn By:
JMS

Approved By:
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Sheet Number:
A-3.1

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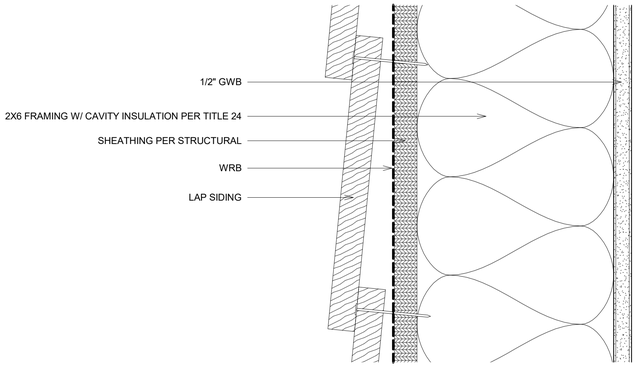
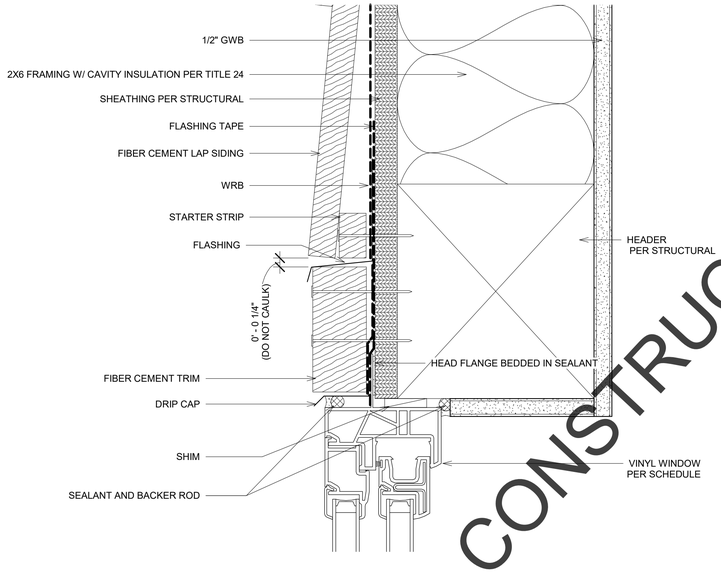


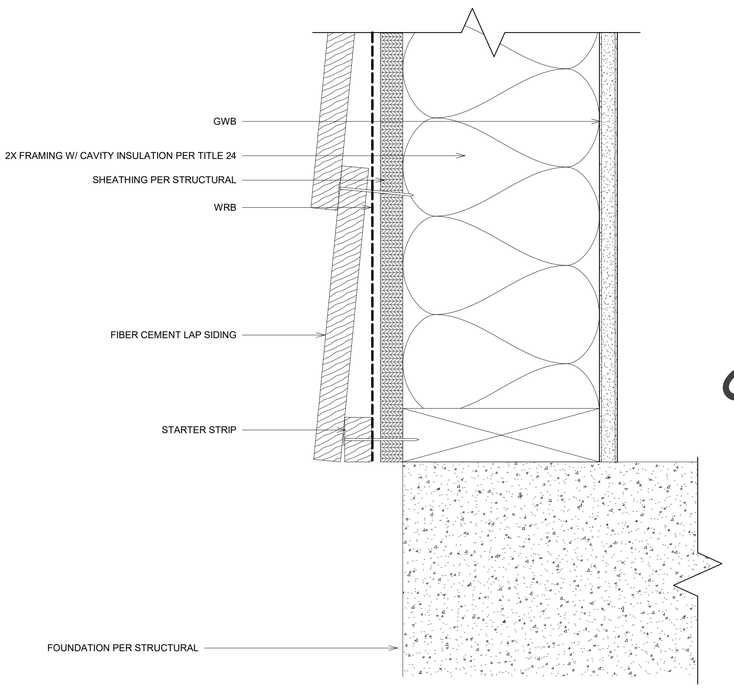
1 LAP SIDING WALL SECTION
6" = 1'-0"



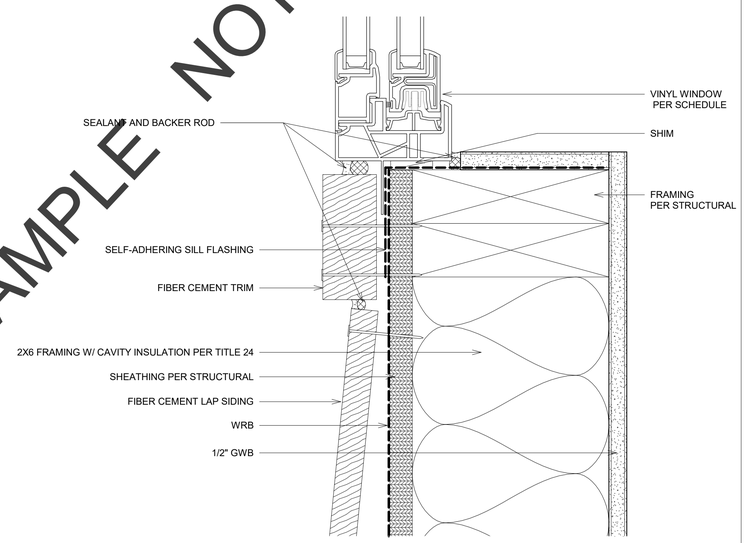
3 LAP SIDING @ VINYL WINDOW HEAD
6" = 1'-0"

LAP SIDING NOTES:

- FIBER-CEMENT LAP SIDING HAVING A MAXIMUM WIDTH OF 12 INCHES SHALL COMPLY WITH THE REQUIREMENTS OF ASTM C1186, TYPE A, MINIMUM GRADE II OR ISO 8336, CATEGORY A, MINIMUM CLASS 2. LAP SIDING SHALL BE LAPPED A MINIMUM OF 11/4 INCHES (32 MM) AND LAP SIDING NOT HAVING TONGUE AND-GROOVE END JOINTS SHALL HAVE THE ENDS PROTECTED WITH CAULKING, COVERED WITH AN H-SECTION JOINT COVER, LOCATED OVER A STRIP OF FLASHING, OR SHALL BE DESIGNED TO COMPLY WITH SECTION R703.1. LAP SIDING COURSES SHALL BE INSTALLED WITH THE FASTENER HEADS EXPOSED OR CONCEALED, IN ACCORDANCE WITH TABLE R703.3(1) OR APPROVED MANUFACTURER'S INSTRUCTIONS.



2 LAP SIDING @ WALL BASE
6" = 1'-0"



4 LAP SIDING @ VINYL WINDOW SILL
6" = 1'-0"

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MODEL A2

No.	Date	Description

Sheet Name:
LAP SIDING SECTION DETAILS

Scale:
6" = 1'-0"
Date:
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Drawn By:
JMS
Approved By:
LM
Sheet Number:

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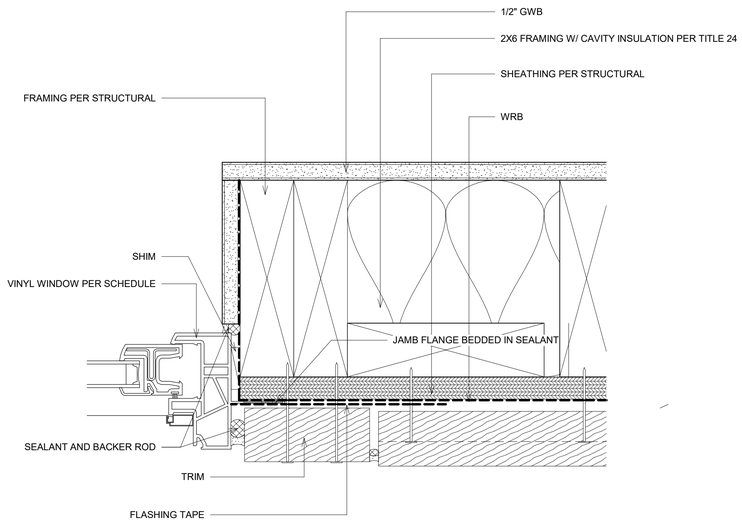
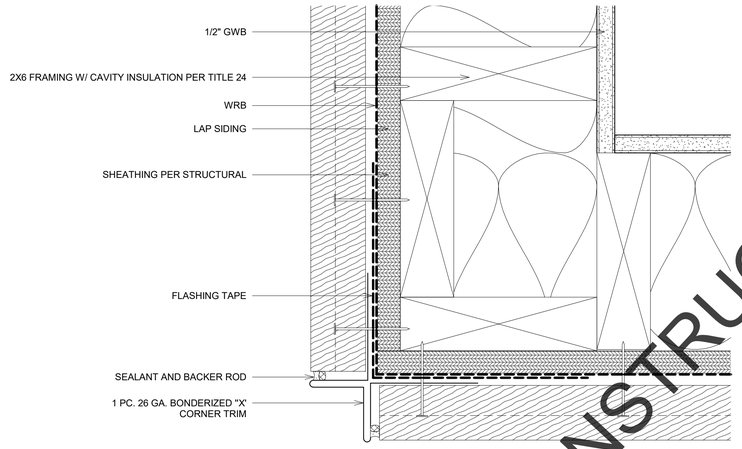


1 LAP SIDING @ VINYL WINDOW JAMB
6" = 1'-0"



2 LAP SIDING @ OUTSIDE CORNER
6" = 1'-0"

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No.	Date	Description

Sheet Name:
LAP SIDING
PLAN DETAILS

Scale:
6" = 1'-0"
Date:
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NOTE: DEVIATIONS FROM THE SHOWN MINIMUM REQUIRED FIRE SEPARATION DISTANCES WILL REQUIRE APPLICANT TO PROVIDE/SHOW THE ASSUMED PROPERTY LINE BETWEEN THE PRIMARY DWELLING AND PROPOSED A.D.U. AND TO COMPLY WITH THE FIRE SEPARATION REQUIREMENTS OF CRC 2022 TABLES R302.1(1) AND R302.1(2) FOR THE WALLS, PROJECTIONS, ETC.

FIREBLOCKING NOTES (IF REQUIRED):

- FIREBLOCKING SHALL BE PROVIDED IN WOOD-FRAMED CONSTRUCTION IN THE FOLLOWING LOCATIONS:

- IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES AND PARALLEL ROWS OF STUDS OR STAGGERED STUDS, AS FOLLOWS:

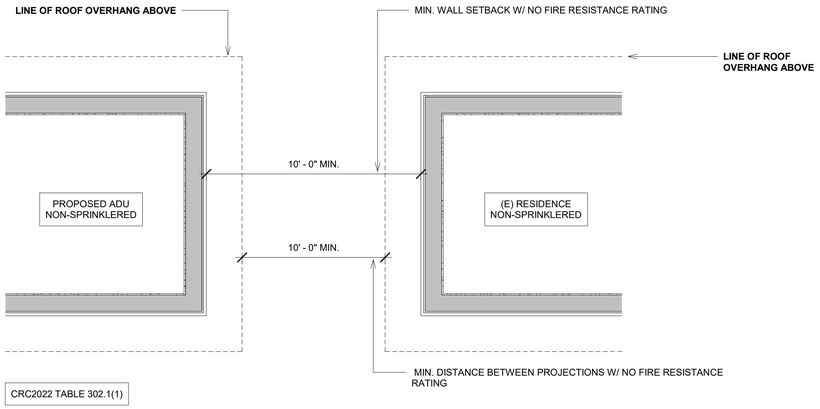
  1. VERTICALLY AT THE CEILING AND FLOOR LEVELS.
  2. HORIZONTALLY AT INTERVALS NOT EXCEEDING 10 FEET (3048 MM).

- AT INTERCONNECTIONS BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS AND COVE CEILINGS.

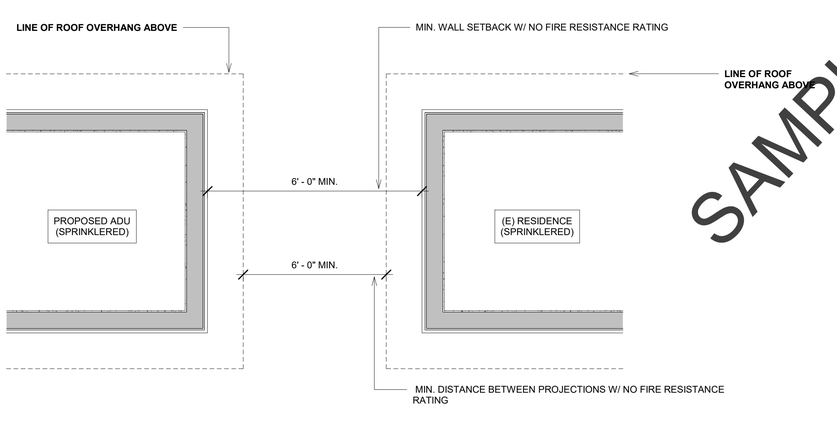
- IN CONCEALED SPACES BETWEEN STAIR STRINGERS AT THE TOP AND BOTTOM OF THE RUN. ENCLOSED SPACES UNDER STAIRS SHALL COMPLY WITH SECTION R302.7.

- AT OPENINGS AROUND VENTS, PIPES, DUCTS, CABLES AND WIRES AT CEILING AND FLOOR LEVEL, WITH AN APPROVED MATERIAL TO RESIST THE FREE PASSAGE OF FLAME AND PRODUCTS OF COMBUSTION.

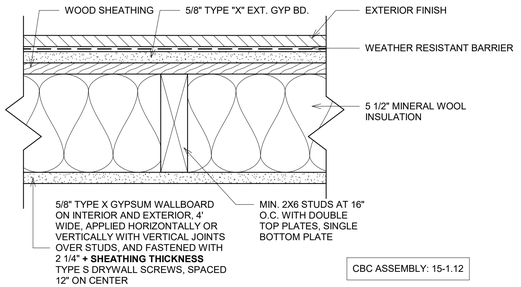
-FIREBLOCKING MATERIALS SHALL COMPLY WITH R302.11.1



1 NON FIRE SPRINKLERED FIRE WALL SEPERATION KEY
1/2" = 1'-0"

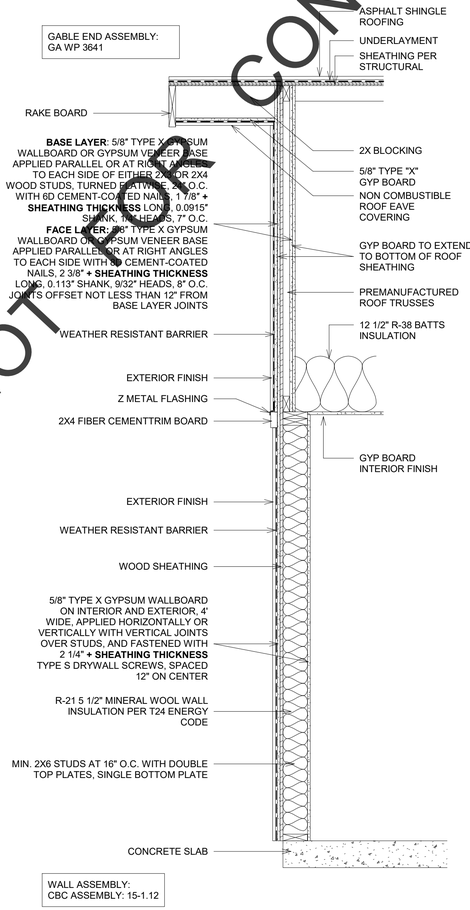


2 SPRINKLERED FIRE WALL SEPERATION KEY
1/2" = 1'-0"



3 1 HOUR EXTERIOR WALL
3" = 1'-0"

NOTE: NO EAVE AND/OR BLOCKING VENTING ALLOWED OVER 1-HOUR RATED WALLS, TYP.



4 TYP. GABLE END 1 HOUR RATED EXTERIOR WALL SECTION
3/4" = 1'-0"

TABLE R302.1(1) EXTERIOR WALLS

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E119, UL 263 or Section 703.3 of the *California Building Code* with exposure from both sides	0 feet
	Not fire-resistance rated	0 hours	≥ 5 feet
Projections	Not allowed	NA	< 2 feet
	Fire-resistance rated	1 hour on the underside, or heavy timber, or fire-retardant-treated wood[a, b]	≥ 2 feet to < 5 feet
	Not fire-resistance rated	0 hours	≥ 5 feet
Openings in walls	Not allowed	NA	< 3 feet
	25% maximum of wall area	0 hours	3 feet
	Unlimited	0 hours	5 feet
Penetrations	All	Comply with Section R302.4	< 3 feet
		None required	3 feet

For SI: 1 foot = 304.8 mm.

NA = Not Applicable.

a. The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave overhang if fireblocking is provided from the wall top plate to the underside of the roof sheathing.
b. The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the rake overhang where gable vent openings are not installed.

TABLE R302.1(2) EXTERIOR WALLS—DWELLINGS *AND ACCESSORY BUILDINGS WITH AUTOMATIC RESIDENTIAL FIRE SPRINKLER PROTECTION*

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E119, UL 263 or Section 703.2.2 of the *California Building Code* with exposure from the outside	0 feet
	Not fire-resistance rated	0 hours	3 feet[a]
Projections	Not allowed	NA	< 2 feet
	Fire-resistance rated	1 hour on the underside, or heavy timber, or fire-retardant-treated wood[b, c]	2 feet[a]
	Not fire-resistance rated	0 hours	3 feet
Openings in walls	Not allowed	NA	< 3 feet
	Unlimited	0 hours	3 feet[a]
Penetrations	All	Comply with Section R302.4	< 3 feet
		None required	3 feet[a]

For SI: 1 foot = 304.8 mm.

NA = Not Applicable.

a. For residential subdivisions where all dwellings are equipped throughout with an automatic sprinkler system installed in accordance with Section *R313*, the fire separation distance for exterior walls not fire-resistance rated and for fire-resistance-rated projections shall be permitted to be reduced to 0 feet, and unlimited unprotected openings and penetrations shall be permitted, where the adjoining lot provides an open setback yard that is 6 feet or more in width on the opposite side of the property line.
b. The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave overhang if fireblocking is provided from the wall top plate to the underside of the roof sheathing.
c. The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the rake overhang where gable vent openings are not installed.

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SACRAMENTO COUNTY
ACCESSORY DWELLING UNIT) PLANS
MODEL A2
PERMIT READY ADU (ACCES

No.	Date	Description

Sheet Name:
FIRE DETAILS

Scale:
As indicated
Date:
MAR 2024
Drawn By:
IS
Approved By:
LM
Sheet Number:

A-3.4

4/8/2024 12:03:13 PM

TRUSS NOTES

DESIGN LOADS:

TOP CHORD
14 PSF DL
20 PSF LL (REDUCIBLE)

BOTTOM CHORD
5 PSF DL
10 PSF LL (NON-CONCURRENT W/ TOP CHORD LL)

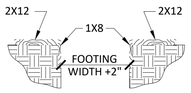
1. TOP CHORD TO BE MINIMUM 2X4 TYPICAL - 2X4 ALL OTHER MEMBERS (U.N.O.).
2. TRUSS MEMBERS SHALL BE DOUGLAS FIR (DF) NO.2 OR BETTER.
3. WOOD UNDER PLATES MUST BE FREE OF KNOTS, KNOT HOLES AND GREATLY DISTORTED GRAINS.
4. CALCULATIONS AND TRUSS DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND/OR ENGINEER FOR REVIEW PRIOR TO FABRICATION. GIRDER TRUSSES CALCULATIONS SHALL INCLUDE POINT LOADS FROM CARRIER TRUSS REACTIONS. ALL CALCULATIONS SHALL BE SIGNED BY A CIVIL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA.
5. FABRICATION AND DESIGN SHALL CONFORM TO THE ICBO, CURRENT EDITION AND ANSI/TPI 1-2014 OF THE TRUSS PLATE INSTITUTE.
6. PROVIDE TEMPORARY ERECTION BRACING AS REQUIRED.
7. ALLOWABLE STRESS INCREASE FOR LOAD DURATION SHALL BE 25% (PERCENT) MAXIMUM.
8. INCREASE FOR ALLOWABLE STRESSES FOR REPETITIVE MEMBERS, SHALL BE PERMISSIBLE.
9. EFFECTS OF ECCENTRIC LOADING SHALL BE CONSIDERED IN THE DESIGN OF ALL JOINTS.
10. GENERAL CONTRACTOR TO PROVIDE WEB BRACING AS REQUIRED BY TRUSS MANUFACTURERS DESIGN.
11. BUILT-UP GIRDER TRUSSES SHALL BE LAMINATED USING ½" BOLTS AT 24" CC MAXIMUM THROUGH ALL MEMBERS.
12. ALL HARDWARE REQUIRED FOR CONNECTING TRUSSES (JACK TO HIP, HIP TO GIRDER, GIRDER TO GIRDER, ETC) SHALL BE DESIGNED, DETAILED AND SPECIFIED BY TRUSS FABRICATOR.
13. TRUSS MANUFACTURER SHALL SUBMIT LATEST ICBO APPROVED TEST DATA FOR TRUSS METAL PLATE CONNECTIONS TO ARCHITECT AND/OR ENGINEER PRIOR TO FABRICATION.
14. TRUSS MANUFACTURER TO PROVIDE PLAN DRAWING SHOWING TRUSS LOCATIONS AND TRUSS PROFILE SHOP DRAWINGS PRIOR TO FABRICATION.
15. GENERAL CONTRACTOR TO VERIFY ALL DIMENSIONS SHOWN ON TRUSS PROFILES WITH ARCHITECTURAL DRAWINGS AND IN FIELD WITH WALL LAYOUT PRIOR TO FABRICATION. PROVIDE SHOP DRAWINGS WITH DIMENSIONS REVIEWED AND APPROVED BY GENERAL CONTRACTOR.
16. TRUSS MANUFACTURER TO ACCOUNT FOR THE WEIGHT OF ALL MECHANICAL EQUIPMENT IN DESIGN OF ALL TRUSSES WHICH SUPPORT SUCH UNITS.

CONCRETE

1. CONCRETE 28 DAY COMPRESSIVE STRENGTH, F'C = 2500PSI, U.N.O.
2. WATER TO CEMENT RATIO SHALL NOT EXCEED 0.50.
3. MOIST CURE SLABS FOR A MINIMUM OF 3 DAYS.
4. CONCRETE MIX DESIGN SHALL BE PREPARED BY A 3RD PARTY INDEPENDENT LABORATORY. SELECTION OF CONCRETE MIX PROPORTIONS SHALL BE PER THE CALIFORNIA BUILDING CODE.
5. CEMENT SHALL CONFORM TO ASTM C-150 TYPE I OR II.
6. CONCRETE AGGREGATES SHALL CONFORM TO ASTM C-33. AGGREGATES FOR LIGHTWEIGHT CONCRETE SHALL CONFORM TO ASTM C-330.
9. REINFORCING DIMENSIONS SHOWN FOR LOCATION OF REINFORCING ARE TO THE FACE OF MAIN BARS AND DENOTE CLEAR COVERAGE. CONCRETE COVERAGE SHALL BE AS FOLLOWS: CONCRETE DEPOSITED AGAINST GROUND (EXCEPT SLABS) -3". CONCRETE EXPOSED TO GROUND BUT PLACES IN FORMS -2". SLABS (ON GROUND) -2" CLEAR FROM TOP U.N.O.
10. ALL PREHEATING AND WELDING OF REINFORCING BARS SHALL BE DONE IN ACCORDANCE WITH AWS D1.4 LATEST EDITION AND SHALL BE CONTINUOUSLY INSPECTED BY A QUALIFIED LABORATORY. CONTRACTOR SHALL FURNISH TO THE LABORATORY, REBAR MILL CERTIFICATES.
11. REINFORCING STEEL SHALL BE FABRICATED ACCORDING TO "MANUAL OF STANDARD PRACTICE FOR REINFORCED CONCRETE CONSTRUCTION".
12. WIRE FABRIC SHALL CONFORM TO ACI 318-3.5.1, ACI 318-3.5.7, AND ASTM A-1064.
13. REINFORCING STEEL SHALL CONFORM TO ASTM A615-GRADE 60 FOR NO. 5 AND LARGER, AND ASTM A615-GRADE 40 FOR NO. 4 AND SMALLER, EXCEPT REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706.
14. SPLICES IN CONTINUOUS REINFORCEMENT FOR A CLASS "A" LAP SPLICE FOR NORMAL WEIGHT CONCRETE WHERE LESS THAN 12" OF CONCRETE IS BELOW THE LAP SPLICE SHALL BE 48 BAR DIAMETERS AND SPLICES IN ADJACENT BARS SHALL BE NOT LESS THAN 5'-0" APART. CLASS "B" LAP SPLICES SHALL BE 63 BAR DIAMETERS. SPLICE CONTINUOUS BARS IN SPANDRELS, GRADE BEAMS, ETC., AS FOLLOWS: TOP BARS AT MID-SPAN; BOTTOM BARS AT CENTERLINE AT SUPPORT, UNLESS NOTED OTHERWISE. SPLICES IN WWF SHALL BE 1.5 MESHES WIDE.
15. REINFORCING, DOWELS, BOLTS, ANCHORS, SLEEVES, ETC., TO BE EMBEDDED IN CONCRETE SHALL BE TIED SECURELY IN POSITION BEFORE PLACING CONCRETE PER ACI 318-12.18.
16. CONSTRUCTION JOINTS SHALL BE MADE ROUGH AND SURFACE FREE OF LOOSE DEBRIS. CONCRETE MY BE ROUGHENED BY SAND BLASTING OR CHIPPING THE ENTIRE SURFACE TO PRODUCE ¼" DEEP DEFORMATIONS.
17. REMOVE ALL DEBRIS FROM FORMS BEFORE CASTING ANY CONCRETE.
18. 3'-0" SHALL BE THE MAXIMUM ALLOWED FREE FALL FOR CONCRETE TO MORE CLOSELY CONFORM TO ACI 318-5.10.
19. CONSOLIDATE CONCRETE PLACED IN FORMS BY MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND-SPADING, RODDING OR TAMPING. USE EQUIPMENT AND PROCEDURES FOR CONSOLIDATION OF CONCRETE IN ACCORDANCE WITH THE RECOMMENDED PRACTICES OF ACI 309 TO SUIT THE TYPE OF CONCRETE AND PROJECT CONDITIONS.
20. NO WOOD SPREADERS ALLOWED. NO WOOD STAKES ALLOWED IN AREAS TO BE CONCRETED.
21. ALL SAW CUTTING SHALL BE DONE AFTER INITIAL SET HAS OCCURRED TO AVOID TEARING OR DAMAGE BY THE SWABBED, BUT BEFORE INITIAL SHRINKING HAS OCCURRED.
22. DRILL THROUGH STEEL COLUMNS, BEAMS AND PLATES TO PASS CONTINUOUS REINFORCING.
23. ADDITIONAL REINFORCING IN PRECAST OR TILT-UP PANELS REQUIRED FOR LIFTING STRESSES SHALL BE SUPPLIED BY THE CONTRACTOR.
24. PROVIDE 2-NO.5X4'-0" DIAGONAL REINFORCING AT MID-DEPTH OF SLAB AT ALL REENTRANT CORNERS TYPICAL.

FOUNDATIONS

1. BOTTOMS OF ALL FOUNDATIONS SHALL BE LEVEL. CHANGES IN BOTTOM OF FOUNDATION ELEVATION SHALL BE MADE ACCORDING TO STEPPED FOOTING DETAIL ON THE TYPICAL DETAIL SHEET.
2. ALL PILE CAPS, GRADE BEAMS, TIE BEAMS & OTHER FOOTINGS SHALL BE FORMED UNLESS SPECIFICALLY APPROVED BY THE ENGINEER OF RECORD. FOUNDATIONS MAY BE CAST IN NEAT EXCAVATIONS PROVIDED WRITTEN APPROVAL IS OBTAINED AND FOOTINGS ARE INCREASED 2" IN WIDTH. USE 2X12 PLANK AT EDGE OF EXCAVATION TO PROTECT AGAINST SLUFFING, AS REQUIRED.
3. WORK PERFORMED ON FOUNDATION SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT CBC
4. IF A TWO POUR FOUNDATION IS UTILIZED, THE COLD JOINT BETWEEN THE EXTERIOR FOOTING AND SLAB-ON-GRADE SHOULD BE LOCATED AT LEAST 4 INCHES ABOVE ADJACENT GRADE. IF THIS IS NOT DONE, A WATERSTOP BETWEEN THE TWO POURS SHALL BE USED.



SHEARWALL

1. MIN 2X FRAMING MEMBERS OR BLOCKING REQUIRED AT ALL PANEL EDGES IN SHEAR WALL.
2. TABLE VALUES ARE BASED ON 16" OC STUD SPACING.
3. ALL ANCHOR BOLTS IN WALLS INCLUDING SHEARWALLS REQUIRE 3"x3"x.229" THICK PLATE WASHERS. ONE EDGE OF THE STEEL PLATE WASHER SHALL EXTEND TO WITHIN 1/2" OF THE MUDSILL ON THE SIDE(S) WITH APA RATED WOOD SHEATHING. THE HOLE IN THE PLATE WASHER IS PERMITTED TO BE DIAGONALLY SLOTTED WITH A WIDTH OF UP TO 3/16" (44 mm) LARGER THAN THE BOLT DIAMETER AND A SLOT LENGTH NOT TO EXCEED 1 3/4" (44 mm), PROVIDED A STANDARD CUT WASHER IS PLACED BETWEEN THE PLATE WASHER AND THE NUT.
4. SOLE PLATE NAILING LESS THAN 6" OC SHALL BE STAGGERED 1/2" ABOUT THE CENTERLINE OF THE SOLID RIM.
5. (2) ANCHOR BOLTS MINIMUM PER SHEAR WALL.
6. 3X and 4X MEMBERS AT ADJOINING PANEL EDGES MUST BE A SINGLE MEMBER.
7. FOR SHEAR WALLS ON RAISED WOOD, FOUNDATIONS AND UPPER FLOORS REQUIRING LTP5 CLIPS AT THE 2x SOLE PLATE, A MINIMUM OF (3) CLIPS MUST ALWAYS BE INSTALLED.
8. SOLE PLATE TO RIM, OR SOLE PLATE TO BEAM, BLOCKING TO BE 2X U.O.N.
9. WHEN A SHEARWALL IS LOCATED IN A FIRE PROTECTED WALL, THE FIELD NAILING SHALL BE 8" OC MAX REGARDLESS OF THE SHEAR WALL SPECIFICATIONS. EN AND NAIL SIZE SHALL BE THE SAME AS SPECIFIED ON THE PLANS.
10. DRYWALL SCREWS ARE PERMITTED TO SUBSTITUTE FOR THE 5D AND 6D NAILS.
11. ALL FIELD NAILING SHALL BE @ 12" OC MAX., U.N.O.

NAILING SCHEDULE

REF. CBC 2022, TABLE 2304.10.2. ALL NAILS FOR STRUCTURAL WORK SHALL BE COMMON WIRE NAILS CONFORMING TO THE FOLLOWING MINIMUM SIZES:

8D	0.131" Ø X 2½"
10D	0.148" Ø X 3"
10D SHORTS	0.148" Ø X 1 ⅝" PLUS THICKNESS OF S.P.
16D	0.162" Ø X 3½"
20D	0.192" Ø X 4"

HOLES SHALL BE SUB-DRILLED WHERE NECESSARY TO PREVENT SPLITTING. NAILING NOT NOTED BELOW OR ON PLANS SHALL BE MINIMUM OF NAILS AT EACH CONTACT.
8D NAILS FOR 1" MATERIAL AND 16D NAILS FOR 2" MATERIAL.

1. BLOCKING BTWN CEILING JSTS, RAFTER OR TRUSS TO TOP PLATE OR FRAMING BELOW; EACH END, TOENAIL ---------- 3-8D
2. BLOCKING BTWN RAFTERS OR TRUSS NOT AT THE WALL TOP PLATE, TO RAFTER OR TRUSS; EACH END, TOENAIL ---------- 2-8D
3. FLAT BLOCKING TO TRUSS AND WEB FILLER; FACE NAIL ---------- 16D
4. CEILING JST TO TOP PLATE; EACH JST, TOENAIL ---------- 3-8D
5. CEILING JST NOT ATTACHED TO PARALLEL RAFTER, (NO THRUST); FACE NAIL --- 3-16D
6. CEILING JST ATTACHED TO PARALLEL RAFTER (HEEL JOINT); FACE NAIL ---------- TABLE 2308.7.3.1
7. COLLAR TIE TO RAFTER; FACE NAIL ---------- 3-10D
8. RAFTER OR ROOF TRUSS TO TOP PLATE; 2TOENAIL ONE SIDE, 1 OPPOSITE ---------- 3-10D
9. ROOF RAFTERS TO RIDGE VALLEY OR HIP RAFTERS, OR ROOF RAFTERS TO 2" RIDGE BEAM; END NAIL ---------- 2-16D
10. STUD TO STUD (NOT AT BRACED WALL PANELS); 24" OC FACE NAIL ---------- 16D
11. STUD TO STUD AND ABUTTING STUDS AT INTERSECTING WALL CORNERS (AT BRACED WALL PANEL); 16" OC FACE NAIL ---------- 16D
12. BUILT UP HEADER (2" TO 2" HEADER); 16" OC EACH EDGE, FACE NAIL --------- 16D
13. CONTINUOUS HEADER TO STUD; TOENAIL ---------- 4-8D
14. TOP PLATE TO TOP PLATE; 16" OC FACE NAIL ---------- 16D
15. TOP PLATE TO TOP PLATE, AT END JOINTS; EA. SIDE END, FACE NAIL, MIN 24" LAP ---------- 8-16D
16. BOTTOM PLATE TO JST, RIM JST, BAND JST, OR BLOCKING (NOT AT BRACED WALL PANELS); 16" OC FACE NAIL ---------- 16D
17. BOTTOM PLATE TO JST, RIM JST, BAND JST, OR BLOCKING AT BRACED WALL PANELS; 16" OC FACE NAIL ---------- 2-16D
18. STUD TO TOP OR BOTTOM PLATE; TOENAIL ---------- 4-8D
19. TOP OR BOTTOM PLATE TO STUD; END NAIL ---------- 2-16D
20. TOP PLATES, LAPS AT CORNERS AND INTERSECTIONS; FACE NAIL ---------- 2-16D
21. 1" BRACE TO EACH STUD & PLATE, FACE NAIL; ---------- 2-8D
22. 1"X6" SHEATHING TO EACH BEARING; FACE NAIL ---------- 2-8D
23. WIDER THAN 1"X8" SHEATHING TO EACH BEARING; FACE NAIL ---------- 3-8D
24. JOIST TO SILL, TOP PLATE, OR GIRDER; TOENAIL ---------- 3-8D
25. RIM JST, BAND JST, OR BLOCKING TO TOP PLATE, SILL, OR OTHER FRAMING; 6" OC TOENAIL ---------- 8D
26. 1" X 6" SUBFLOOR OR LESS TO EACH JST; FACE NAIL ---------- 2-8D
27. 2" SUBFLOOR TO JST OR GIRDER; BLIND AND FACE NAIL ---------- 2-16D
28. 2" PLANKS (PLANK & BEAM - FLOOR AND ROOF); EACH BEARING, FACE NAIL --- 2-16D
29. BUILT UP GIRDERS AND BEAMS, 3 LUMBER LAYERS; 32" OC FACE NAIL TOP & BOT. STAGGERED ON OPP SIDES ---------- 20D
30. LEDGER STRIP SUPPORTING JST OR RAFTERS; EACH JST OR RAFTER, FACE NAIL ---------- 3-16D
31. JOIST TO BAND JOIST OR RIM JOIST; END NAIL ---------- 3-16D
32. BRIDGING OR BLOCKING TO JST, RAFTER, OR TRUSS; EACH END, TOENAIL ---- 2-8D
33. WOOD STRUCTURAL PANELS, COMBINATION SUBFLOOR UNDERLAYMENT TO FRAMING

¾" AND LESS	8D	NAILS SPACED @ 6"OC AT EDGES, 6"OC @ INTERMEDIATE SUPPORT FOR ROOF EXCEPT AT 4" O.C WHEN INTERMEDIATE SUPPORT EXCEEDS 48" O.C. AND WIND SPEED IS GREATER THAN 130MPH IN EXPOSURE B AND 110MPH IN C.
⅞"	8D	
1⅛"	10D	

34. PANEL SIDING TO FRAMING

½" OR LESS	6D	
⅝"	8D	

WOOD

1. ALL WOOD IN DIRECT CONTACT WITH EARTH OR CONCRETE SHALL BE PRESSURE TREATED DOUGLAS FIR.
2. BEARING AND SHEAR WALLS SHALL HAVE DOUBLE TOP PLATES, LAPPED AT WALL AND PARTITION INTERSECTION WITH 3-16D NAILS.
3. PROVIDE SOLID BLOCKING BETWEEN JOISTS AND RAFTERS AT ALL SUPPORTS.
4. PROVIDE BLOCKING AT ALL CEILING LEVELS.
5. ALL STRUCTURAL WOOD SHALL CONFORM WITH THE FOLLOWING SPECIFICATION:
   DOUGLAS FIR - COAST REGION - WCLIB GRADING RULES NO.17 DF NO.2, U.N.O.
   REDWOOD - CALIFORNIA REDWOOD ASSOCIATION GRADING RULES, LATEST EDITION.
   GLUED LAMINATED BEAMS - SHALL BE 24F-V4 OR 24F-V8 FOR CANTILEVERED BEAMS. BEAMS SHALL ALSO BE MANUFACTURED AND IDENTIFIED AS REQUIRED IN ANSI/AITC A190.1 AND ASTM D3737. STANDARD SPEC. FOR STRUCTURAL GLUED LAMINATED TIMBER AITC 117 LATEST ADDITION. SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION OF GLUED-LAMINATED MEMBERS.
   PLYWOOD - U.S. PRODUCT STANDARDS PS1 AND PS2. PLYWOOD SHALL BE APA RATED EXPOSURE 1, OR EXTERIOR, AS REQUIRED; STRUCTURAL 1 AND C-D TO MEET PS1 AND PS2 AS REQUIRED. CDX (C-D EXPOSURE 1) OR OSB (ORIENTED STRAND BOARD) @ FLOORS ADN ROOF - U.N.O.
6. PRESSURE TREATED DOUGLAS FIR - AWPA (AMERICAN WOOD PRESERVERS' ASSOCIATION) U1. USE CATEGORY UC2 FOR INTERIOR USE. WATERBORN PRESERVATIVES SHALL HAVE A MINIMUM RETENTION LEVEL OF 0.25 LB/FT^3 AND SHALL NOT CONTAIN CHROMIUM, COPPER, OR ARSENATE. NEWLY EXPOSED SURFACES, RESULTING FROM FIELD MODIFICATION SUCH AS CUTTING, BORING, OR HANDLING, SHALL BE FIELD TREATED IN ACCORDANCE WITH AWPA M-4.
7. HOLES FOR BOLTS IN WOOD SHALL BE BORED WITH A BIT OF THE SAME NOMINAL DIAMETER AS THE BOLT PLUS $\frac{1}{16}$".
8. HOLES FOR LAG SCREW SHALL BE BORED TO THE SAME DIAMETER AND DEPTH AS THE SHANK AND THE REST NO LARGER THAN THE ROOT OF THE THREAD.
9. LAG SCREWS AND WOOD SCREWS SHALL BE SCREWED AND NOT DRIVEN INTO PLACE. SOAP MAY BE USED TO LUBRICATE THE SCREWS.
10. ALL BOLTS AND LAG SCREWS SHALL BE PROVIDED WITH METAL WASHERS UNDER HEADS AND NUTS WHICH BEAR ON WOOD. APPLIES ALSO TO INSERTED EXPANDING FASTENERS, RED HEAD ETC.

BOLT DIAMETER	MI WASHER	STEEL WASHER
½" DIA.	2" DIA. X $\frac{15}{16}$"	3" X 3" X ¼"
⅝" DIA.	2¾" DIA. X $\frac{15}{16}$"	3" X 3" X ¼"
¾" DIA.	3" DIA. X $\frac{7}{16}$"	3" X 3" X $\frac{5}{16}$"
⅞" DIA.	3½" DIA. X $\frac{7}{16}$"	3½" X 3½" X ⅜"
1" DIA.	4" DIA. X ½"	3¾" X 3¾" X ⅜"

11. ALL BOLTS AND LAG SCREWS SHALL BE TIGHTENED ON INSTALLATION AND RETIGHTENED BEFORE CLOSING IN OR AT COMPLETION OF JOB.
12. BLOCK SP JOINTS WITH 2X4 FLAT BLOCKING WHERE NOTED ON ROOF OR FLOOR FRAMING PLANS AND WITH BLOCKING SAME AS STUDS AT WALLS.
13. LAY ALL STRUCTURAL PLYWOOD ON ROOF AND FLOORS WITH FACE GRAIN PERPENDICULAR TO SUPPORT UNLESS NOTED OTHERWISE.
14. CONNECTOR HARDWARE MODEL NUMBER ARE THOSE FOR SIMPSON STRONG-TIE COMPANY. EQUIVALENT CONNECTORS WITH ICC ACCEPTANCE MAY BE SUBSTITUTED WITH WRITTEN APPROVAL FROM THE ENGINEER OF RECORD. ALL JOIST HANGERS SHALL BE SIMPSON U SERIES UNLESS NOTED OTHERWISE.
15. FASTENERS FOR PRESERVATIVE TREATED & FIRE RETARDANT TREATED WOOD SHALL BE OF HOT DIPPED ZINC COATED GALVANIZED STEEL (PER ASTM A153, CLASS G185), STAINLESS STEEL, SILICON BRONZE OR COPPER. THE COATING WEIGHTS FOR ZINC COATED FASTENERS SHALL BE IN ACCORDANCE WITH ASTM A 153.
16. ALL WOOD FRAMING SHALL HAVE LESS THAN 19% MOISTURE CONTENT AT TIME OF INSTALLATION.

ABBREVIATIONS

AB	ANCHOR BOLT
BTWN	BETWEEN
CC	CENTER TO CENTER
CJ	CONSTRUCTION JOINT
CJT	CONTROL JOINT
CLR	CLEAR
CONC	CONCRETE
CONT	CONTINUOUS
CP	COMPLETE PENETRATION
DF	DOUGLAS FIR
DL	DEAD LOAD
(E)	EXISTING
EJ	EXPANSION JOINT
EN	EN
FB	FACE OF BLOCK
FC	FACE OF CONCRETE
FF	FINISH FLOOR
FLR	FLOOR
FS	FACE OF STUD
FTG	FOOTING
GA	GAUGE
GLB	GLUED-LAMINATED BEAM
HDR	HEADER
HSB	HIGH STRENGTH BOLT (A-325)
HT	HEIGHT
JH	JOIST HANGER (SIMPSON)
LL	LIVE LOAD
LS	LAG SCREW
LSL	LAMINATED STRAND LUMBER 2325 Fb, 310 Fv, 1.55E
LT WT	LIGHT WEIGHT
LVL	LAMINATED VENEER LUMBER 2600Fb, 285Fv, 1.8E
MFR	MANUFACTURER
MI	MALLEABLE IRON
(N)	NEW
PTDF	PRESSURE TREATED DOUGLAS FIR
PSL	PARALLEL STRAND LUMBER 2900Fb, 290Fv, 2.0E
NTS	NOT TO SCALE
OH	OPPOSITE HAND
PC	PIECE
PP	PARTIAL PENETRATION
PW	PANEL WALL
RDWD	REDWOOD
SC	SHEAR CONNECTOR
SDSTS	SELF DRILLING SLF TAPPING SCRW
SP	STRUCTURAL PLY
SPEN	STRUCTURAL PLY EN
STFNR	STIFFENER
STGGRD ...	STAGGERED
T&B	TOP & BOTTOM
T&G	TONGUE & GROOVE
TN	TOE NAIL
TOF	TOP OF FRAMING
TOS	TOP OF STEEL
UNO	UNLESS NOTED OTHERWISE
W/	WITH
W/O	WITHOUT
WP	WORK POINT
WS	WOOD SCREW
WWF	WELDED WIRE FABRIC
℄	CENTERLINE
℞	PLATE
#	NUMBER OF POUNDS
□	SQUARE
Ø	ROUND OR DIAMETER
▨	CONTINUOUS WOOD IN SECTION
▨	WOOD BLOCKING IN SECTION
▨	END OF WOOD PIECE

GENERAL CONSTRUCTION NOTES

1. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL WORK AND CONSTRUCTION MEETS ALL CURRENT FEDERAL, STATE, COUNTY, AND LOCAL CODES, ORDINANCES, REGULATIONS, ETC. THESE CODES ARE TO BE CONSIDERED PART OF THE SPECIFICATIONS FOR THIS BUILDING AND SHOULD BE ADHERED TO EVEN IF THEY ARE IN VARIANCE OF THE PLAN.
2. DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE DRAWING (DO NOT SCALE DRAWING.)
3. THE ENGINEER HAS NOT BEEN ENGAGED FOR CONSTANT CONSTRUCTION SUPERVISION AND ASSUMES NO RESPONSIBILITY FOR CONSTRUCTION COORDINATING WITH THESE PLANS, NOR RESPONSIBILITY FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCE, OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THERE ARE NO WARRANTIES FOR A SPECIFIC USE EXPRESSED OR IMPLIED IN THE USE OF THESE PLANS.
4. REFER TO ARCHITECTURAL SHEETS FOR FLOOR PLANS, EXTERIOR ELEVATIONS, AND WINDOW AND DOOR SIZES AND TYPES.

DESIGN CRITERIA

SEISMIC CRITERIA		GRAVITY LOADING	
SDC	D	ROOF LIVE	20psf
SITE CLASS	D	ROOF DEAD	12psf
RISK CATEGORY	II	WALL DEAD	17psf
SEISMIC IMPORTANCE FACTOR	1.00		
RESPONSE MODIFICATION FACTOR	6.5		
SEISMIC FORCE RESISTING SYSTEM: LIGHT FRAME WOOD SHEAR WALL		WIND CRITERIA	
		ULTIMATE WIND, Vult	93mph
S_s	1.322g	BASIC WIND, Vasd	76mph
S_1	0.458g	WIND EXPOSURE	D
S_{DS}	1.058g	INTERNAL PRESSURE COEFF	+1-0.18
S_{D1}	0.763g	Iw	1.0
C_s	0.163g		
Ω_0	3.0	SOIL BEARING	1500psf
C_p	3.5		
ANALYSIS PROCESS	EQUIVALENT LATERAL FORCE	CODES	
		ASCE 7-16, CBC 2022, ACI318-19, 2018 NDS	

STRUCTURAL INDEX

WCD
916-251-9798 | WWW.WCDASSOCIATES.COM
6930 DESTINY DRIVE SUITE #300, ROCKLIN, CA 95677

TITLE: STRUCTURAL NOTES AND SPECIFICATIONS

ADDRESS: PERMIT READY ACCESSORY DWELLING UNIT PLANS - MODEL A2

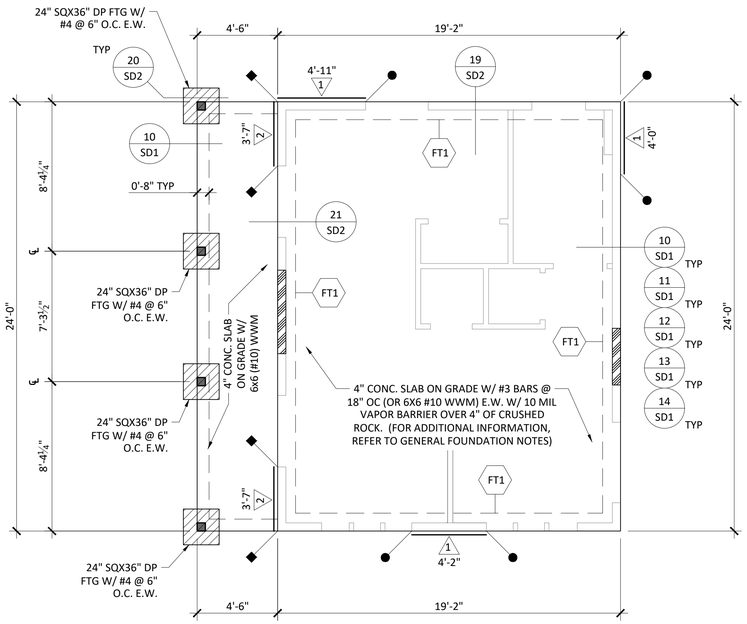
REGISTERED PROFESSIONAL ENGINEER
WESLEY CULLUMBER
No. 80675
Exp. 03-31-25
CIVIL
STATE OF CALIFORNIA

NO.	REVISIONS
△	
△	
△	
△	

SCALE:	AS NOTED
DATE:	4/15/2024
DESIGNED BY:	E.VILLALPANDO
DRAWN BY:	E.COURPET
REVIEWED BY:	W.CULLUMBER
JOB NO:	RN101022

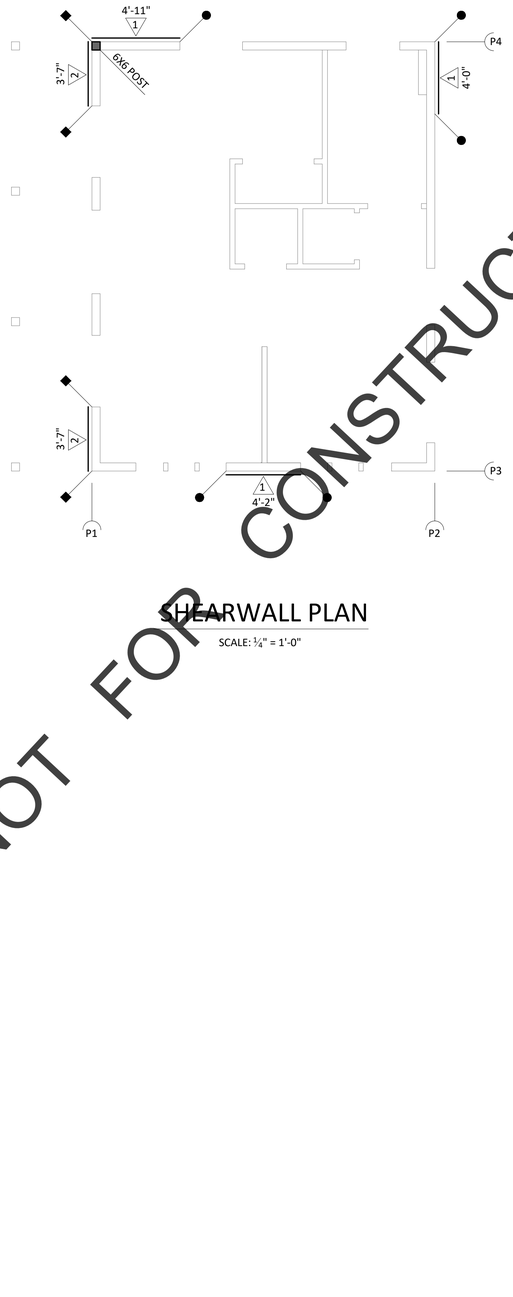
SHEET NO.

SN1



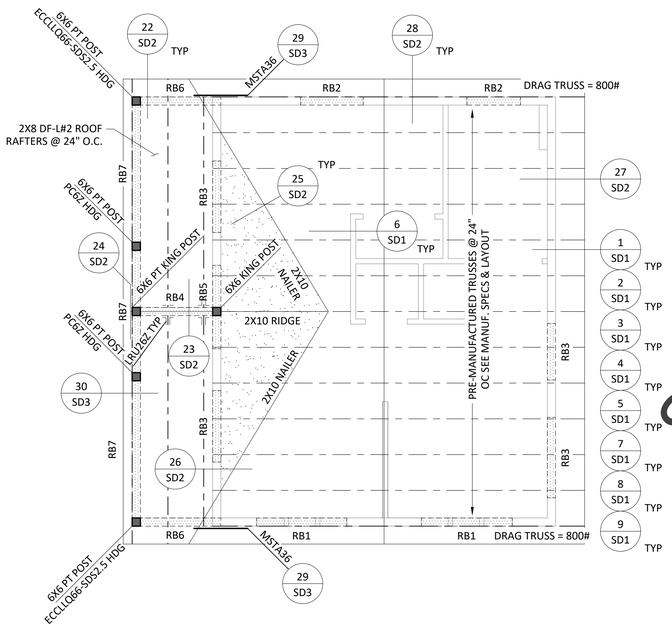
FOUNDATION AND SHEARWALL PLAN

SCALE: ¼" = 1'-0"



SHEARWALL PLAN

SCALE: ¼" = 1'-0"



ROOF FRAMING

SCALE: ¼" = 1'-0"

FOOTING SCHEDULE

TYPE	DIMENSIONS			REINFORCEMENT						MAX. CAPACITY	NOTES
				PARALLEL			PERPENDICULAR				
	LENGTH	WIDTH	DEPTH	NO.	SIZE	LENGTH	NO.	SIZE	LENGTH		
FT1	CONT.	12"	12"	2	#4	CONT.	-	-	-	1,500 PLF	(1) TOP, (1) BOT

GENERAL FOUNDATION NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR REFERRING TO THE PLANS TO VERIFY HOLDOWN LOCATIONS, STRUCTURAL PLYWOOD SHEATHING SPECIFICATIONS AND NAILING SCHEDULE.
2. POSTS SHOWN ON THE FOUNDATION PLAN ARE THOSE DIRECTLY CONNECTED TO THE FOUNDATION WITH A HOLDOWN OR POST BASE CONNECTOR.
3. TYPICAL ONE STORY FOUNDATION, U.N.O. - 12" WIDE X 12" DEEP FOOTING WITH (1) #4 REBAR TOP AND BOTTOM (TOT. 2).
4. PROVIDE ⅝"X10" ANCHOR BOLTS @ 4'-0" OC AND 12" FROM ALL EDGES AT THE BEARING WALLS AND EXTERIOR NON-SHEAR WALLS W/ 7" MIN. EMBEDMENT. FASTEN TO BOTTOM PLATE USING 3"X3"X¼" STEEL WASHERS.
5. PROVIDE 2X PTDF SLEEPER EMBEDDED IN SLAB AT DOORS LEADING TO EXTERIOR AND GARAGE. EXTEND 6" PAST DOOR CASING. (2) 20d @ EA END & 24" OC
6. ALL FOOTINGS, FOUNDATIONS, EXCAVATIONS, GRADING, AND FILL SHALL COMPLY TO THE PROVISIONS OF THE CALIFORNIA BUILDING CODE.
7. SLAB REINFORCEMENT SHALL BE PROVIDED EACH WAY, AS INDICATED ON THE PLANS, IN THE MIDDLE THIRD OF SLAB. WHERE VAPOR BARRIER IS REQUIRED, VAPOR RETARD BARRIER SHALL BE SEALED AT ALL PENETRATIONS AND SHALL CONFORM TO CLASS A VAPOR RETARDER IN ACCORDANCE WITH THE MOST CURRENT VERSION OF ASTM E 1745, "STANDARD SPECIFICATIONS FOR PLASTIC WATER VAPOR RETARDERS USED IN CONTACT WITH SOIL OR GRANULAR FILL UNDER CONCRETE SLABS". VAPOR BARRIER SHALL BE UNDERLAIN WITH 4" DEEP ¾" CRUSHED ROCK WITH 100% PASSING THE ¾" SIEVE AND LESS THAN 5% PASSING THE NO. 4 SIEVE.
8. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL MEASUREMENTS AGAINST THE ARCHITECTURAL PLAN SET. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE EOR AND DESIGNER BEFORE FORMING AND/OR POURING CONCRETE.

FOUNDATION LEGEND

(N) FOOTING - SEE FOOTING SCHEDULE FOR DIMENSIONS AND REINFORCEMENT.

DOOR SLEEPER PER FOUNDATION NOTE #5.

SHEARWALL SCHEDULE

# #### PLF	SHEATHING/NAILING	MUD SILL	ANCHOR BOLTS	VERT. MEMBER @ ADJ. PANEL EDGES	SOLE PLATE TO RIM	RIM TO SILL PLATE (A35 CLIPS)
1 260 PLF	⅜" APA RATED ONE FACE w/8d COMMONS @ 6" OC EDGE & 12" O.C. FIELD. 8" O.C. FIELD AT FIRE RATED WALLS ONLY	2x	⅝" @ 48" OC	2x	SDWS22500DB @ 12" OC	@ 24" CC
2 350 PLF	⅜" APA RATED ONE FACE w/8d COMMONS @ 4" O.C. EDGE & 12" O.C. FIELD. 8" O.C. FIELD AT FIRE RATED WALLS ONLY	2x	⅝" @ 48" O.C.	(2) 2x	SDWS22500DB @ 8" O.C.	@ 20" C.C.

1. REFER TO "SHEARWALL NOTES" ON SHEET SN1 FOR ADDITIONAL INFORMATION.

HOLDOWN SCHEDULE

1,435 LBS	STHD10/10RJ HOLDOWN INSTALL PER DETAIL 15/SD2 & 18/SD2
2,685 LBS	STHD14/14RJ HOLDOWN INSTALL PER DETAIL 17/SD2 & 18/SD2

1. ALL HOLDOWN CONNECTORS SHALL BE RE-TIGHTENED JUST PRIOR TO ENCLOSURE.
2. CONTRACTOR SHALL PLACE ALL HOLDOWNS IN THE CORRECT LOCATION TO TIE INTO HD POST.
3. REFER TO DETAIL 18/SD2 FOR HD PLACEMENT AT WINDOW OR DOOR OPEN.

ROOF BEAM SCHEDULE

NAME	PLY	SIZE	TYPE	LOCATION
RB1	1	6X8	DF-L#2	HEADER
RB2	1	6X6	DF-L#2	HEADER
RB3	1	6X8	DF-L#2	HEADER
RB4	1	6X12	PTDF-L#2	FLUSH
RB5	1	6X10	DF-L#2	HEADER
RB6	1	6X10	PTDF-L#2	DROP
RB7	1	6X10	PTDF-L#2	DROP

BEAMS SPECIFICATIONS:
- PSL 2900Fb, 290Fv, 2.2E
- LVL 2600Fb, 285Fv, 1.8E
- LSL 2300Fb, 285Fv, 1.55E
- GLB 2400Fb, 265Fv, 1.9E

ROOF FRAMING NOTES

1. SEE SHEET SD1 AND SD2 FOR ADDITIONAL FRAMING DETAILS.
2. SEE "WOOD NOTES" ON SHEET SN1.
3. ALL BEAM SUPPORTING POSTS ARE TO BE AT LEAST THE WIDTH OF THE BEAM BEING SUPPORTED.
4. ROOF SHEATHING SHALL BE $^{15}/_{32}$" CDX/OSB WITH 8d @ 6" O.C. EDGE NAILING & 6" O.C. FIELD NAILING, U.N.O. 6" EDGE & 6" INTERMEDIATE AT EAVE END & OVERHANGS. $^{32}/_{16}$ SPAN RATING.
5. NO EDGE BLOCKING REQUIRED, U.N.O.
6. TOP PLATE SPLICE AT INTERIOR AND EXTERIOR WALLS SHALL BE 48" MIN. LENGTH AND NAILED WITH (16) 16d NAILS.
7. ROOF OVERFRAME - 2x DF-L#2 @ 24" O.C. (ONE NOMINAL SIZE SMALLER THAN RIDGE BOARD) OVERFRAME AREA PROVIDE OPENINGS THROUGH ROOF SHEATHING BELOW INTO MAIN ATTIC SPACE FOR ADEQUATE VENTILATION. IN AREAS OF HEAD ROOM OF MORE THAN 30" HIGH PROVIDE A 22" x 30" ACCESS THROUGH MAIN ROOF SHEATHING (TYP).
8. FOR BUILT-UP COLUMNS, PROVIDE (2) 10d NAILS @ 8" O.C. TO PROVIDE SOLID CONNECTION.
9. EXTERIOR STUD WALLS SHALL BE 2X6 DF-L#2 @16" O.C. U.N.O.. WALL SIZES SHALL BE VERIFIED TO MATCH THE ARCHITECTURAL PLAN SET.
10. BEAMS MAY BE SUBSTITUTED FOR LARGER WIDTHS AND/OR DEPTH OF EQUAL SPECIFICATIONS TO ACCOMMODATE WALL FRAMING. POSTS SHALL BE EQUAL OR LARGE SIZE THAN BEAM WIDTH.
11. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL TRUSS DIMENSIONS AND LOCATIONS BEFORE ORDERING TRUSSES. ENGINEER HAS ONLY VERIFIED SPECIFIC TRUSS MEMBERS FOR INTEGRATION WITH THE BUILDING DESIGN. NO DIMENSIONS HAVE BEEN CHECKED BY THE ENGINEER.
12. ALL WOOD EXPOSED TO WATER FROM DIRECT OR BLOWING RAIN, SNOW, OR IRRIGATION TO BE PRESSURE TREATED.
13. MAX GABLE END RAKE OVERHANG TO BE HALF OF THE TRUSS SPACING.

ROOF LEGEND

BEAM PER BEAM SCHEDULE

INTERIOR NON-BEARING WALL

*NOTE: ALL EXTERIOR WALLS SHALL BE BEARING WALLS

WCD
916-251-9798 | WWW.WCDASSOCIATES.COM
6930 DESTINY DRIVE SUITE #300, ROCKLIN, CA 95677

TITLE: FOUNDATION, SHEARWALL, AND ROOF FRAMING PLANS

ADDRESS: PERMIT READY ACCESSORY DWELLING UNIT PLANS - MODEL A2

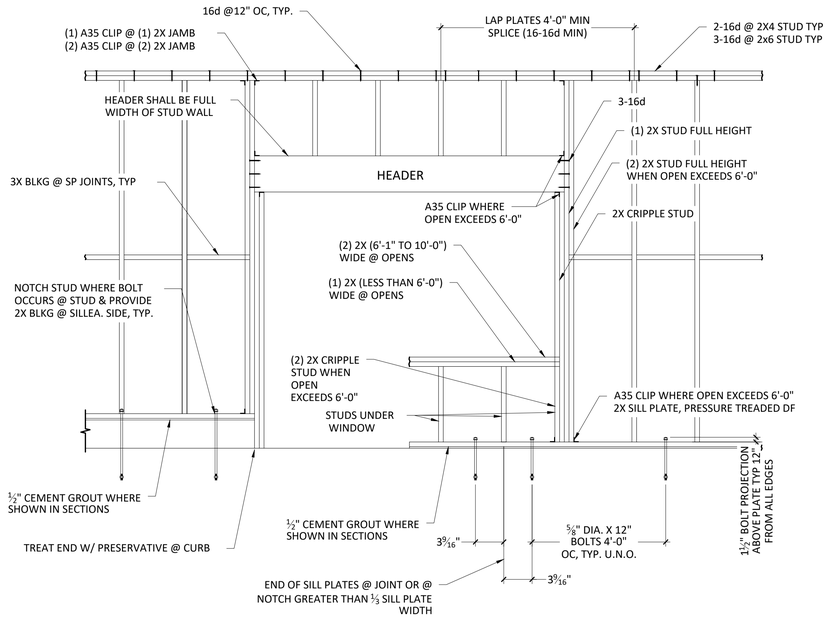
REGISTERED PROFESSIONAL ENGINEER
WESLEY CULLUMBER
No. 80675
Exp. 03-31-25
CIVIL
STATE OF CALIFORNIA

NO.	REVISIONS

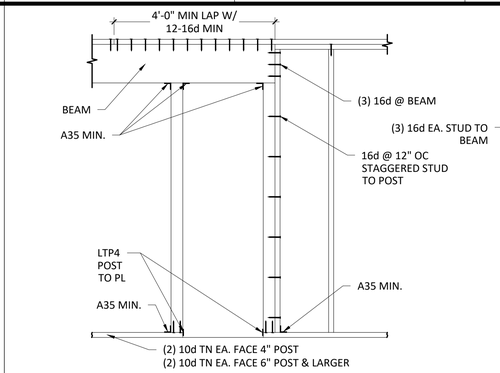
SCALE:	AS NOTED
DATE:	4/15/2024
DESIGNED BY:	E.VILLALPANDO
DRAWN BY:	E.COURPET
REVIEWED BY:	W.CULLUMBER
JOB NO:	RN101022

SHEET NO.

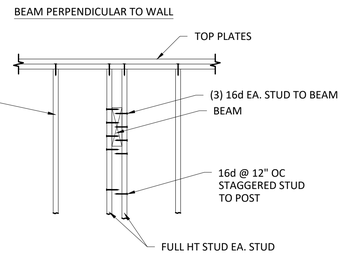
S1.0

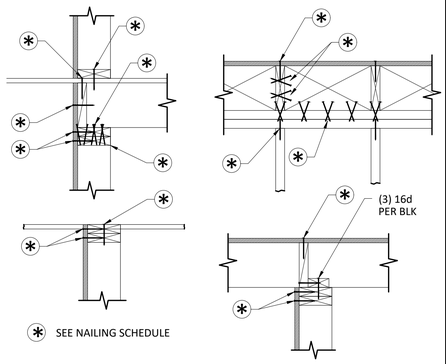


TYPICAL STUD WALL & OPEN FRAMING | 1

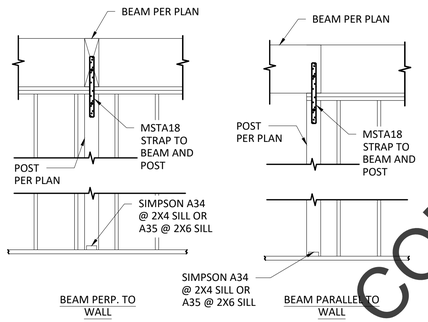


POST AND BEAM CONNECTIONS | 2

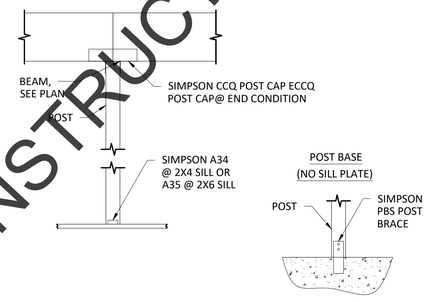




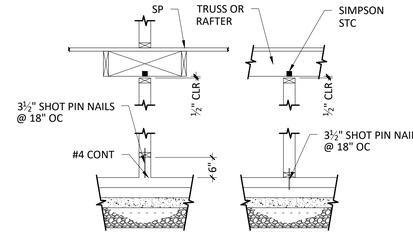
TYPICAL NAILING EXAMPLE | 3



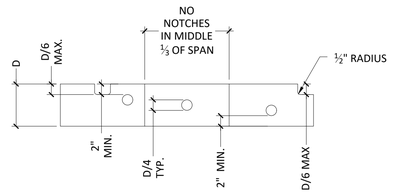
TYPICAL BEAM & POST IN WALL CONNECTION | 4



TYPICAL BEAM & POST CONNECTION | 5

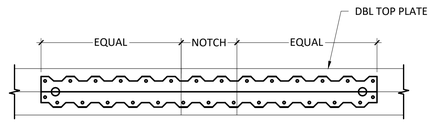


NON-BEARING PARTITION FRAMING | 6



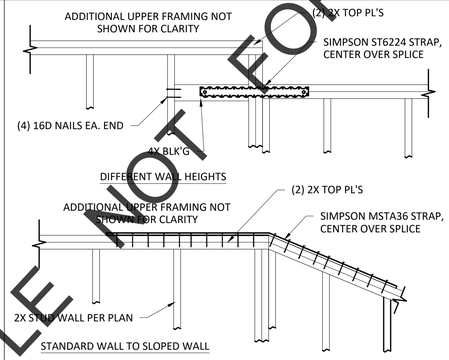
NOTES:
1. PREDRILL CORNERS OF NOTCHES SO AS NOT TO OVER CUT.
2. NOTCHES ON THE ENDS OF JOISTS & HEADERS SHALL NOT EXCEED ⅙ THE DEPTH.
3. NOTCHES IN THE TOP OF JOISTS SHALL NOT EXCEED ⅙ THE DEPTH AND SHALL NOT BE LOCATED IN THE MIDDLE THIRD OF THE SPAN.
4. NOTCHES ON THE BOTTOM OF JOISTS ALLOWED ONLY WHERE SPECIFICALLY SHOWN ON DRAWINGS.
5. HOLES BORED IN JOISTS SHALL NOT BE WITHIN 2 INCHES OF THE TOP OR BOTTOM AND SHALL NOT HAVE A DIAMETER LARGER THAN ¼ THE DEPTH.

NOTCHES & HOLES IN JOISTS & HEADERS | 7

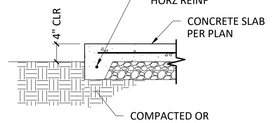


NOTE: SIMPSON ST6224 W/ 12-16d EA END WHERE NOTCH IS 3" OR LESS. ST6236 WHERE NOTCH IS GREATER THAN 3" BUT LESS THAN 6". USE SINGLE STRAP ON NOTCH SIDE WHERE NOTCH IS UP TO ⅓ WIDTH OF PLATES. USE STRAP ON EA SIDE WHERE NOTCH IS GREATER THAN ⅓ WIDTH BUT LESS THAN ⅔ WIDTH OF PLATE. NO NOTCH GREATER THAN ⅔ WIDTH OF PLATE.

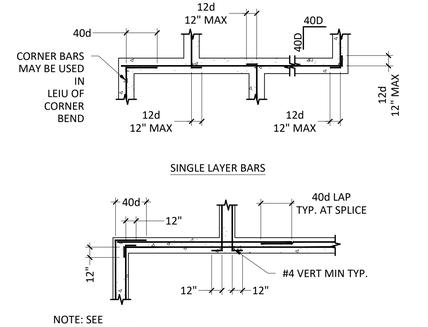
SPLICE AT TP AT NOTCH OR HOLES FOR PIPES OR CONDUITS | 8



SPLICE AT WALL TRANSITION | 9



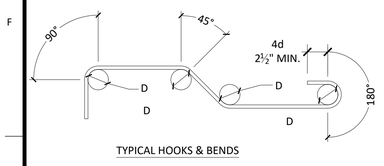
PATIO SLAB EDGE | 10



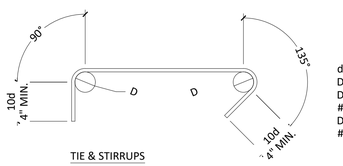
NOTE: SEE CONCRETE NOTES FOR ADD'L REQUIREMENTS

DOUBLE LAYER BARS

TYPICAL CORNER REINFORCING | 11



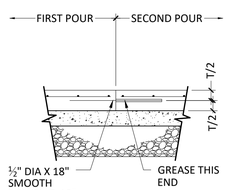
TYPICAL HOOKS & BENDS



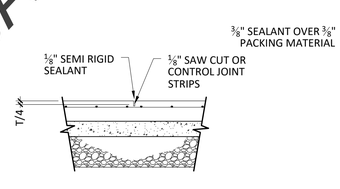
TIE & STIRRUPS

d=REBAR DIAMETER
D=6d FOR #3 THRU #8
D=8d FOR #9 THRU #11
D=10dFOR #14 THRU #18

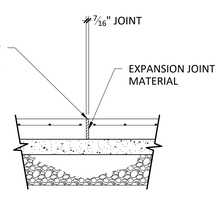
REBAR HOOK & BENDS | 12



CONSTRUCTION JOINT (CJ)



CONTROL JOINT (CTJ)

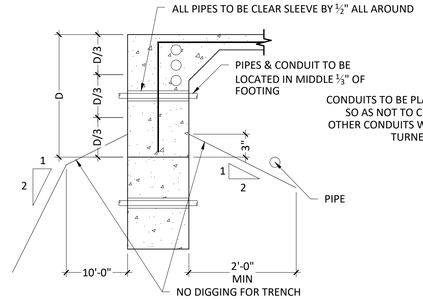


NOTE: REINFORCING DOES NOT CONT. THRU JOINT

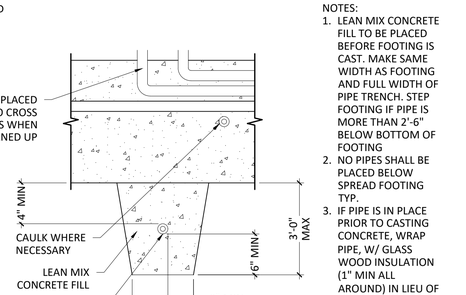
EXPANSION JOINT (EJ)

NOTE: CONSTRUCTION JOINTS & CONTROL JOINTS SHALL DIVIDE SLAB INTO AREAS NOT EXCEEDING 400 SQ. FT. WITHOUT REENTRANT CORNERS & WITH LENGTH TO WIDTH RATIOS NOT EXCEED 1.5 TO 1. JOINT SPACING SHALL NOT EXCEED 20' IN EITHER DIRECTION. SEMI-RIGID SEALANT TO BE METZGER/MCGUIRE "MM-80" OR EQUAL.

SLAB-ON-GRADE JOINT | 13



D=DEPTH OF FOOTING



NOTES:
1. LEAN MIX CONCRETE FILL TO BE PLACED BEFORE FOOTING IS CAST. MAKE SAME WIDTH AS FOOTING AND FULL WIDTH OF PIPE TRENCH. STEP FOOTING IF PIPE IS MORE THAN 2'-6" BELOW BOTTOM OF FOOTING
2. NO PIPES SHALL BE PLACED BELOW SPREAD FOOTING TYP.
3. IF PIPE IS IN PLACE PRIOR TO CASTING CONCRETE, WRAP PIPE, W/ GLASS WOOD INSULATION (1" MIN ALL AROUND) IN LIEU OF SLEEVE

CONCRETE FOOTING AT PIPES & CONDUITS | 14

WCD
916-251-9798 | WWW.WCDASSOCIATES.COM
6930 DESTINY DRIVE SUITE #300, ROCKLIN, CA 95677

STRUCTURAL DETAILS

PERMIT READY
ACCESSORY DWELLING UNIT PLANS - MODEL A2

TITLE:

ADDRESS:

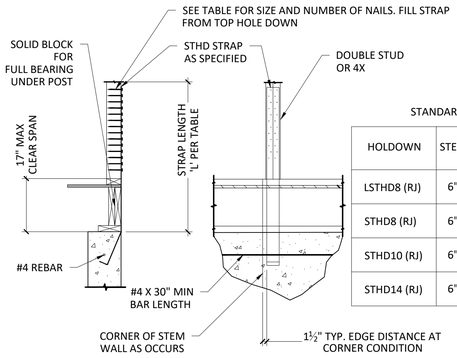
REGISTERED PROFESSIONAL ENGINEER
WESLEY CULLUMBER
No. 80675
Exp. 03-31-25
CIVIL
STATE OF CALIFORNIA

NO.	REVISIONS

SCALE:	AS NOTED
DATE:	4/15/2024
DESIGNED BY:	E.VILLALPANDO
DRAWN BY:	E.COURPET
REVIEWED BY:	W.CULLUMBER
JOB NO:	RN101022

SHEET NO.

SD1



STANDARD INSTALLATION

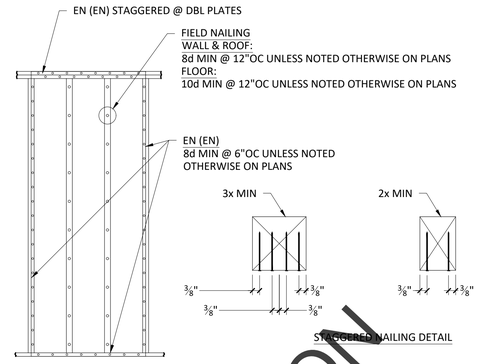
HOLDOWN	STEM WALL	STRAP LENGTH (L)	STRAP LENGTH (RJ) (L)	MIN REBAR IN FOOTING	HD POST	HD TO POST CONNECTION
LSTHD8 (RJ)	6" OR 8"	18 5/8"	32 1/8"	(1) #4 TOP/BOT	(2) 2x OR 4x	(16) 16d SINKERS
STHD8 (RJ)	6" OR 8"	21 5/8"	35 1/8"	(1) #4 TOP/BOT	(2) 2x OR 4x	(20) 16d SINKERS
STHD10 (RJ)	6" OR 8"	24 5/8"	38 1/8"	(1) #4 TOP/BOT	(2) 2x OR 4x	(24) 16d SINKERS
STHD14 (RJ)	6" OR 8"	26 1/8"	39 5/8"	(1) #4 TOP/BOT	(2) 2x OR 4x	(30) 16d SINKERS

STHD INSTALLATION & DETAILS | 15

EN (EN) AS CALLED FOR ON PLANS & SECTIONS APPLIES TO EDGES OF ALL SHEETS & AT ALL INTERIOR LINES AS FOLLOWS:
AT SHEAR WALLS
1. WHERE SP CONTACTS WALL PLATES & SOLID BLOCKING OVER WALL CONSTRUCTION. SEE DETAILS ON THIS SHEET.
2. AT 4X STUD ADJACENT TO HOLDOWN STRAP SEE DETAIL ON THIS SHEET.

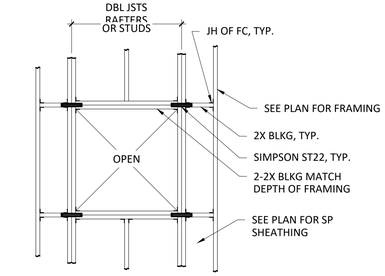
AT ROOF & FLOOR - DIAPHRAGMS
1. AT BLOCKING OR TOP P'S OVER SHEAR WALLS.
2. AT TIES & BEAM IN LINE WITH SHEAR WALLS.
3. ADDITIONAL NAILINGS AS NOTED ON DRAWINGS.

NOTES:
1. WHERE 8d NAILS ARE SPACED @ 2½"OC OR LESS OR 10d NAILS @ 3"OC OR LESS, NAILS SHALL BE STAGGERED & FRAMING SP JOINTS SHALL BE 3X OR LARGER.SEE DETAIL AT RIGHT.
2. WHERE 10d NAILS ARE SPACED @ 3"OC OR LESS, NAILS SHALL BE 10d SHORTS. SEE TYP NAILING SCHEDULE.
3. STAGGER SP JOINTS WHERE SHEAR WALL IS MORE THAN ONE VERTICAL PANEL IN HEIGHT.



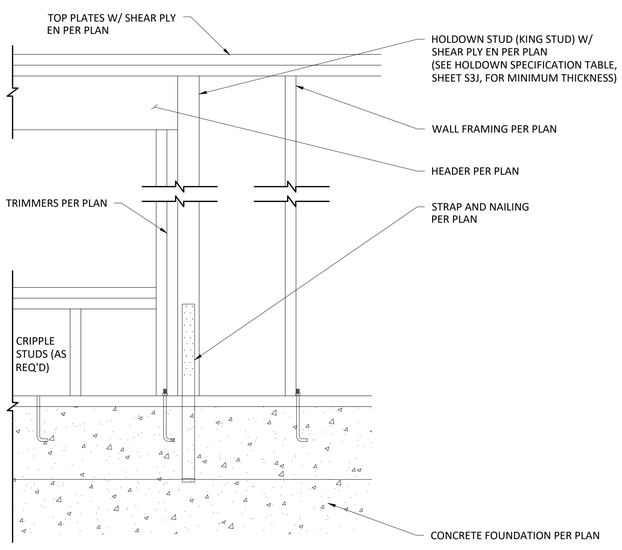
STAGGERED NAILING DETAIL

STRUCTURAL PLYWOOD & PLYWOOD SIDING NAILING | 16

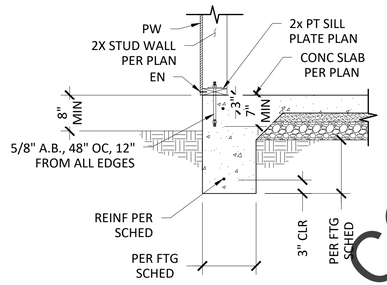


(OPENS TO BE 4'-0" SQ MAX)

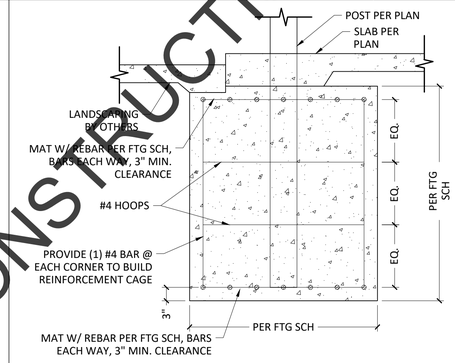
TYPICAL OPEN IN ROOF OR WALL PLYWOOD DIAPHRAGM | 17



TYPICAL HOLDOWN AT WINDOW/DOOR | 18

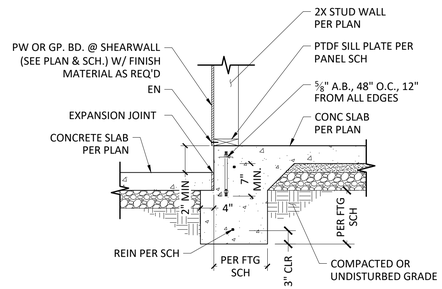


TYPICAL EXTERIOR FOOTING | 19

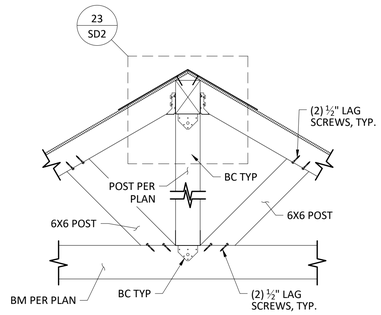


EMBEDDED POST | 20

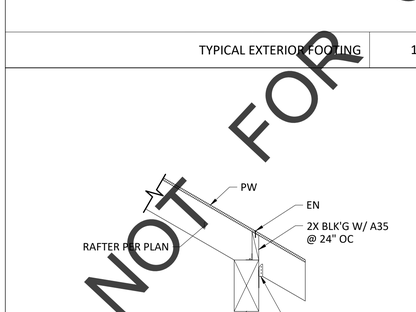
(OPT) = TWO-POUR IS OPTIONAL - 7" MIN EMBED IS FROM TOP OF FOOTING CONC.



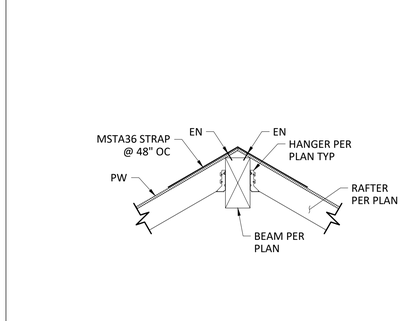
FOOTING TO LOWER SLAB DETAIL | 21



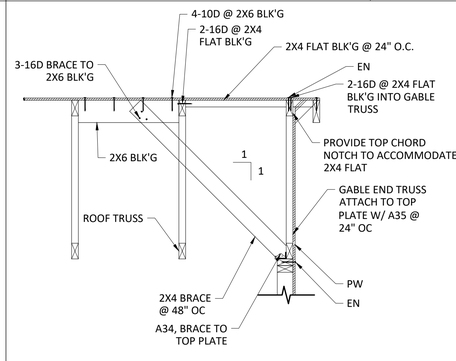
RIDGE BEAM/POST CONNECTIONS | 24



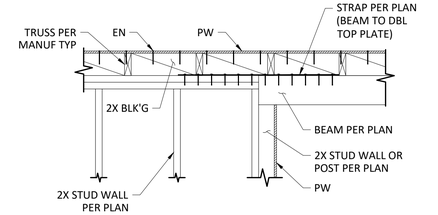
RAFTER TO BEAM CONNECTION | 22



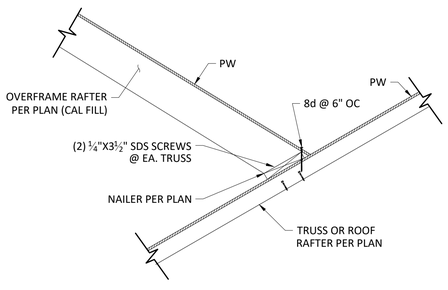
FLUSH RIDGE BM | 23



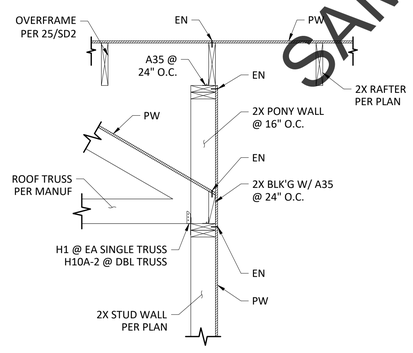
TYPICAL GABLE END TRUSS CONNECTION | 28



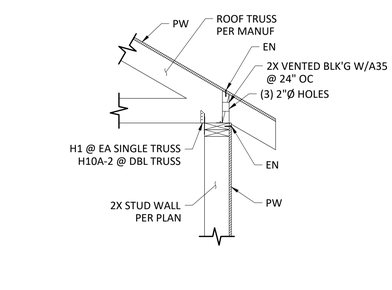
STRAP TO BEAM AND TOP PLATES | 29



OVERFRAMING | 25



TRUSS & RAFTER TO WALL CONNECTION | 26



TRUSS TO WALL CONNECTION | 27

WCD
916-251-9798 | WWW.WCDASSOCIATES.COM
6930 DESTINY DRIVE SUITE #300, ROCKLIN, CA 95677

STRUCTURAL DETAILS

PERMIT READY
ACCESSORY DWELLING UNIT PLANS - MODEL A2

TITLE:

ADDRESS:

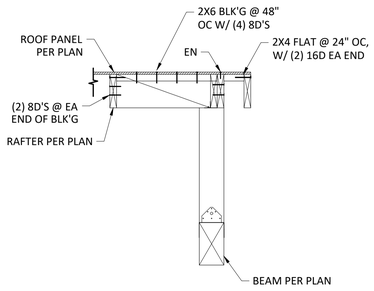
REGISTERED PROFESSIONAL ENGINEER
WESLEY CULLUMBER
No. 80675
Exp. 03-31-25
CIVIL
STATE OF CALIFORNIA

NO.	REVISIONS

SCALE:	AS NOTED
DATE:	4/15/2024
DESIGNED BY:	E.VILLALPANDO
DRAWN BY:	E.COURPET
REVIEWED BY:	W.CULLUMBER
JOB NO:	RN101022

SHEET NO.

SD2



RAFTER & CEILING JOIST @ BALLOON FRAMED WALL	30

WCD
916-251-9798 | WWW.WCDASSOCIATES.COM
6930 DESTINY DRIVE SUITE #300, ROCKLIN, CA 95677

TITLE: STRUCTURAL DETAILS

ADDRESS: PERMIT READY ACCESSORY DWELLING UNIT PLANS - MODEL A2

REGISTERED PROFESSIONAL ENGINEER
WESLEY CULLUMBER
No. 80675
Exp. 03-31-25
CIVIL
STATE OF CALIFORNIA

NO.	REVISIONS
1	
2	
3	
4	

SCALE:	AS NOTED
DATE:	4/15/2024
DESIGNED BY:	E.VILLALPANDO
DRAWN BY:	E.COURPET
REVIEWED BY:	W.CULLUMBER
JOB NO:	RN101022

SHEET NO.

SD3

GENERAL INFORMATION					
01	**Project Name**	Model A with Gable Roof			
02	**Run Title**	Title 24 Analysis			
03	**Project Location**	Model A with Gable Roof			
04	**City**	Sacramento County	05	**Standards Version**	2022
06	**Zip code**	90000	07	**Software Version**	EnergyPro 9.2
08	**Climate Zone**	12	09	**Front Orientation (deg/ Cardinal)**	All orientations
10	**Building Type**	Single family	11	**Number of Dwelling Units**	1
12	**Project Scope**	Newly Constructed	13	**Number of Bedrooms**	1
14	**Addition Cond. Floor Area (ft^2)**	0	15	**Number of Stories**	1
16	**Existing Cond. Floor Area (ft^2)**	n/a	17	**Fenestration Average U-factor**	0.3
18	**Total Cond. Floor Area (ft^2)**	460	19	**Glazing Percentage (%)**	28.79%
20	**ADU Bedroom Count**	n/a	21	**ADU Conditioned Floor Area**	n/a
22	**Fuel Type**	All electric	23	**Occupancy U:**	No

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

ENERGY DESIGN RATINGS						
	Energy Design Ratings			Compliance Margins		
	Source Energy (EDR1)	Efficiency[1] EDR (EDR2efficiency)	Total[2] EDR (EDR2total)	Source Energy (EDR1)	Efficiency[1] EDR (EDR2efficiency)	Total[2] EDR (EDR2total)
Standard Design	36.5	31.9	49.1			
Proposed Design						
North Facing	33.8	28	46.6	2.7	3.9	2.5
East Facing	34.2	29.4	47.5	2.3	2.5	1.6
South Facing	33.7	27.7	46.4	2.8	4.2	2.7
West Facing	34.3	30.2	48	2.2	1.7	1.1
RESULT[3]: PASS						

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

- Standard Design PV Capacity: 0.00 kWdc
- Proposed PV Capacity Scaling: North (0.00 kWdc) East (0.00 kWdc) South (0.00 kWdc) West (0.00 kWdc)

ENERGY USE SUMMARY						
Energy Use	**Standard Design Source Energy (EDR1) (kBtu/ft^2 -yr)**	**Standard Design TDV Energy (EDR2) (kTDV/ft^2 -yr)**	**Proposed Design Source Energy (EDR1) (kBtu/ft^2 -yr)**	**Proposed Design TDV Energy (EDR2) (kTDV/ft^2 -yr)**	**Compliance Margin (EDR1)**	**Compliance Margin (EDR2)**
Space Heating	3.99	27.22	4.16	31.83	-0.17	-4.61
Space Cooling	1.55	40.23	1.07	34.13	0.48	6.1
IAQ Ventilation	0.48	5.13	0.48	5.13	0	0
Water Heating	4.86	51.13	3.23	37.29	1.63	13.84
Self Utilization/Flexibility Credit				0		0
North Facing Efficiency Compliance Total	**10.88**	**123.71**	**8.94**	**108.38**	**1.94**	**15.33**
Space Heating	3.99	27.22	4.18	31.7	-0.19	-4.48
Space Cooling	1.55	40.23	1.3	39.92	0.25	0.31
IAQ Ventilation	0.48	5.13	0.48	5.13	0	0
Water Heating	4.86	51.13	3.23	37.22	1.63	13.91
Self Utilization/Flexibility Credit				0		0
East Facing Efficiency Compliance Total	**10.88**	**123.71**	**9.19**	**113.97**	**1.69**	**9.74**

ENERGY USE SUMMARY						
Energy Use	**Standard Design Source Energy (EDR1) (kBtu/ft^2 -yr)**	**Standard Design TDV Energy (EDR2) (kTDV/ft^2 -yr)**	**Proposed Design Source Energy (EDR1) (kBtu/ft^2 -yr)**	**Proposed Design TDV Energy (EDR2) (kTDV/ft^2 -yr)**	**Compliance Margin (EDR1)**	**Compliance Margin (EDR2)**
Space Heating	3.99	27.22	3.98	30.24	0.01	-3.02
Space Cooling	1.55	40.23	1.11	34.84	0.44	5.39
IAQ Ventilation	0.48	5.13	0.48	5.13	0	0
Water Heating	4.86	51.13	3.23	37.25	1.63	13.88
Self Utilization/Flexibility Credit				0		0
South Facing Efficiency Compliance Total	**10.88**	**123.71**	**8.8**	**107.46**	**2.08**	**16.25**
Space Heating	3.99	27.22	4.16	31.84	-0.17	-4.62
Space Cooling	1.55	40.23	1.39	42.86	0.16	-2.63
IAQ Ventilation	0.48	5.13	0.48	5.13	0	0
Water Heating	4.86	51.13	3.23	37.22	1.63	13.91
Self Utilization/Flexibility Credit				0		0
West Facing Efficiency Compliance Total	**10.88**	**123.71**	**9.26**	**117.05**	**1.62**	**6.66**

ENERGY USE INTENSITY				
	Standard Design (kBtu/ft^2 - yr)	**Proposed Design (kBtu/ft^2 - yr)**	**Compliance Margin (kBtu/ft^2 - yr)**	**Margin Percentage**
North Facing				
Gross EUI[1]	36.5	33.86	2.64	7.23
Net EUI[2]	36.5	33.86	2.64	7.23
East Facing				
Gross EUI[1]	36.5	34.37	2.13	5.84
Net EUI[2]	36.5	34.37	2.13	5.84
South Facing				
Gross EUI[1]	36.5	33.76	2.74	7.51
Net EUI[2]	36.5	33.76	2.74	7.51
West Facing				
Gross EUI[1]	36.5	34.51	1.99	5.45
Net EUI[2]	36.5	34.51	1.99	5.45

Notes
1. Gross EUI is Energy Use Total (Not including PV) / Total Building Area.
2. Net EUI is Energy Use Total (Including PV) / Total Building Area.

REQUIRED PV SYSTEMS

01	02	03	04	05	06	07	08	09	10	11	12
DC System Size (kWdc)	**Exception**	**Module Type**	**Array Type**	**Power Electronics**	**CFI**	**Azimuth (deg)**	**Tilt Input**	**Array Angle (deg)**	**Tilt: (x in 12)**	**Inverter Eff. (%)**	**Annual Solar Access (%)**
0		Standard (14-17%)	Fixed	none	true	n/a	n/a	n/a	n/a	n/a	

REQUIRED SPECIAL FEATURES

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

- PV exception 2: No PV required when minimum PV size (Section 150.1(c)14) < 1.8 kWdc (0 kW)
- 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

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.

- Indoor air quality ventilation
- Kitchen range hood
- Verified Refrigerant Charge
- Airflow in habitable rooms (SC3.1.4.1.7)
- 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)

BUILDING - FEATURES INFORMATION

01	02	03	04	05	06	07
Project Name	**Conditioned Floor Area (ft^2)**	**Number of Dwelling Units**	**Number of Bedrooms**	**Number of Zones**	**Number of Ventilation Cooling Systems**	**Number of Water Heating Systems**
Model A with Gable Roof	460	1	1	1	0	1

compucalc@title24energyreports.com
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Title 24 Part 6 Energy Services
Elizabeth Smithwick
Certified Energy Analyst
#19-94-00006

2022 Title 24 Part 6
Energy Code

Sheet:
T24-1

ZONE INFORMATION

01	02	03	04	05	06	07
Zone Name	Zone Type	HVAC System Name	Zone Floor Area (ft^2)	Avg. Ceiling Height	Water Heating System 1	Status
ADU	Conditioned	Res HVAC1	460	8	DHW Sys 1	New

OPAQUE SURFACES

01	02	03	04	05	06	07	08
Name	Zone	Construction	Azimuth	Orientation	Gross Area (ft^2)	Window and Door Area (ft2)	Tilt (deg)
Front Wall	ADU	R-21 Wall	0	Front	192	62.1	90
Back Wall	ADU	R-21 Wall	180	Back	192	40.1	90
Right Wall	ADU	R-21 Wall	270	Right	153	13.5	90
Left Wall	ADU	R-21 Wall	90	Left	153	16.75	90
Attic	ADU	R-38 Roof Attic	n/a	n/a	460	n/a	n/a

ATTIC

01	02	03	04	05	06	07	08
Name	Construction	Type	Roof Rise (x in 12)	Roof Reflectance	Roof Emittance	Radiant Barrier	Cool Roof
Attic ADU	Attic RoofADU	Ventilated	5	0.1	0.85	No	No

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
F1 WA	Window	Front Wall	Front	0			1	16	0.3	NFRC	0.23	NFRC	Bug Screen
F2 WB SL	Window	Front Wall	Front	0			1	10	0.3	NFRC	0.23	NFRC	Bug Screen
F3 D1	Window	Front Wall	Front	0			1	20.1	0.3	NFRC	0.23	NFRC	Bug Screen

FENESTRATION / GLAZING

01	02	03	04	05	06	07	08	09	10	11	12	13	14
Name	Type	Surface	Orientation	Azimuth	Width (ft)	Height (ft)	Mult.	Area (ft^2)	U-factor	U-factor Source	SHGC	SHGC Source	Exterior Shading
F4 WA	Window	Front Wall	Front	0			1	16	0.3	NFRC	0.23	NFRC	Bug Screen
B1 D6	Window	Back Wall	Back	180			1	20.1	0.3	NFRC	0.23	NFRC	Bug Screen
B2 WE	Window	Back Wall	Back	180			1	20	0.3	NFRC	0.23	NFRC	Bug Screen
R1 (3) WD	Window	Right Wall	Right	270			1	6.75	0.3	NFRC	0.23	NFRC	Bug Screen
R2 (3) WD	Window	Right Wall	Right	270			1	6.75	0.3	NFRC	0.23	NFRC	Bug Screen
L1 WC	Window	Left Wall	Left	90			1	12.25	0.3	NFRC	0.23	NFRC	Bug Screen
L2 WF	Window	Left Wall	Left	90			1	4.5	0.3	NFRC	0.23	NFRC	Bug Screen

SLAB FLOORS

01	02	03	04	05	06	07	08
Name	Zone	Area (ft^2)	Perimeter (ft)	Edge Insul. R-value and Depth	Edge Insul. R-value and Depth	Carpeted Fraction	Heated
Slab-on-Grade	ADU	460	86	none	0	80%	No

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
R-21 Wall	Exterior Walls	Wood Framed Wall	2x6 @ 16 in. O. C.	R-21	None / None	0.068	Inside Finish: Gypsum Board Cavity / Frame: R-21 Exterior Finish: All Other Siding

OPAQUE SURFACE CONSTRUCTIONS

01	02	03	04	05	06	07	08
Construction Name	Surface Type	Construction Type	Framing	Total Cavity R-value	Interior / Exterior Continuous R-value	U-factor	Assembly Layers
Attic RoofADU	Attic Roofs	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-0	None / 0	0.644	Roofing: Light Roof (Asphalt Shingle) Roof Deck: Wood Siding/sheathing/decking Cavity / Frame: no insul. / 2x4
R-38 Roof Attic	Ceilings (below attic)	Wood Framed Ceiling	2x4 @ 24 in. O. C.	R-38	None / None	0.025	Over Ceiling Joists: R-28.9 insul. Cavity / Frame: R-9.1 / 2x4 Inside Finish: Gypsum Board

BUILDING ENVELOPE - HERS VERIFICATION

01	02	03	04	05
Quality Insulation Installation (QII)	High R-value Spray Foam Insulation	Building Envelope Air Leakage	CFM50	CFM50
Not Required	Not Required	N/A	n/a	n/a

WATER HEATING SYSTEMS

01	02	03	04	05	06	07	08	09
Name	System Type	Distribution Type	Water Heater Name	Number of Units	Solar Heating System	Compact Distribution	HERS Verification	Water Heater Name (#)
DHW Sys 1	Domestic Hot Water (DHW)	Standard	DHW Heater 1	1	n/a	None	n/a	DHW Heater 1 (1)

WATER HEATERS - NEEA HEAT PUMP

01	02	03	04	05	06	07	08
Name	# of Units	Tank Vol. (gal)	NEEA Heat Pump Brand	NEEA Heat Pump Model	Tank Location	Duct Inlet Air Source	Duct Outlet Air Source
DHW Heater 1	1	40	Generic	Tier3Generic40	Outside	ADU	ADU

WATER HEATING - HERS VERIFICATION

01	02	03	04	05	06	07
Name	Pipe Insulation	Parallel Piping	Compact Distribution	Compact Distribution Type	Recirculation Control	Shower Drain Water Heat Recovery
DHW Sys 1 - 1/1	Not Required	Not Required	Not Required	None	Not Required	Not Required

SPACE CONDITIONING SYSTEMS

01	02	03	04	05	06	07	08	09
Name	System Type	Heating Unit Name	Heating Equipment Count	Cooling Unit Name	Cooling Equipment Count	Fan Name	Distribution Name	Required Thermostat Type
Res HVAC1	Heat pump heating cooling	Heat Pump System 1	1	Heat Pump System 1	1	n/a	n/a	Setback

HVAC - HEAT PUMPS

01	02	03	04	05	06	07	08	09	10	11	12	13
			Heating			Cooling						
Name	System Type	Number of Units	Efficiency Type	HSPF / HSPF2 / COP	Cap 47	Cap 17	Efficiency Type	SEER / SEER2	EER / EER / CEER	Zonally Controlled	Compressor Type	HERS Verification
Heat Pump System 1	VCHP-ductless	1	HSPF2	7.5	10900	6700	EER2SEER2	14.3	9	Not Zonal	Single Speed	Heat Pump System 1-hers-htpump

HVAC HEAT PUMPS - HERS VERIFICATION

01	02	03	04	05	06	07	08	09
Name	Verified Airflow	Airflow Target	Verified EER/EER2	Verified SEER/SEER2	Verified Refrigerant Charge	Verified HSPF/HSPF2	Verified Heating Cap 47	Verified Heating Cap 17
Heat Pump System 1-hers-htpump	Not Required	0	Not Required	Not Required	Yes	No	Yes	Yes

VARIABLE CAPACITY HEAT PUMP COMPLIANCE OPTION - HERS VERIFICATION

01	02	03	04	05	06	07	08	09	10
Name	Certified Low-Static VCHP System	Airflow to Habitable Rooms	Ductless Units in Conditioned Space	Wall Mount Thermostat	Air Filter Sizing & Pressure Drop Rating	Low Leakage Ducts in Conditioned Space	Minimum Airflow per RA3.3 and SC3.3.3.4.1	Certified non-continuous Fan	Indoor Fan not Running Continuously
Heat Pump System 1	Not required	Required	Required	Required	Not required	Not required	Not required	Not required	Not required

INDOOR AIR QUALITY (IAQ) FANS

01	02	03	04	05	06	07	08	09
Dwelling Unit	Airflow (CFM)	Fan Efficacy (W/CFM)	IAQ Fan Type	Includes Heat/Energy Recovery?	IAQ Recovery Effectiveness - SRE	Includes Fault Indicator Display?	HERS Verification	Status
SFam IAQVentRpt	29	0.35	Exhaust	No	n/a / n/a	No	Yes	

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I, I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: Jeff Travis	Documentation Author Signature: Jeff Travis
Company: CompuCalc	Signature Date: 2023-08-23 10:41:57
Address: 5201 Coventry Dr.,	CEA/ HERS Certification Identification (If applicable): R19-22-30127
City/State/Zip: Riverside, CA 92506	Phone: 951-902-2660

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design identified on this Certificate of Compliance.
2. 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 Regulations.
3. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name: laura miller	Responsible Designer Signature: laura miller
Company: Miller Design Studio	Date Signed: 2023-08-23 11:04:45
Address: 2656 Harkness Street	License: NA
City/State/Zip: Sacramento, CA 95818	Phone: 916-607-3321

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.

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Title 24 Part 6 Energy Services
Elizabeth Smilowitz
Certified Energy Analyst
R19-94-30006

2022 Title 24 Part 6 Energy Code

Sheet: T24-2

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.
(042022)

Building Envelope:

§ 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 U0.164. 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-19 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):	**Raised-floor Insulation.** Minimum R-19 insulation in raised wood framed floor or 0.037 maximum U-factor.*
§ 150.0(f):	**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 physical damage and UV light deterioration; and, when installed as part of a heated slab floor, meet the requirements of § 110.8(g).
§ 150.0(g)1:	**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 §150.0(d).
§ 150.0(g)2:	**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.
§ 150.0(g):	**Fenestration Products.** Fenestration, including skylights, separating conditioned space from unconditioned space or outdoors must have 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:

§ 110.5(e)	**Pilot Light.** Continuously burning pilot lights are not allowed for indoor and outdoor fireplaces.
§ 150.0(e)1:	**Closable Doors.** Masonry or factory-built fireplaces must have a closable metal or glass door covering the entire opening of the firebox.
§ 150.0(e)2:	**Combustion Intake.** Masonry or factory-built fireplaces must have a combustion outside air intake, which is at least six square inches in area and is equipped with a readily accessible, operable, and tight-fitting damper or combustion-air control device.*
§ 150.0(e)3:	**Flue Damper.** Masonry or factory-built fireplaces must have a flue damper with a readily accessible control.*

Space Conditioning, Water Heating, and Plumbing System::

§ 10.0 § 110.3:	**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.
§ 110.2(a):	**HVAC Efficiency.** Equipment must meet the applicable efficiency requirements in Table 110.2-A through Table 110.2-N.*
§ 110.2(b):	**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.*
§ 110.2(c):	**Thermostats.** All heating or cooling systems not controlled by a central energy management control system (EMCS) must have a setback thermostat.*
§ 110.3(c)3:	**Insulation.** Unfired service water heater storage tanks and solar water-heating backup tanks must have adequate insulation, or tank surface heat loss rating.
§ 110.3(c)5:	**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.

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§ 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 1.2'5' 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 Heating 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.

Ducts 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, CMC/IAPMO/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 (RA3.1.4.3.9) 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 for aerosol sealant that meets UL 723. The combination of mastic and either mesh or tape must be used to seal openings greater than ¼", 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 additional closure systems.*
§ 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 ducts and plenums.*
§ 150.0(m)7:	**Backdraft Damper.** Fan systems that exchange air between conditioned space and outdoors must have backdraft or automatic dampers.
§ 150.0(m)8	**Gravity Ventilation Dampers.** Gravity ventilation systems serving conditioned space must have either automatic or readily accessible, manually operated dampers in all openings leading 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 durable 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 core flex ducts must have a non-porous layer or air barrier between the inner core and outer vapor barrier.
§ 150.0(m)11:	**Duct System Sealing and Leakage Test.** When space conditioning systems use forced air duct systems to supply conditioned air to an occupiable space, the ducts must be sealed and duct leakage tested, as confirmed through field verification and diagnostic testing, in accordance with Reference Residential Appendix RA3.1.
§ 150.0(m)12:	**Air Filtration.** Space conditioning systems with ducts exceeding 10 feet and the supply side of ventilation systems must have MERV 13 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. Clean-filter pressure drop labeling must meet the requirements in §150.0(m)12. Filters must be accessible for regular service. Filter racks or cabinets must have gaskets, sealing, or other means to close gaps around the inserted filters to and prevents air from bypassing the filter.*

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§ 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 all 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.

Solar 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 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.
§ 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:	**Main Electrical Service Panel.** The main electrical service panel must have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space must be permanently marked as "For Future Solar Electric."

Electric and Energy Storage Ready:

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2022 Single-Family Residential Mandatory Requirements Summary

§ 150.0(m)13:	**Space Conditioning System Airflow Rate and Fan Efficacy.** Space conditioning systems that use ducts to supply cooling must have a hole for the placement of a static pressure probe, or a permanently installed static pressure probe in the supply plenum. Airflow must 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 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 cooling capacity, and an air-handling unit fan efficacy ≤ 0.62 watts per CFM. Field verification testing is required in accordance with Reference Residential Appendix RA3.3.*

Ventilation and Indoor Air Quality:

§ 150.0(o)1:	**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.*
§ 150.0(o)1B:	**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 andcontrolled 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 compliance with § 150.0(o)1C.
§ 150.0(o)1C:	**Whole-Dwelling Unit Mechanical Ventilation for Single-Family Detached and townhouses .** Single-family detached dwelling units, 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)1Oi-iii.
§ 150.0(o)1G:	**Local Mechanical Exhaust.** Kitchens and bathrooms must have local mechanical exhaust; nonenclosed kitchens must have demand-controlled 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)1Gvi.*
§ 150.0(o)1H&I:	**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.
§ 150.0(o)2:	**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:

§ 110.4(a):	**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.*
§ 110.4(b)1:	**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.
§ 110.4(b)2:	**Covers.** Outdoor pools or spas that have a heat pump or gas heater must have a cover.
§ 110.4(b)3:	**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.
§ 110.5:	**Pilot Light.** Natural gas pool and spa heaters must not have a continuously burning pilot light.
§ 150.0(p):	**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:

§ 110.9:	**Lighting Controls and Components.** All lighting control devices and systems, ballasts, and luminaires must meet the applicable requirements of § 110.9.*
§ 150.0(k)1A:	**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.*
§ 150.0(k) 1C:	**Recessed Downlight Luminaires in Ceilings.** Luminaires recessed into ceilings must not contain screw based sockets, must be airtight, and must be sealed with a gasket or caulk. California Electrical Code § 410.116 must also be met.
§ 150.0(k) 1D:	**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) 1E:	**Blank Electrical Boxes.** The number of electrical boxes that are more than five feet above the finished floor and do not contain a luminaire or other device shall be no more than the number of bedrooms. These boxes must be served by a dimmer, vacancy sensor control, low voltage wiring, or fan speed control.
§ 150.0(k) 1F:	**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).

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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; or 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."
§ 150.0(v)	**Electric Clothes Dryer Ready.** Clothes dryer locations with gas or propane plumbing to serve individual dwelling units must include: A 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 circuit breaker permanently marked as "For Future 240V use."

*Exceptions may apply.

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This compliance report shows use of a Variable Capacity Heat Pump. Please note requirements below:

HERS VERIFICATIONS:

Cooling System Verifications:

- Airflow in habitable rooms (SC3.1.4.1.7)
- Refrigerant Charge
- Fan Efficacy/CFM

Heating System Verifications:

- Verified heat pump rated heating capacity per AHRI Certificate at 47 Degrees & 17 degrees

- Ductless indoor units located entirely in conditioned space
- Field verification according to the procedure in SC3.4.5 shall confirm that VCHP space conditioning zones in the dwelling that are greater than 150 ft2, are controlled by a permanently installed wall-mounted thermostat

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Sheet:
T24-3
SINGLE FAMILY MANDATORY REQUIREMENTS

From Section 150.0(o) G. Local mechanical exhaust

Local mechanical exhaust. A local mechanical exhaust system shall be installed in each kitchen and bathroom. Systems shall be rated for airflow in accordance with ASHRAE 62.2 Section 7.1.

i. Nonenclosed kitchens shall have a demand-controlled mechanical exhaust system meeting the requirements of Section 150.0(o)1Giii.

ii. Enclosed kitchens and all bathrooms shall have either one of the following alternatives a or b:
  a. A demand-controlled mechanical exhaust system meeting the requirements of Section 150.0(o)1Giii.
  b. A continuous mechanical exhaust system meeting the requirements of Section 150.0(o)1Giv.

iii. Demand-controlled mechanical exhaust. A local mechanical exhaust system shall be designed to be operated as needed.
  a. Control and operation. Demand-controlled mechanical exhaust systems shall be provided with at least one of the following controls:
    1. A readily accessible occupant-controlled ON-OFF control.
    2. An automatic control that does not impede occupant ON control.
  b. Ventilation rate and capture efficiency. The system shall meet or exceed either the minimum airflow in accordance with Table 150.0-E or the minimum capture efficiency in accordance with Table 150.0-E, and Table 150.0-G. Capture efficiency ratings shall be determined in accordance with ASTM E3087 and listed in a product directory approved by the Energy Commission.

iv. Continuous mechanical exhaust. A mechanical exhaust system shall be installed to operate continuously. The system may be part of a balanced mechanical ventilation system.
  a. Control and operation. A manual ON-OFF control shall be provided for each continuous mechanical exhaust system. The system shall be designed to operate during all occupiable hours. The ON-OFF control shall be accessible to the dwelling unit occupant.
  b. Ventilation rate. The minimum delivered ventilation shall be at least the amount indicated in Table 150.0-F during each hour of operation.

v. Airflow measurement of local mechanical exhaust by the system installer. The airflow required by Section 150.0(o)1G is the quantity of indoor air exhausted by the ventilation system as installed in the dwelling unit. When a vented range hood utilizes a capture efficiency rating to demonstrate compliance with Section 150.0(o)1Giiib, the airflow listed in the approved directory corresponding to the compliant capture efficiency rating point shall be met by the installed system. The as-installed airflow shall be verified by the system installer to ensure compliance by use of either Subsection a or b below:
  a. The system installer shall measure the airflow by using a flow hood, flow grid or other airflow measuring device at the mechanical ventilation fanâ€™s inlet terminals/grilles or outlet terminals/grilles in accordance with the procedures in Reference Residential Appendix RA3.7.
  b. As an alternative to performing an airflow measurement of the system as installed in the dwelling unit, compliance may be demonstrated by installing an exhaust fan and duct system that conforms to the specifications of Table 150.0-H. Visual inspection shall verify the installed system conforms to the requirements of Table 150.0-H.

When using Table 150.0-H for demonstrating compliance, the airflow rating shall be greater than or equal to the value required by Section 150.0(o)1G at a static pressure greater than or equal to 0.25 in. of water (62.5 Pa). When a vented range hood utilizes a capture efficiency rating to demonstrate compliance with Section 150.0(o)1Giiib, a static pressure greater than or equal to 0.25 in. of water at the rating point shall not be required, and the airflow listed in the approved directory corresponding to the compliant capture efficiency rating point shall be applied to Table 150.0-H for determining compliance.

Use of Table 150.0-H is limited to ventilation systems that conform to all of the following three specifications:
1. Total duct length is less than or equal to 25 ft (8 m),
2. Duct system has not more than three elbows, and
3. Duct system has exterior termination fitting with a hydraulic diameter greater than or equal to the minimum duct diameter and not less than the hydraulic diameter of the fan outlet.

Table 150.0-G Kitchen Range Hood Airflow Rates (cfm) and ASTM E3087 Capture Efficiency (CE)Ratings According to Dwelling Unit Floor Area and Kitchen Range Fuel Type

Dwelling Unit Floor Area (ft²)	Hood Over Electric Range	Hood Over Natural Gas Range
>1500	50% CE or 110 CFM	70% CE or 180 CFM
>1000 to 1500	50% CE or 110 CFM	80% CE or 250 CFM
750 - 1000	55% CE or 110 CFM	85% CE or 280 CFM
<750	65% CE or 110 CFM	85% CE or 280 CFM

From Section 150.0 (n) (s)(t)(u)(v) – MANDATORY FEATURES AND DEVICES

(n) **Water heating system.**
1. Systems using gas or propane water heaters to serve individual dwelling units shall designate a space at least 2.5 feet by 2.5 feet wide and 7 feet tall suitable for the future installation of a heat pump water heater (HPWH) by meeting either A or B below. All electrical components shall be installed in accordance with the California Electrical Code:
  A. If the designated space is within 3 feet from the water heater, then this space shall include the following:
    i. A dedicated 125 volt, 20 amp electrical receptacle that is connected to the electric panel with a 120/240 volt 3 conductor, 10 AWG copper branch circuit, within 3 feet from the water heater and accessible to the water heater with no obstructions; and
    ii. Both ends of the unused conductor shall be labeled with the word "spare" and be electrically isolated; and
    iii. A reserved single pole circuit breaker space in the electrical panel adjacent to the circuit breaker for the branch circuit in A above and labeled with the words "Future 240V Use"; and
    iv. A condensate drain that is no more than 2 inches higher than the base of the installed water heater, and allows natural draining without pump assistance.
  B. If the designated space is more than 3 feet from the water heater, then this space shall include the following:
    i. A dedicated 240 volt branch circuit shall be installed within 3 feet from the designated space. The branch circuit shall be rated at 30 amps minimum. The blank cover shall be identified as "240V ready"; and
    ii. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future HPWH installation. The reserved space shall be permanently marked as "For Future 240V use"; and
    iii. Either a dedicated cold water supply, or the cold water supply shall pass through the designated HPWH location just before reaching the gas or propane water heater; and
    iv. The hot water supply pipe coming out of the gas or propane water heater shall be routed first through the designated HPWH location before serving any fixtures; and
    v. The hot and cold water piping at the designated HPWH location shall be exposed and readily accessible for future installation of an HPWH; and
    vi. A condensate drain that is no more than 2 inches higher than the base of the installed water heater, and allows natural draining without pump assistance.

(s) **Energy Storage Systems (ESS) ready.** All single-family residences that include one or two dwelling units shall meet the following. All electrical components shall be installed in accordance with the *California Electrical Code:*

1. At least one of the following shall be provided:
  A. ESS ready interconnection equipment with a minimum backed-up capacity of 60 amps and a minimum of four ESS-supplied branch circuits, or
  B. A dedicated raceway from the main service to a panelboard (subpanel) that supplies the branch circuits in Section 150.0(s)(2). All branch circuits are permitted to be supplied by the main service panel prior to the installation of an ESS. The trade size of the raceway shall be not less than one inch. The panelboard that supplies the branch circuits (subpanel) must be labeled "Subpanel shall include all backed-up load circuits."
2. A minimum of four branch circuits shall be identified and have their source of supply collocated at a single panelboard suitable to be supplied by the ESS. At least one circuit shall supply the refrigerator, one lighting circuit shall be located near the primary egress, and at least one circuit shall supply a sleeping room receptacle outlet.
3. The main panelboard shall have a minimum busbar rating of 225 amps.
4. Sufficient space shall be reserved to allow future installation of a system isolation equipment/transfer switch within 3 feet of the main panelboard. Raceways shall be installed between the panelboard and the system isolation equipment/transfer switch location to allow the connection of backup power source.

(t) **Heat pump space heater ready**. Systems using gas or propane furnace to serve individual dwelling units shall include the following:
1. A dedicated 240 volt branch circuit wiring shall be installed within 3 feet from the furnace and accessible to the furnace with no obstructions. The branch circuit conductors shall be rated at 30 amps minimum. The blank cover shall be identified as "240V ready." All electrical components shall be installed in accordance with the California Electrical Code.
2. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future heat pump space heater installation. The reserved space shall be permanently marked as "For Future 240V use."

(u) **Electric cooktop ready**. Systems using gas or propane cooktop to serve individual dwelling units shall include the following:
1. A dedicated 240 volt branch circuit wiring shall be installed within 3 feet from the cooktop and accessible to the cooktop with no obstructions. The branch circuit conductors shall be rated at 50 amps minimum. The blank cover shall be identified as "240V ready." All electrical components shall be installed in accordance with the California Electrical Code.
2. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future electric cooktop installation. The reserved space shall be permanently marked as "For Future 240V use."

(v) **Electric clothes dryer ready**. Clothes dryer locations with gas or propane plumbing to serve individual dwelling units shall include the following:
1. A dedicated 240 volt branch circuit wiring shall be installed within 3 feet from the clothes dryer location and accessible to the clothes dryer location with no obstructions. The branch circuit conductors shall be rated at 30 amps minimum. The blank cover shall be identified as "240V ready." All electrical components shall be installed in accordance with the California Electrical Code.
2. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future electric clothes dryer installation. The reserved space shall be permanently marked as "For Future 240V use

SECTION 110.10 – MANDATORY REQUIREMENTS FOR SOLAR READINESS (Fron Section 110.10 of the 2022 Building Energy Efficiency Standards)

a. **Single-family residences.** Single-family residences located in subdivisions with ten or more single-family residences and where the application for a tentative subdivision map for the residences has been deemed complete or approved by the enforcement agency, which do not have a photovoltaic system installed, shall comply with the requirements of Sections 110.10(b) through 110.10(e)

b. **Solar zone.**

1. Minimum solar zone area. The solar zone shall have a minimum total area as described below. The solar zone shall 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 shall be comprised of areas that have no dimension less than five 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.

A. Single-family residences. The solar zone shall be located on the roof or overhang of the building and have a total area no less than 250 square feet.

Exception 1 to Section 110.10(b)1A: Single-family residences with a permanently installed domestic solar water-heating system meeting the installation criteria specified in the Reference Residential Appendix RA4 and with a minimum solar savings fraction of 0.50.

Exception 2 to Section 110.10(b)1A: Single-family residences with three habitable stories or more and with a total floor area less than or equal to 2000 square feet and having a solar zone total area no less than 150 square feet.

Exception 3 to Section 110.10(b)1A: Single-family residences located in the Wildland-Urban Interface Fire Area as defined in Title 24, Part 2 and having a whole house fan and having a solar zone total area no less than 150 square feet.

Exception 4 to Section 110.10(b)1A: Buildings with a designated solar zone area that is no less than 50 percent of the potential solar zone area. The potential solar zone area is the total area of any low-sloped roofs where the annual solar access is 70 percent or greater and any steep-sloped roofs oriented between 90 degrees and 300 degrees of true north where the annual solar access is 70 percent or greater. Solar access is the ratio of solar insolation including shade to the solar insolation without shade. Shading from obstructions located on the roof or any other part of the building shall not be included in the determination of annual solar access.

Exception 5 to Section 110.10(b)1A: Single-family residences having a solar zone total area no less than 150 square feet and where all thermostats are demand responsive controls and comply with Section 110.12(a), and are capable of receiving and responding to Demand Response Signals prior to granting of an occupancy permit by the enforcing agency.

Exception 6 to Section 110.10(b)1A: Single-family residences meeting the following conditions:

A. All thermostats are demand responsive controls that comply with Section 110.12(a), and are capable of receiving and responding to Demand Response Signals prior to granting of an occupancy permit by the enforcing agency.

B. Comply with one of the following measures:
  i. Install a dishwasher that meets or exceeds the ENERGY STAR® Program requirements with a refrigerator that meets or exceeds the ENERGY STAR Program requirements, a whole house fan driven by an electronically commutated motor, or an SAE J1772 Level 2 Electric Vehicle Supply Equipment (EVSE or EV charger) with a minimum of 40 amperes; or
  ii. Install a home automation system capable of, at a minimum, controlling the appliances and lighting of the dwelling and responding to demand response signals; or
  iii. Install alternative plumbing piping to permit the discharge from the clothes washer and all showers and bathtubs to be used for an irrigation system in compliance with the California Plumbing Code and any applicable local ordinances; or
  iv. Install a rainwater catchment system designed to comply with the California Plumbing Code and any applicable local ordinances, and that uses rainwater flowing from at least 65 percent of the available roof area.

2. Azimuth range. All sections of the solar zone located on steep-sloped roofs shall have an azimuth range between 90 degrees and 300 degrees of true north.
3. Shading.
  A. No obstructions, including but not limited to, vents, chimneys, architectural features and roof mounted equipment, shall be located in the solar zone.
  B. Any obstruction, located on the roof or any other part of the building that projects above a solar zone shall be located at least twice the distance, measured in the horizontal plane, 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.

Exception to Section 110.10(b)3: Any roof obstruction, located on the roof or any other part of the building, that is oriented north of all points on the solar zone.

4. Structural design loads on construction documents. For areas of the roof designated as solar zone, the structural design loads for roof dead load and roof live load shall be clearly indicated on the construction documents. Note: Section 110.10(b)4 does not require the inclusion of any collateral loads for future solar energy systems.

(c) **Interconnection pathways.**
1. The construction documents shall 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.
2. For single-family residences and central water-heating systems, the construction documents shall indicate a pathway for routing of plumbing from the solar zone to the water-heating system.

(d) **Documentation. A copy of the construction documents or a comparable document indicating the information from Sections 110.10(b) through 110.10(c) shall be provided to the occupant.**

(e) **Main electrical service panel.**
1. The main electrical service panel shall have a minimum busbar rating of 200 amps.
2. The main electrical service panel shall have a reserved space to allow for the installation of a double pole circuit breaker for a future solar electric installation. The reserved space shall be permanently marked as "For Future Solar Electric".

Exception 2 to Section 150.1(c)14: No PV system is required when the minimum PV system size specified by section 150.1(c)14 is less than 1.8 kWdc.

Prescriptive Equation for PV Exemption:

460 x 0.613/1000 + 1 x 1.4 = 1.68

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Sheet:
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PV & ESS READY-NOTES