Project Data

Project Scope of Work
Construction of a new, detached, one- story, Studio, 250 SF, or a one bedroom , one bathroom, 400 SF Accessory Dwelling Unit. Exterior options of Craftsman or Spanish Colonial Revival. Slab on grade. Gable roof, advanced framing (wood),
stucco or fiber cement board siding (SFM APPROVED FIRE RESILIENT MATERIALS). All electric. Kitchen and bathroom.
Pursuant to Gov. Code 65852.2 and pursuant to SBMC §30.185.040. (Post January 1, 2020).

Owner	Address:_____ _____ Contact:_____ _____ Email:_____ _____ Number:_____ _____
Applicant	Address:_____ _____ Contact:_____ _____ Email:_____ _____ Number:_____ _____
Project Address	Street Address:_____ _____
APN	_____ _____
Zoning	_____ _____
General Plan Neighborhood	_____ _____
Design District	_____ _____
High Fire Area Zoning	_____ _____
Flood Hazard Area	_____ _____
Land Use:	_____ _____
Existing Use:	_____ _____
Proposed Use:	_____ _____
Number of Stories	1
Occupancy Type	R-3
Construction Type:	VB
Sprinklered:	See Fire Sprinkler Section
Maximum Height Allowed	16' 0"
Roof Rating	Class A
High Fire	Refer to High Fire Hazard Area Map

Applicable Codes:
2022 California Residential Code
2022 California Plumbing Code
2022 California Electrical Code
2022 California Mechanical Code
2022 California Fire Code
2022 California Energy Code
2022 California Green Building Standards Code
Amendments as adopted in Santa Barbara City Ordinance 5919

Zoning Analysis

Lot Size (from County Assessor's Rolls)	_____ Acres
Lot Size	_____ Square Feet
Slope (Estimate from City's GIS System)	_____ %

Proposed Grading: No Grading Proposed

Parking Analysis:_____ _____

PARKING CALCULATIONS

Street Address: (Primary Residence)

Existing Parking: _____ _____

Proposed Parking: _____ _____

Required Parking: 0 parking stalls pursuant to SBMC 30.185.040 for demolition of the garage and the construction of an Accessory Dwelling Unit

Total On-Site Parking
Existing : _____ _____
Proposed : _____ _____
Required:_____ _____

No parking for the proposed Studio Accessory Dwelling Unit since it will be converting existing building area, pursuant to Gov. Code 65852.2. (Post January 1, 2020).

Note: Landscape is not included under this permit.

Note: PV system is a deferred submittal

LOT COVERAGE

	Existing /	Proposed
Building:	_____	_____
Hardscape/ Paving:	_____	_____
Landscape:	_____	_____

Area Calculations

Existing Building Area	_____
Proposed ADU	400 SF
Total Building Area	_____
Existing Lot Area	_____
Hardscape	_____
Landscape	_____

Seperate Permits

1. Solar photovoltaic (PV) system is a deferred submittal and plans and application for PV installation must be submitted to SB City for plan check prior to inspection request for rough framing inspection and must be installed prio to final inspection.
2. Roof Truss Calculations by Licensed Structural Engineer
3. Fire Sprinkler Plans (If Applicable)

Utilites

All ADUs must attan approval from applicable agencies, as follows, prior to issuance of Building Permit

Electric Utility Services: PG+E
Water and Sewer Services: City of Santa Barbara
Trash and Recycling: Marborg
Gas Utility Services: So Cal Gas

Sprinklers

The proposed Accessory Dwelling Unit shall not have sprinklers, if the existing primary residence does not have sprinklers. Pursuant to Gov. Code 65852.2.D.xii.

Sheet Index

Supporting Documents

Geotechnical Report
Prepared By _____
Contact _____
Date Prepared _____

Survey
Prepared By _____
Contact _____
Date Prepared _____

Structural Calculations
Prepared By _____
Contact _____
Date Prepared _____

Truss Calculations
Prepared By _____
Contact _____
Date Prepared _____

Energy Compliance
Prepared By _____
Contact _____
Date Prepared _____

Civil Engineer
Prepared By _____
Contact _____
Date Prepared _____

Mechanical Engineer
Prepared By _____
Contact _____
Date Prepared _____

Electrical Engineer
Prepared By _____
Contact _____
Date Prepared _____

Operation & Maintenance

At the time of final inspection, an operation & maintenance manual, compact disc or web- based reference shall be placed in the building. This manual shall include all of the items listed on Califonria Green Building Standards Code Section 4.410.1. Refer toi sheets A0.2 and A0.3.

Stormwater Compliance - Tier 1

For the building permit submittal, this project will demonstrate compliance with Tier 2 (new 2020 requirements) post-construction storm water requirements, since between 500 and 1,999 sf of new/replaced impervious area is proposed.

Tier 2 projects are required to install BMPs that will capture and treat an area and volume of runoff equivalent to the total area and runoff volume of the new and/or replaced impervious area (between 500 and 1,999 square feet). The treated area is not required to be the new/redeveloped impervious area – another impervious location on the project site may be selected for treatment.

Mandatory Inspections:
1. (TBD)

Inspections shall be called in by Contractor for inspection 72 hours prior to needed inspection. The City will then route the request to the QSP Inspector or third party Company.

Archaeological Discovery Condition

Prior to the start of any vegetation or paving removal, demolition, trenching or grading, contractors and construction personnel shall be alerted to the possibility of uncovering unanticipated subsurface archaeological features or artifacts associated with past human occupation of the parcel.

If such archaeological resources are encountered or suspected, work shall be halted immediately, the City Environmental Analyst shall be notified and an archaeologist from the most current City-Qualified Archaeological Resources Consultant List shall be retained by the applicant. The latter shall be employed to assess the nature, extent and significance of any discoveries and to develop appropriate management recommendations for archaeological resource treatment which may include, but are not limited to, redirection of grading or excavation activities, consultation or monitoring with a Barbareño Chumash representative from the most current City-Qualified Native American Site Monitors List.

If a discovery consists of possible human remains, the Santa Barbara County Coroner shall be contacted immediately. If the Coroner determines that the remains are Native American, the Coroner shall contact the California Native American Heritage Commission. A Barbareño Chumash representative from the most current City-Qualified Native American Site Monitors List shall be retained to monitor all further subsurface disturbance in the area of the find. Work in the area may only proceed after the Environmental Analyst grants authorization.

If a discovery consists of possible prehistoric or Native American artifacts or materials, a Barbareño Chumash representative from the most current Native American Site Monitors List shall be retained to monitor all further subsurface disturbance in the area of the find. Work in the area may only proceed after the Environmental Analyst grants authorization.

Vicinity Map

Project Site

Project Directory

Designer:	Lucrezia DeLeon (805) 260-1381 lucrezia@itsihouse.com
Builder:	

Construction Waste Reduction, Disposal and Recycling

See A0.11 for California Green Building Standards Code provisions for construction waste management and documentation of diversion approach.

An approved County sorting / recycling facility must be utilized for construction waste management to comply with Construction Waste Reduction, Disposal and Recycling provisions of California Green Standards Code Section 4.408.1 "minmum 65% non- hazardous materials recycled and/ or salvaged for re-use.)

Approved Waste Management Company:
Marborg Industries
728 E. Yanonali
Santa Barbarba, CA 93103
Phone: 805.963.1852

Enhances Durability, Reduced Maintenance

Annulare Spaces around pipes, electrical cables, conduits and other openings in sole, bottom plates at exterior walls shall be protected against the passage of rodents by closing such openings with cements mortar, concrete masonry or similar method acceptable to the enforcing agency.

Smoke Detectors and CO Alarms

Provide Smoke Detectors & Carbon Monoxide Alarms per California Residential Code

Very High Fire Severity Zone

Properties that are in the very high Fire Hazard Severity Zones muyst complet with Chapter 7A, S. B. Municipal Code Sections 22.04.020 & 22.04.025

Pollutant Control

See A0.2 and A0.3 for California Green Building Standards Code provisions for polluntant control regarding ducts, indoor air quality, mechanical equipment and finish materials. Confirm to provisions for Interior Moiture Control, Indoor Air Quality, Installer, & Special Inspector Qualifications, and Verifications.

Area for Stamps

City of Santa Barbara ADU Proto Types

Santa Barbara County, CA

Stamp/Signature:

Lucrezia DeLeon

Initial Submittal

Revisions:

1	
2	
3	
4	
5	

Sheet Title:

Cover Sheet

Sheet No.:

A0.0

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

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.

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)

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.

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.

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".

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.

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.

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

4.106.4.2.2.1.3 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.

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).

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
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)]

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*.

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

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
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
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.

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.

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.

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

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
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.

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.

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 O^3/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

4.503.1 GENERAL. Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA New Source Performance Standards (NSPS) emission limits as applicable, and shall have a permanent label indicating they are certified to meet the emission limits. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.

4.504 POLLUTANT CONTROL

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

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

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

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1 or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and tricloroethylene), except for aerosol products, as specified in Subsection 2 below.

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

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

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.

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[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[4]	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)

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.

4.504.3.1 Carpet cushion. All carpet cushion installed in the building interior shall meet the requirements of the California Department of Public Health, "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers," Version 1.2, January 2017 (Emission testing method for California Specification 01350)

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

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

4.504.3.2 Carpet adhesive. All carpet adhesive shall meet the requirements of Table 4.504.1.

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

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

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

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

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

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*.

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

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

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

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

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

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.

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

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.

City of Santa Barbara ADU Proto Types

Santa Barbara County, CA

By using these "ADU Plans" plans, the user agrees to release the City of Santa Barbara from any and all claims, liabilities, suits, and demands on account of any injury, damage, or loss to persons or property, including injury or death, or economic losses, arising out of the use of these construction documents. The use of these plans does not eliminate or reduce the user's responsibility to verify any and all information.

Stamp/Signature:

Lucrezia DeLeon

Initial Submittal

Revisions:

1	
2	
3	
4	
5	

Sheet Title:

Site Plan - Proposed + Drainage

Sheet No.:

A0.5

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Address:

View of Existing Single Family Residence

View of Property Across the Street

View of Neighboring Property

View of Neighboring Property

Address:

North Elevation (Front)

South Elevation

East Elevation

Northwest Elevation

Fire Protection Systems Notes

1. Smoke alarms shall be installed in the following locations:
   1. In each sleeping room.
   2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
   3. On each additional story of the dwelling, including basements and habitable attics and not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
   4. Smoke alarms shall be installed not less than 3 feet (914 mm) horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by Section R314.3.
2. Required smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection. (CRC R314.6)
3. Smoke alarms shall be installed not less than 3 feet horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by CRC R314.3.
4. The smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed. (CRC R314.4)
5. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection. (CRC R315.5)
6. Required carbon monoxide alarms shall be installed in the following locations per CRC R315.3:
   1. Outside of each separate sleeping area in the immediate vicinity of the bedrooms.
   2. On every occupiable level of a dwelling unit, including basements.
   3. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.
7. Carbon monoxide alarms shall be listed in accordance with UL 2034. Combination carbon monoxide and smoke alarms shall be listed in accordance with UL 2034 and UL 217. (CRC R315.1.1)

Electrical Notes

1. See Sheet A0.4 for 2016 Low-Rise Residential Mandatory Measures
2. All 125-volt, 15-amp, and 20-amp receptacles shall be listed as tamper-resistant receptacles. [§ 406.12 CEC]
3. Vent fans must be switched separately from lighting. 2019 California Energy Code 150(k)2B
4. Provide arc-fault circuit interrupter protection for all outlets in the entire dwelling unit. 210.12 CEC
5. Small Appliance Branch Circuits: Provide two or more 20-ampere small appliance branch circuits in kitchen. CEC 210.52 (B)
6. Bathroom Receptacles: Outlets shall be supplied by a least one 20-amp branch circuit. Such circuits shall have no other outlets. CEC 210.11 (C)(3)
7. Arc-Fault Circuit Interrupter: All branch circuits that supply 120-volt, single phase, 15 and 20 ampere branch circuits upplying outlets or devices installed in dwelling unit kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry rooms or similar rooms or areas shall be protected by an arc-fault circuit interrupter(s). CEC 210.12(A) & (B).
8. Laundry Branch Circuits: Provide a minimum of one 20-ampere branch circuit for laundry receptacles. CEC 210.52(F)
9. Where branch-circuit wiring is modified, replaced or extended in areas specified in CEC 210.12(A), the branch circuit shall be protected by either a listed combination-type AFCI located at the origin of the branch circuit or a listed outlet branch-circuit type AFCI located at the first receptacle of the existing branch circuit. [CEC 210.12 (D)]
10. All interior residential lighting is to be high efficacy. Luminaires with integral sources (e.g., LED luminaires) and changeable lamps must be CEC certified as meeting the requirements of JA8.
11. Lighting not automatically classified as high efficacy by the CA Energy Commission (e.g., pin-based fluorescent l uminaires, pulse-start halide luminaires, high pressure sodium luminaries) is to have a light source or lamp installed in them at the time of inspection that meets the requirements of Joint Appendix JA8.
12. Recessed downlighting is to contain light sources that are JA8-certified, shall not contain screw based lamps and shall not contain light sources that are labeled “not for use in enclosed fixtures” or “not for use in recessed fixtures”. They shall be listed for zero clearance, have a label that certifies the luminaire as airtight when tested in accordance with ASTM E283 (with the exception of exhaust fan housings) and be readily accessible for ballast or driver maintenance and replacement
13. The NFRC thermal performance labels shall remain on the windows until final inspection
14. All exterior outlets shall be waterproof/GFCI outdoor receptacles. [CEC 210.52 (E)(1)].
15. Except for closets less than 70 square feet and hallways, all luminaires that are installed with JA8-certified light sources are required to be controlled by either a dimmer or vacancy sensor. Please note or show this on plans.
16. At least one luminaire each bathroom, garage, laundry room, and utility room shall be controlled by a manual on/automatic-off vacancy sensor. Please indicate this on the plans. [California Energy Code Section 150 (k) 2 (J)]

Plumbing Notes

-All water closets shall have an effective flush volume of not more than 1.28 gallons per flush. Tank type water closet shall be certified to the performance criteria of the U.S. EPA Water Sense Specification for tank type toilets.
-Urinals shall have an effective flush volume not to exceed 0.5 gallons per flush.
-Single shower heads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Multiple shower heads when served by a single valve shall have a combined flow rated not to exceed 1.8 gallons per minute.
-Residential lavatory faucets shall have a maximum rate of 1.2 gallons per minute at 60 psi and a minimum flow rate of not less than 0.8 gallons per minute at 20 psi.
-Faucets in common and public areas (outside dwellings and sleeping units) in residential buildings must have a maximum flow rate of 0.5 gallons per minute at 60 psi.
-Metering faucets when installed in residential buildings must not deliver more than 0.25 gallons per cycle.
-Kitchen faucets shall have a maximum of flow rate of 1.8 gallons per minute at 60 psi.
-Kitchen faucets temporarily increase the flow rate to a maximum of 2.2 gallons at 60 psi but must default back to the 1.8 gallons per minute. (Section 4.303)
-The WC shall be located in a space of 30" min. width, and 24" min. clear space in front shall be provided. CPC 407.5

A plumbing fixture certification must be completed and signed by either a licensed general contractor, or a plumbing subcontractor or the building owner certifying the flow rate of the fixtures installed.

Joints and openings, annular spaces around pipes, electric cables, conduits, or other openings in plates of exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or similar method accepted by agency. (Section 4.406.1)

Bathroom Exhaust Fans

Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control. Humidity controls shall be capable of adjustment between a relative humidity range of:::: 50 percent to a maximum of 80 percent. A humidity control may utilize manual or automatic means of adjustment. A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in).

Water Closet Flush: Water Closets, either flush tank, flushometer tank, or flushometer valve operated, shall have an average consumption of not more than 1.28 gallons of water per flush. Lavatory Faucets shall have a maximum flow rate of 1.2 gpm at 60 psi, Kitchen faucets: Max 1.8 gpm at 60 psi, Showerheads: Max 1.8 gpm at 80 psi and multiple showerheads serving one shower shall have a combined flow rate of all showerheads of 1.8 gpm at 80 psi. 2016 California Green Building Code Section 4.303"

Title 24 Notes

-Residential Outdoor Lighting CEC 150 (k) 3; In addition to meeting the requirements of Section 150.0(k) 1A, luminaires providing residential outdoor lighting shall meet the following requirements;
- Controlled by a manual ON and OFF switch.
- Controlled by a photocell and motion sensor.
- Controlled by one of the following methods:
  - o Photocontrol and automatic time switch control
  - o Astronomical time clock
  - o Energy management control

-In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces shall be controlled by a vacancy sensor. CEC 150.0 Show the lighting control device on the plans.

-The bathroom lighting and exhaust fan are utilizing the same switch. The exhaust fan shall be separately switched. CEC 150.0 (k) 2

-Exhaust fans must be switched separate from lighting or utilize a device where lighting can be turned OFF while the fan is running. The exhaust fans will achieve the minimum 31 CFM of IAQ specified in the Title 24 report.

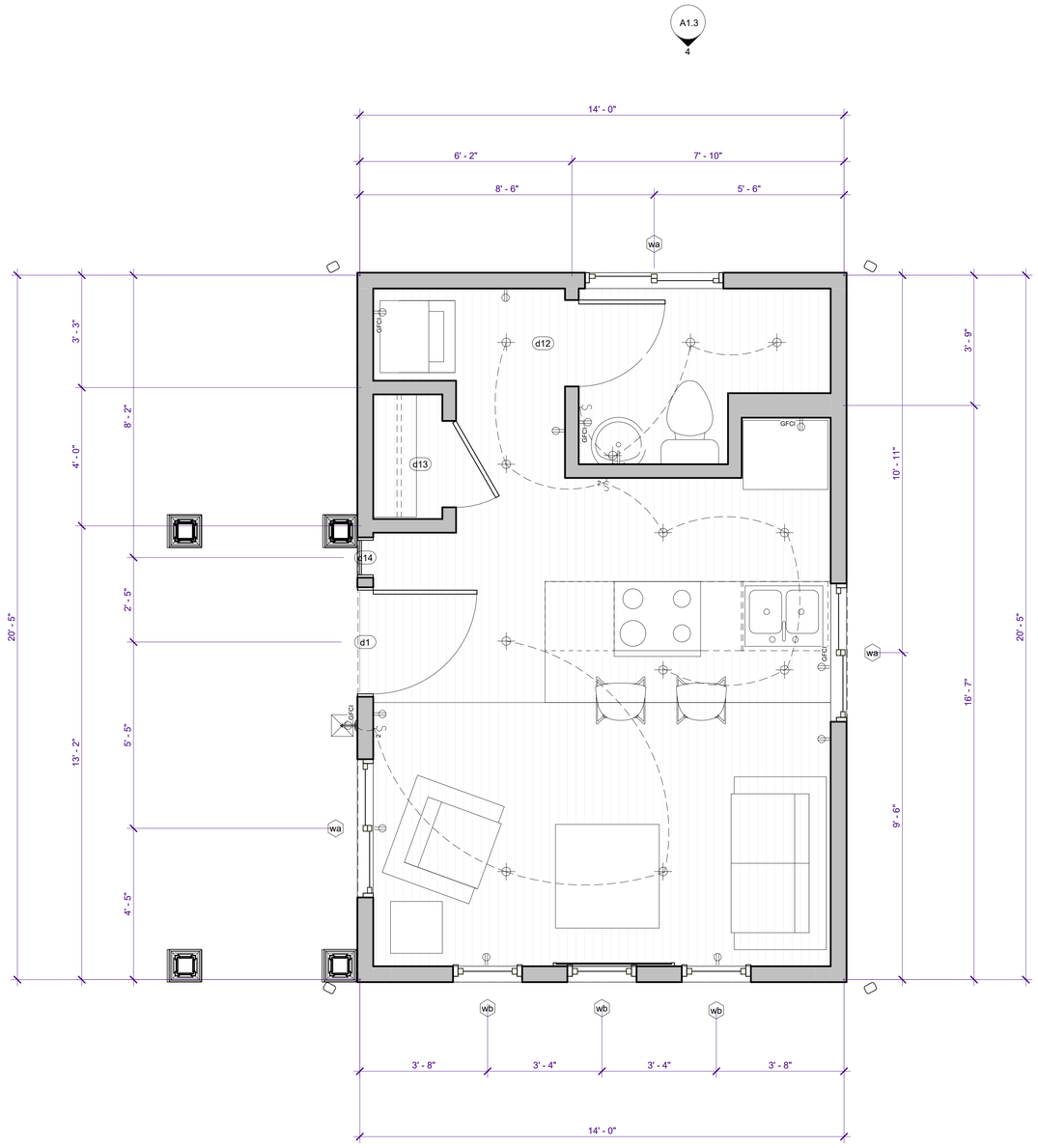
-Dimmers or vacancy sensors shall control all luminaires required to have light sources compliant with Reference Joint Appendix JA8. Show lighting control device on the plans. Exception: Luminaires in closets less than 70 square feet.

-Luminaires that must use JAB-Certified Light Sources or Lamps; Sheet A 1.1, keynote 2, what type of high efficacy and show the type of lighting control device to be installed.
- Light sources in ceiling recessed downlight luminaires
- LED luminaires with integral sources
- Screw-based LED lamps (A-lamps, PAR lamps, etc.)
- Pin-based LED lamps (MR-16-AR-111, etc.)
- GU-24 based LED light source

Note: 10.01 at the time of final inspection, an operation & maintenance manual, compact disc or web based reference shall be placed in the building. This manual shall include all of the items listed on California Green Building Standards Code Section 4.410.1. [CGBSC 4.410]

Keynotes - Floor Plans

Note	Comment



2 Floorplans - Furniture Layout 1
1/2" = 1'-0"

City of Santa Barbara ADU Proto Types

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Lucrezia DeLeon

Initial Submittal

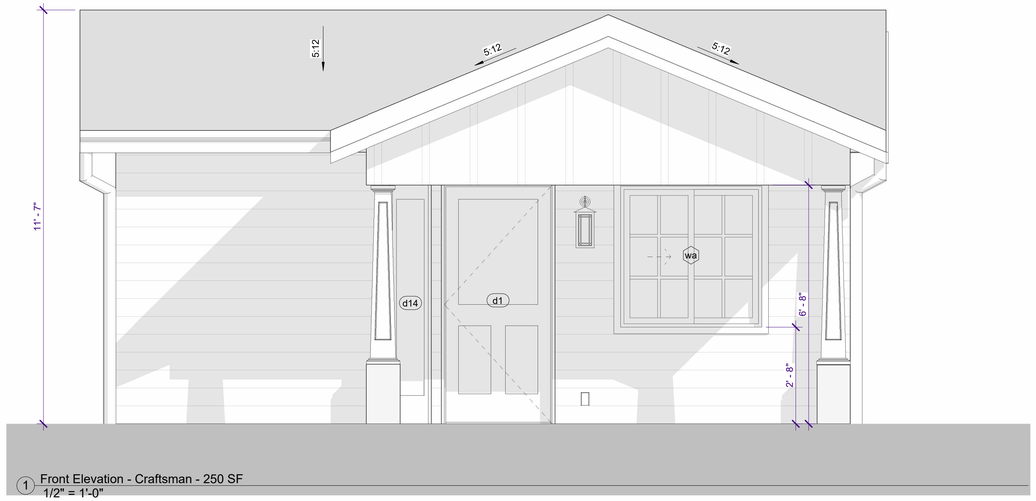
Revisions:

Sheet Title:

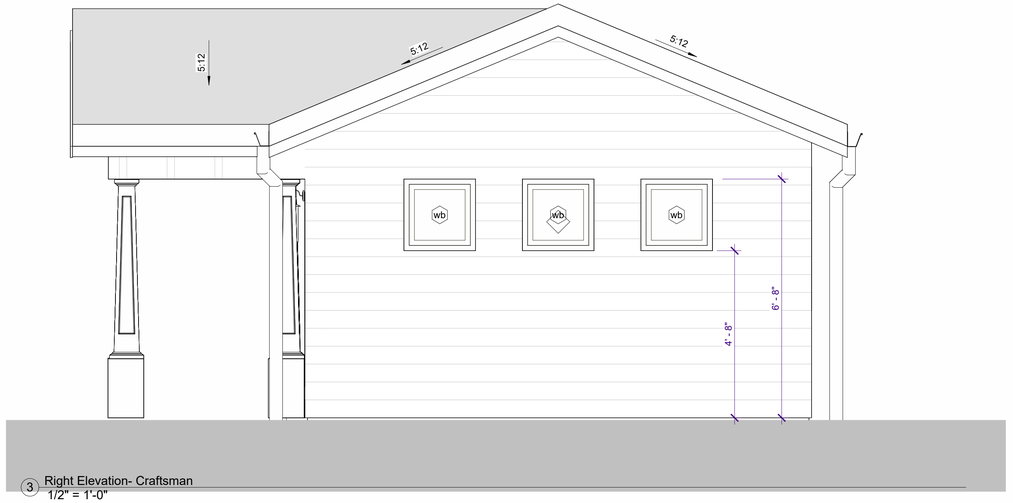
Floor plans - 250 SF

Sheet No.:

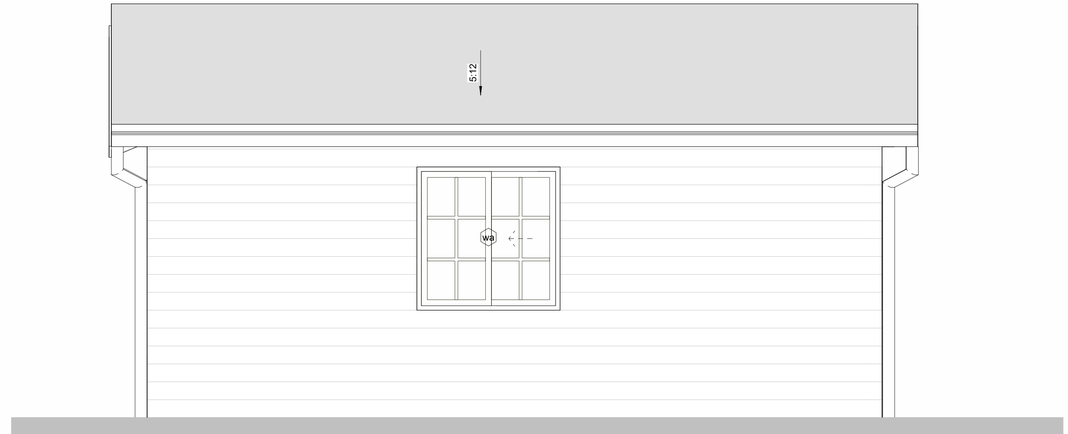
A1.1



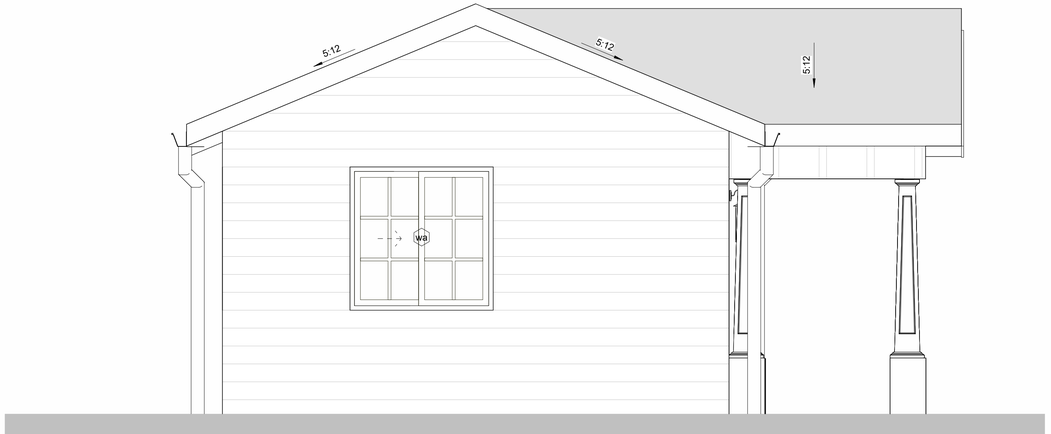
1 Front Elevation - Craftsman - 250 SF
1/2" = 1'-0"



3 Right Elevation- Craftsman
1/2" = 1'-0"



2 Rear Elevation- Craftsman
1/2" = 1'-0"



4 Left Elevation- Craftsman
1/2" = 1'-0"

Note: CRC Section R308.4
1. **R308.4.1** Glazing in fixes and operatons apnels of swingings, slidng, and bifold doors shall be considered to be a hazardous location.

Exceptions:
1. Glazed openings of a size through which a 3-inch-diameter (76 mm) sphere is unable to pass.
2. Decorative glazing.

2. **R308.4.2** Glazing adjacent to doors. Glazing in an individual fixed or operable panel adjacent to a door shall be considered to be a hazardous location where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) above the floor or walking surface and it meets either of the following conditions:

1. Where the glazing is within 24 inches (610 mm) of either side of the door in the plane of the door in a closed position.
2. Where the glazing is on a wall less than 180 degrees (3.14 rad) from the plane of the door in a closed position and within 24 inches (610 mm) of the hinge side of an in-swinging door.

Exceptions:
1. Decorative glazing.
2. Where there is an intervening wall or other per-manent barrier between the door and the glazing.
3. Where access through the door is to a closet or storage area 3 feet (914 mm) or less in depth. Glazing in this application shall comply with Section R308.4.3.
4. Glazing that is adjacent to the fixed panel of patio doors.

3. **R308.4.3** Glazing in windows. Glazing in an individual fixed or operable panel that meets all of the following con-ditions shall be considered to be a hazardous location:
1. The exposed area of an individual pane is larger than 9 square feet (0.836 m2).
2. The bottom edge of the glazing is less than 18 inches (457 mm) above the floor.
3. The top edge of the glazing is more than 36 inches (914 mm) above the floor.

4. U- factor of new glazing is not to exceed 0.30 and SHGC shall not exceed 0.23.

TABLE R308.3.1(1)
MINIMUM CATEGORY CLASSIFICATION OF GLAZING USING CPSC 16 CFR 1201

EXPOSED SURFACE AREA OF ONE SIDE OF ONE LITE	GLAZING IN STORM OR COMBINATION DOORS (Category Class)	GLAZING IN DOORS (Category Class)	GLAZED PANELS REGULATED BY SECTION R308.4.3 (Category Class)	GLAZED PANELS REGULATED BY SECTION R308.4.2 (Category Class)	GLAZING IN DOORS AND ENCLOSURES REGULATED BY SECTION 308.4.5 (Category Class)	SLIDING GLASS DOORS PATIO TYPE (Category Class)
9 square feet or less	I	I	NR	I	II	II
More than 9 square feet	II	II	II	II	II	II

For SI: 1 square foot = 0.0929 m².
NR = No Requirement.

TABLE R308.3.1(2)
MINIMUM CATEGORY CLASSIFICATION OF GLAZING USING ANSI Z97.1

EXPOSED SURFACE AREA OF ONE SIDE OF ONE LITE	GLAZED PANELS REGULATED BY SECTION R308.4.3 (Category Class)	GLAZED PANELS REGULATED BY SECTION R308.4.2 (Category Class)	DOORS AND ENCLOSURES REGULATED BY SECTION R308.4.5[a] (Category Class)
9 square feet or less	No requirement	B	A
More than 9 square feet	A	A	A

For SI: 1 square foot = 0.0929 m².
a. Use is permitted only by the exception to Section R308.3.1.

Outdoor Electrical Notes:
60.01 Outdoor lighting permanently mounted to a single family dwelling or other buildings in the same lot shall be high efficacy and must be controlled by an on/off switch that does not override to ON as listed below. Also, the lighting must by one of the following methods:

1. Controlled by photocell and motion sensor. Controls that override to ON shall not be allowed unless the override automatically reactivates the motion sensor within 6 hours, or
2. Controlled by any of the following:
   1. Photocell and automatic time switch control. Controls that override to ON shall not be allowed unless the override automatically return the photocontrol and automatic time switch control to its normal operation within 6 hours, or
   2. Astronomical time clock. Controls that override to ON shall not be allowed unless the override automatically return the astronomical clock its normal operation within 6 hours and which is programmed to automatically turn the outdoor lighting OFF during daylight hours, or
   3. Energy management control system which meets all of the following requirements. At a minimum provides the functionality of an astronomical time clock in accordance with Section 110.9 of the standards; meets the Installation Certification requirements in Section 130.4 of the standards; meets the requirements for an EMCS in Section 130.5 of the standards; does not have an override or bypass switch that allows the luminaire to be always ON; and, is programmed to automatically turn the outdoor lighting OFF during daylight hours.

Note: Unvented attic assemblies can be approved provided the unvented attic space is completelycontained within the building thermal envelope and no interior vapor retarder is installed on the ceiling side of the unvented attic assembly. Insulation shall be applied in direct contact with the underside of the structural roof sheathing and shall either be entirely of an
air-impermeable product or shall have a layer of air-impermeable product installed in direct contact with the underside of the structural roof sheathing for proper condensation control with the balance of the insulation being air-impermeable below it. (Note: Air-permeable insulation alone may be applied directly below the structural sheathing when rigid insulation with an R-value of R-5 minimum is installed directly above the structural roof sheathing for condensation control) **[CRC R806.5]**

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Lucrezia DeLeon

Initial Submittal

Revisions:

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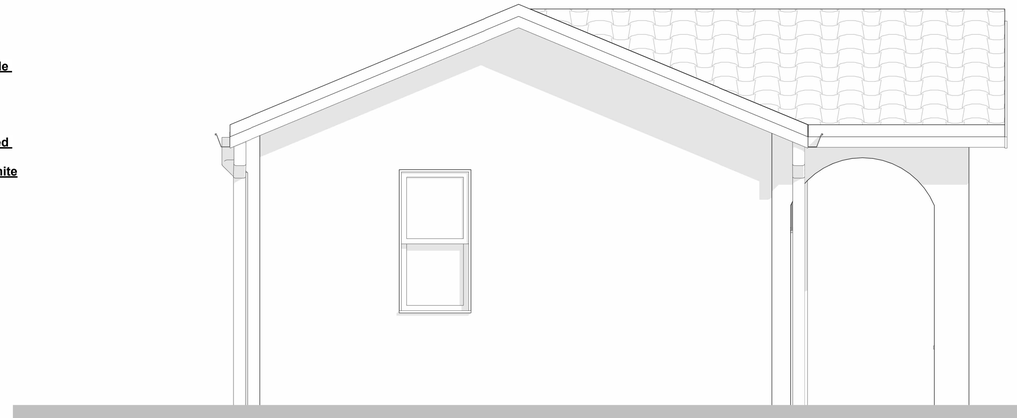
Sheet Title:

Elevations - Craftsman - 250 SF

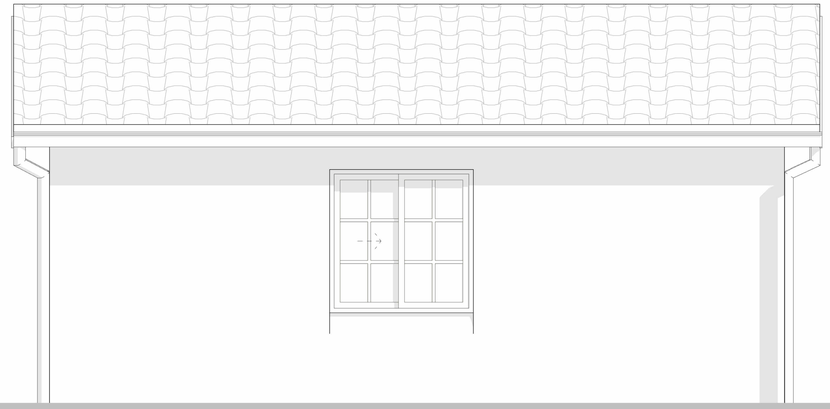
Sheet No.:

A1.3

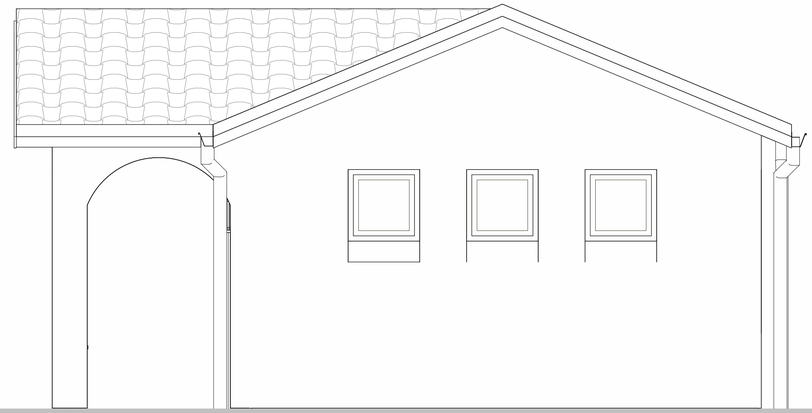
1 Front Elevation- Spanish Colonial
1/2" = 1'-0"



3 Left Elevation- Spanish Colonial
1/2" = 1'-0"



2 Rear Elevation- Spanish Colonial
1/2" = 1'-0"



4 Right Elevation- Spanish Colonial
1/2" = 1'-0"

Note: CRC Section R308.4
1. **R308.4.1** Glazing in fixes and operatons apnels of swingings, slidng, and bifold doors shall be considered to be a hazardous location.

Exceptions:
1. Glazed openings of a size through which a 3-inch-diameter (76 mm) sphere is unable to pass.
2. Decorative glazing.

2. **R308.4.2** Glazing adjacent to doors. Glazing in an individual fixed or operable panel adjacent to a door shall be considered to be a hazardous location where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) above the floor or walking surface and it meets either of the following conditions:

1. Where the glazing is within 24 inches (610 mm) of either side of the door in the plane of the door in a closed position.
2. Where the glazing is on a wall less than 180 degrees (3.14 rad) from the plane of the door in a closed position and within 24 inches (610 mm) of the hinge side of an in-swinging door.

Exceptions:
1. Decorative glazing.
2. Where there is an intervening wall or other per-manent barrier between the door and the glazing.
3. Where access through the door is to a closet or storage area 3 feet (914 mm) or less in depth. Glazing in this application shall comply with Section R308.4.3.
4. Glazing that is adjacent to the fixed panel of patio doors.

3. **R308.4.3** Glazing in windows. Glazing in an individual fixed or operable panel that meets all of the following con-ditions shall be considered to be a hazardous location:
1. The exposed area of an individual pane is larger than 9 square feet (0.836 m2).
2. The bottom edge of the glazing is less than 18 inches (457 mm) above the floor.
3. The top edge of the glazing is more than 36 inches (914 mm) above the floor.

4. U- factor of new glazing is not to exceed 0.30 and SHGC shall not exceed 0.23.

TABLE R308.3.1(1)
MINIMUM CATEGORY CLASSIFICATION OF GLAZING USING CPSC 16 CFR 1201

EXPOSED SURFACE AREA OF ONE SIDE OF ONE LITE	GLAZING IN STORM OR COMBINATION DOORS (Category Class)	GLAZING IN DOORS (Category Class)	GLAZED PANELS REGULATED BY SECTION R308.4.3 (Category Class)	GLAZED PANELS REGULATED BY SECTION R308.4.2 (Category Class)	GLAZING IN DOORS AND ENCLOSURES REGULATED BY SECTION R308.4.3 (Category Class)	SLIDING GLASS DOORS PATIO TYPE (Category Class)
9 square feet or less	I	I	NR	I	II	II
More than 9 square feet	II	II	II	II	II	II

For SI: 1 square foot = 0.0929 m².
NR = No Requirement.

TABLE R308.3.1(2)
MINIMUM CATEGORY CLASSIFICATION OF GLAZING USING ANSI Z97.1

EXPOSED SURFACE AREA OF ONE SIDE OF ONE LITE	GLAZED PANELS REGULATED BY SECTION R308.4.3 (Category Class)	GLAZED PANELS REGULATED BY SECTION R308.4.2 (Category Class)	DOORS AND ENCLOSURES REGULATED BY SECTION R308.4.3[a] (Category Class)
9 square feet or less	No requirement	II	A
More than 9 square feet	A	A	A

For SI: 1 square foot = 0.0929 m².
a. Use is permitted only by the exception to Section R308.3.1.

Outdoor Electrical Notes:
60.01 Outdoor lighting permanently mounted to a single family dwelling or other buildings in the same lot shall be high efficacy and must be controlled by an on/off switch that does not override to ON as listed below. Also, the lighting must by one of the following methods:

1. Controlled by photocell and motion sensor. Controls that override to ON shall not be allowed unless the override automatically reactivates the motion sensor within 6 hours, or
2. Controlled by any of the following:
   1. Photocell and automatic time switch control. Controls that override to ON shall not be allowed unless the override automatically return the photocontrol and automatic time switch control to its normal operation within 6 hours, or
   2. Astronomical time clock. Controls that override to ON shall not be allowed unless the override automatically return the astronomical clock its normal operation within 6 hours and which is programmed to automatically turn the outdoor lighting OFF during daylight hours, or
   3. Energy management control system which meets all of the following requirements. At a minimum provides the functionality of an astronomical time clock in accordance with Section 110.9 of the standards; meets the Installation Certification requirements in Section 130.4 of the standards; meets the requirements for an EMCS in Section 130.5 of the standards; does not have an override or bypass switch that allows the luminaire to be always ON; and, is programmed to automatically turn the outdoor lighting OFF during daylight hours.

Note: Unvented attic assemblies can be approved provided the unvented attic space is completelycontained within the building thermal envelope and no interior vapor retarder is installed on the ceiling side of the unvented attic assembly. Insulation shall be applied in direct contact with the underside of the structural roof sheathing and shall either be entirely of an
air-impermeable product or shall have a layer of air-impermeable product installed in direct contact with the underside of the structural roof sheathing for proper condensation control with the balance of the insulation being air-impermeable below it. (Note: Air-permeable insulation alone may be applied directly below the structural sheathing when rigid insulation with an R-value of R-5 minimum is installed directly above the structural roof sheathing for condensation control) **[CRC R806.5]**

City of Santa Barbara ADU Proto Types
Santa Barbara County, CA

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Lucrezia DeLeon

Initial Submittal

Revisions:

Sheet Title:
Elevations - Spanish Colonial - 250 SF

Sheet No.:
A1.2

Fire Protection Systems Notes

1. Smoke alarms shall be installed in the following locations:
   1. In each sleeping room.
   2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
   3. On each additional story of the dwelling, including basements and habitable attics and not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
   4. Smoke alarms shall be installed not less than 3 feet (914 mm) horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by Section R314.3.
2. Required smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection. (CRC R314.6)
3. Smoke alarms shall be installed not less than 3 feet horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by CRC R314.3.
4. The smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed. (CRC R314.4)
5. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection. (CRC R315.5)
6. Required carbon monoxide alarms shall be installed in the following locations per CRC R315.3:
   1. Outside of each separate sleeping area in the immediate vicinity of the bedrooms.
   2. On every occupiable level of a dwelling unit, including basements.
   3. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.
7. Carbon monoxide alarms shall be listed in accordance with UL 2034. Combination carbon monoxide and smoke alarms shall be listed in accordance with UL 2034 and UL 217. (CRC R315.1.1)

Electrical Notes

1. See Sheet A0.4 for 2016 Low-Rise Residential Mandatory Measures
2. All 125-volt, 15-amp, and 20-amp receptacles shall be listed as tamper-resistant receptacles. [§ 406.12 CEC]
3. Vent fans must be switched separately from lighting. 2019 California Energy Code 150(k)2B
4. Provide arc-fault circuit interrupter protection for all outlets in the entire dwelling unit. 210.12 CEC
5. Small Appliance Branch Circuits: Provide two or more 20-ampere small appliance branch circuits in kitchen. CEC 210.52 (B)
6. Bathroom Receptacles: Outlets shall be supplied by a least one 20-amp branch circuit. Such circuits shall have no other outlets. CEC 210.11 (C)(3)
7. Arc-Fault Circuit Interrupter: All branch circuits that supply 120-volt, single phase, 15 and 20 ampere branch circuits upplying outlets or devices installed in dwelling unit kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry rooms or similar rooms or areas shall be protected by an arc-fault circuit interrupter(s). CEC 210.12(A) & (B).
8. Laundry Branch Circuits: Provide a minimum of one 20-ampere branch circuit for laundry receptacles. CEC 210.52(F)
9. Where branch-circuit wiring is modified, replaced or extended in areas specified in CEC 210.12(A), the branch circuit shall be protected by either a listed combination-type AFCI located at the origin of the branch circuit or a listed outlet branch-circuit type AFCI located at the first receptacle of the existing branch circuit. [CEC 210.12 (D)]
10. All interior residential lighting is to be high efficacy. Luminaires with integral sources (e.g., LED luminaires) and changeable lamps must be CEC certified as meeting the requirements of JA8.
11. Lighting not automatically classified as high efficacy by the CA Energy Commission (e.g., pin-based fluorescent l uminaires, pulse-start halide luminaires, high pressure sodium luminaries) is to have a light source or lamp installed in them at the time of inspection that meets the requirements of Joint Appendix JA8.
12. Recessed downlighting is to contain light sources that are JA8-certified, shall not contain screw based lamps and shall not contain light sources that are labeled “not for use in enclosed fixtures” or “not for use in recessed fixtures”. They shall be listed for zero clearance, have a label that certifies the luminaire as airtight when tested in accordance with ASTM E283 (with the exception of exhaust fan housings) and be readily accessible for ballast or driver maintenance and replacement
13. The NFRC thermal performance labels shall remain on the windows until final inspection
14. All exterior outlets shall be waterproof/GFCI outdoor receptacles. [CEC 210.52 (E)(1)].
15. Except for closets less than 70 square feet and hallways, all luminaires that are installed with JA8-certified light sources are required to be controlled by either a dimmer or vacancy sensor. Please note or show this on plans.
16. At least one luminaire each bathroom, garage, laundry room, and utility room shall be controlled by a manual on/automatic-off vacancy sensor. Please indicate this on the plans. [California Energy Code Section 150 (k) 2 (J)]

Plumbing Notes

-All water closets shall have an effective flush volume of not more than 1.28 gallons per flush. Tank type water closet shall be certified to the performance criteria of the U.S. EPA Water Sense Specification for tank type toilets.
-Urinals shall have an effective flush volume not to exceed 0.5 gallons per flush.
-Single shower heads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Multiple shower heads when served by a single valve shall have a combined flow rated not to exceed 1.8 gallons per minute.
-Residential lavatory faucets shall have a maximum rate of 1.2 gallons per minute at 60 psi and a minimum flow rate of not less than 0.8 gallons per minute at 20 psi.
-Faucets in common and public areas (outside dwellings and sleeping units) in residential buildings must have a maximum flow rate of 0.5 gallons per minute at 60 psi.
-Metering faucets when installed in residential buildings must not deliver more than 0.25 gallons per cycle.
-Kitchen faucets shall have a maximum of flow rate of 1.8 gallons per minute at 60 psi.
-Kitchen faucets temporarily increase the flow rate to a maximum of 2.2 gallons at 60 psi but must default back to the 1.8 gallons per minute. (Section 4.303)
-The WC shall be located in a space of 30" min. width, and 24" min. clear space in front shall be provided. CPC 407.5

A plumbing fixture certification must be completed and signed by either a licensed general contractor, or a plumbing subcontractor or the building owner certifying the flow rate of the fixtures installed.

Joints and openings, annular spaces around pipes, electric cables, conduits, or other openings in plates of exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or similar method accepted by agency. (Section 4.406.1)

Bathroom Exhaust Fans

Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidity control. Humidity controls shall be capable of adjustment between a relative humidity range of:::; 50 percent to a maximum of 80 percent. A humidity control may utilize manual or automatic means of adjustment. A humidity control may be a separate component to the exhaust fan and is not required to be integral (i.e., built-in).

Water Closet Flush: Water Closets, either flush tank, flushometer tank, or flushometer valve operated, shall have an average consumption of not more than 1.28 gallons of water per flush. Lavatory Faucets shall have a maximum flow rate of 1.2 gpm at 60 psi, Kitchen faucets: Max 1.8 gpm at 80 psi, Showerheads: Max 1.8 gpm at 80 psi and multiple showerheads serving one shower shall have a combined flow rate of all showerheads of 1.8 gpm at 80 psi. 2016 California Green Building Code Section 4.303"

Title 24 Notes

-Residential Outdoor Lighting CEC 150 (k) 3; In addition to meeting the requirements of Section 150.0(k) 1A, luminaires providing residential outdoor lighting shall meet the following requirements;
- Controlled by a manual ON and OFF switch.
- Controlled by a photocell and motion sensor.
- Controlled by one of the following methods:
  - o Photocontrol and automatic time switch control
  - o Astronomical time clock
  - o Energy management control

-In bathrooms, garages, laundry rooms, and utility rooms, at least one luminaire in each of these spaces shall be controlled by a vacancy sensor. CEC 150.0 Show the lighting control device on the plans.

-The bathroom lighting and exhaust fan are utilizing the same switch. The exhaust fan shall be separately switched. CEC 150.0 (k) 2

-Exhaust fans must be switched separate from lighting or utilize a device where lighting can be turned OFF while the fan is running. The exhaust fans will achieve the minimum 31 CFM of IAQ specified in the Title 24 report.

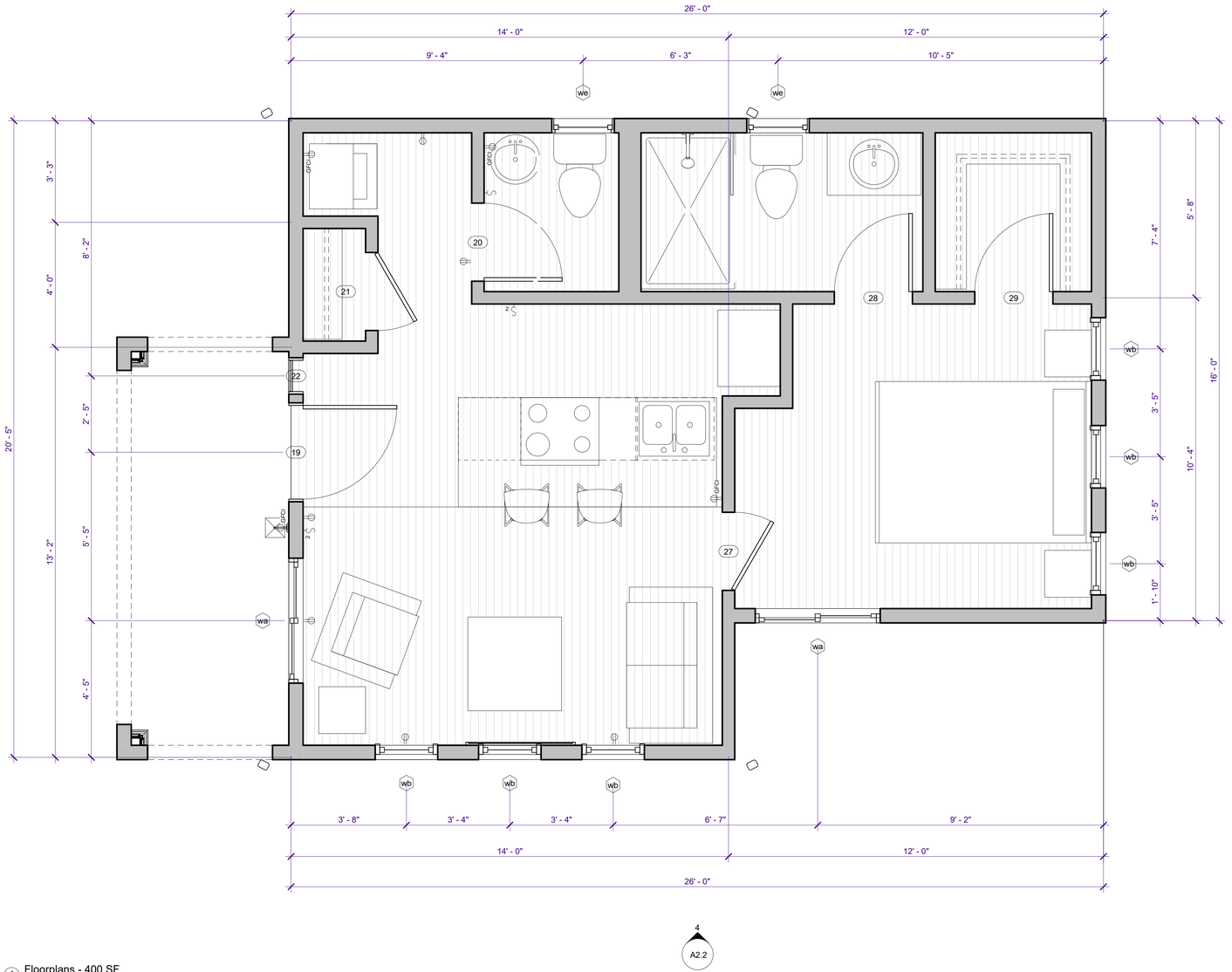
-Dimmers or vacancy sensors shall control all luminaires required to have light sources compliant with Reference Joint Appendix JA8. Show lighting control device on the plans. Exception: Luminaires in closets less than 70 square feet.

-Luminaires that must use JAB-Certified Light Sources or Lamps; Sheet A 1.1, keynote 2, what type of high efficacy and show the type of lighting control device to be installed.
- Light sources in ceiling recessed downlight luminaires
- LED luminaires with integral sources
- Screw-based LED lamps (A-lamps, PAR lamps, etc.)
- Pin-based LED lamps (MR-16-AR-111, etc.)
- GU-24 based LED light source

Note: 10.01 at the time of final inspection, an operation & maintenance manual, compact disc or web based reference shall be placed in the building. This manual shall include all of the items listed on California Green Building Standards Code Section 4.410.1. [CGBSC 4.410]

Keynotes - Floor Plans

Note	Comment



A2.2 1

4 A2.2

1 Floorplans - 400 SF
1/2" = 1'-0"

Stamp/Signature:

Lucrezia DeLeon

Initial Submittal

Revisions:

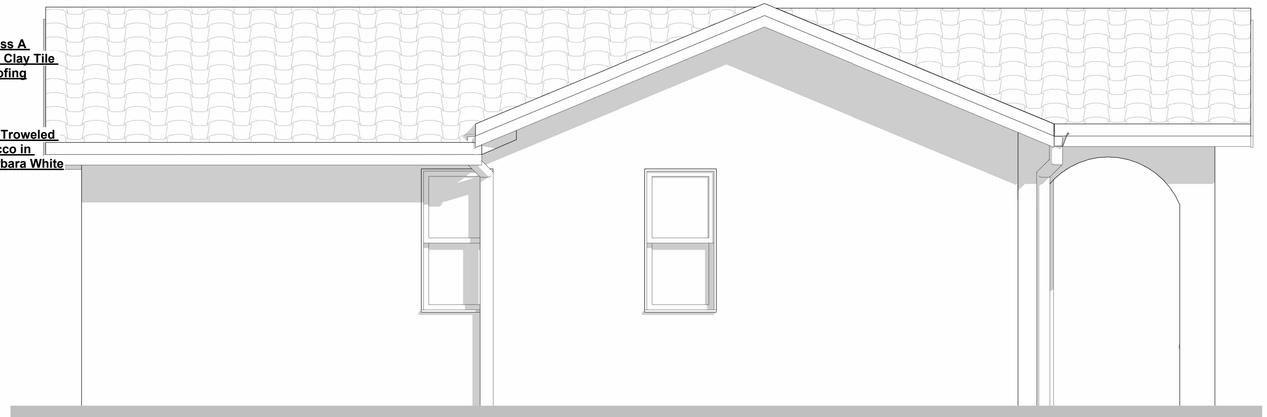
Sheet Title:

Floor plans - 450 SF

Sheet No.:

A2.1

1 Front Elevation - Spanish Colonial - 400 SF
1/2" = 1'-0"



3 Right Elevation - Spanish Colonial - 400 SF
1/2" = 1'-0"

2 Rear Elevation - Spanish Colonial - 400 SF
1/2" = 1'-0"

4 Left Elevation - Spanish Colonial - 400 SF
1/2" = 1'-0"

Note: CRC Section R308.4
1. **R308.4.1** Glazing in fixes and operatons apnels of swingings, slidng, and bifold doors shall be considered to be a hazardous location.

Exceptions:
1. Glazed openings of a size through which a 3-inch-diameter (76 mm) sphere is unable to pass.
2. Decorative glazing.

2. **R308.4.2** Glazing adjacent to doors. Glazing in an individual fixed or operable panel adjacent to a door shall be considered to be a hazardous location where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) above the floor or walking surface and it meets either of the following conditions:

1. Where the glazing is within 24 inches (610 mm) of either side of the door in the plane of the door in a closed position.
2. Where the glazing is on a wall less than 180 degrees (3.14 rad) from the plane of the door in a closed position and within 24 inches (610 mm) of the hinge side of an in-swinging door.

Exceptions:
1. Decorative glazing.
2. Where there is an intervening wall or other per-manent barrier between the door and the glazing.
3. Where access through the door is to a closet or storage area 3 feet (914 mm) or less in depth. Glazing in this application shall comply with Section R308.4.3.
4. Glazing that is adjacent to the fixed panel of patio doors.

3. **R308.4.3** Glazing in windows. Glazing in an individual fixed or operable panel that meets all of the following con-ditions shall be considered to be a hazardous location:
1. The exposed area of an individual pane is larger than 9 square feet (0.836 m2).
2. The bottom edge of the glazing is less than 18 inches (457 mm) above the floor.
3. The top edge of the glazing is more than 36 inches (914 mm) above the floor.

4. U- factor of new glazing is not to exceed 0.30 and SHGC shall not exceed 0.23.

TABLE R308.3.1(1)
MINIMUM CATEGORY CLASSIFICATION OF GLAZING USING CPSC 16 CFR 1201

EXPOSED SURFACE AREA OF ONE SIDE OF ONE LITE	GLAZING IN STORM OR COMBINATION DOORS (Category Class)	GLAZING IN DOORS (Category Class)	GLAZED PANELS REGULATED BY SECTION R308.4.3 (Category Class)	GLAZED PANELS REGULATED BY SECTION R308.4.2 (Category Class)	GLAZING IN DOORS AND ENCLOSURES REGULATED BY SECTION 308.4.5 (Category Class)	SLIDING GLASS DOORS PATIO TYPE (Category Class)
9 square feet or less	I	I	NR	I	II	II
More than 9 square feet	II	II	II	II	II	II

For SI: 1 square foot = 0.0929 m².
NR = No Requirement.

TABLE R308.3.1(2)
MINIMUM CATEGORY CLASSIFICATION OF GLAZING USING ANSI Z97.1

EXPOSED SURFACE AREA OF ONE SIDE OF ONE LITE	GLAZED PANELS REGULATED BY SECTION R308.4.3 (Category Class)	GLAZED PANELS REGULATED BY SECTION R308.4.2 (Category Class)	DOORS AND ENCLOSURES REGULATED BY SECTION R308.4.5[a] (Category Class)
9 square feet or less	No requirement	B	A
More than 9 square feet	A	A	A

For SI: 1 square foot = 0.0929 m².
a. Use is permitted only by the exception to Section R308.3.1.

Outdoor Electrical Notes:
60.01 Outdoor lighting permanently mounted to a single family dwelling or other buildings in the same lot shall be high efficacy and must be controlled by an on/off switch that does not override to ON as listed below. Also, the lighting must by one of the following methods:

1. Controlled by photocell and motion sensor. Controls that override to ON shall not be allowed unless the override automatically reactivates the motion sensor within 6 hours, or
2. Controlled by any of the following;
   1. Photocell and automatic time switch control. Controls that override to ON shall not be allowed unless the override automatically return the photocontrol and automatic time switch control to its normal operation within 6 hours, or
   2. Astronomical time clock. Controls that override to ON shall not be allowed unless the override automatically return the astronomical clock its normal operation within 6 hours and which is programmed to automatically turn the outdoor lighting OFF during daylight hours, or
   3. Energy management control system which meets all of the following requirements. At a minimum provides the functionality of an astronomical time clock in accordance with Section 110.9 of the standards; meets the Installation Certification requirements in Section 130.4 of the standards; meets the requirements for an EMCS in Section 130.5 of the standards; does not have an override or bypass switch that allows the luminaire to be always ON; and, is programmed to automatically turn the outdoor lighting OFF during daylight hours.

Note: Unvented attic assemblies can be approved provided the unvented attic space is completelycontained within the building thermal envelope and no interior vapor retarder is installed on the ceiling side of the unvented attic assembly. Insulation shall be applied in direct contact with the underside of the structural roof sheathing and shall either be entirely of an
air-impermeable product or shall have a layer of air-impermeable product installed in direct contact with the underside of the structural roof sheathing for proper condensation control with the balance of the insulation being air-impermeable below it. (Note: Air-permeable insulation alone may be applied directly below the structural sheathing when rigid insulation with an R-value of R-5 minimum is installed directly above the structural roof sheathing for condensation control) **[CRC R806.5]**

City of Santa Barbara ADU Proto Types
Santa Barbara County, CA

Stamp/Signature:

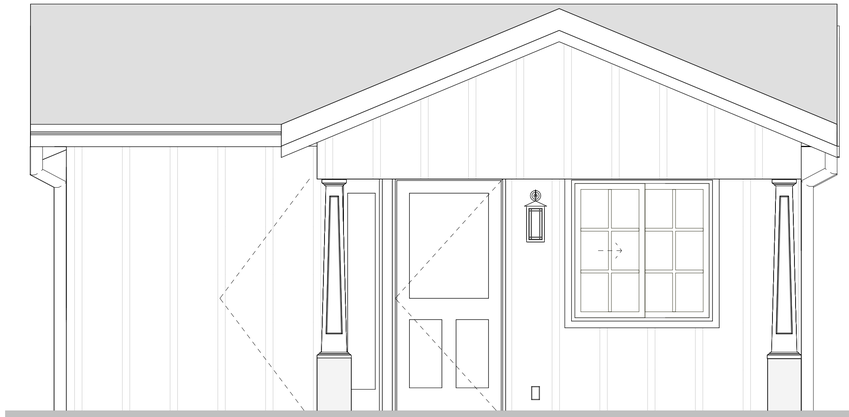
Lucrezia DeLeon

Initial Submittal

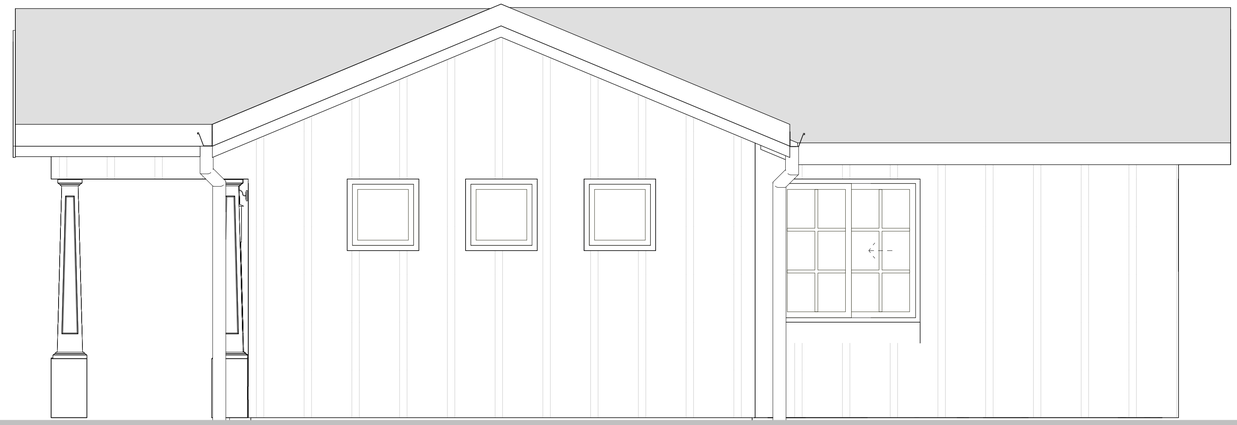
Revisions:

Sheet Title:
Elevations - Spanish Colonial - 450 SF

Sheet No.:
A2.2



1 Front Elevation - Craftsman- 400 SF
1/2" = 1'-0"



2 Left Elevation - Craftsman- 400 SF
1/2" = 1'-0"

3 Rear Elevation - Craftsman- 400 SF
1/2" = 1'-0"

4 Right Elevation - Craftsman- 400 SF
1/2" = 1'-0"

Note: CRC Section R308.4
1. **R308.4.1** Glazing in fixes and operatons apnels of swingings, slidng, and bifold doors shall be considered to be a hazardous location.

Exceptions:
1. Glazed openings of a size through which a 3-inch-diameter (76 mm) sphere is unable to pass.
2. Decorative glazing.

2. **R308.4.2** Glazing adjacent to doors. Glazing in an individual fixed or operable panel adjacent to a door shall be considered to be a hazardous location where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) above the floor or walking surface and it meets either of the following conditions:

1. Where the glazing is within 24 inches (610 mm) of either side of the door in the plane of the door in a closed position.
2. Where the glazing is on a wall less than 180 degrees (3.14 rad) from the plane of the door in a closed position and within 24 inches (610 mm) of the hinge side of an in-swinging door.

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1. Decorative glazing.
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3. The top edge of the glazing is more than 36 inches (914 mm) above the floor.
4. U- factor of new glazing is not to exceed 0.30 and SHGC shall not exceed 0.23.

TABLE R308.3.1(1)
MINIMUM CATEGORY CLASSIFICATION OF GLAZING USING CPSC 16 CFR 1201

EXPOSED SURFACE AREA OF ONE SIDE OF ONE LITE	GLAZING IN STORM OR COMBINATION DOORS (Category Class)	GLAZING IN DOORS (Category Class)	GLAZED PANELS REGULATED BY SECTION R308.4.3 (Category Class)	GLAZED PANELS REGULATED BY SECTION R308.4.2 (Category Class)	GLAZING IN DOORS AND ENCLOSURES REGULATED BY SECTION 308.4.5 (Category Class)	SLIDING GLASS DOORS PATIO TYPE (Category Class)
9 square feet or less	I	I	NR	I	II	II
More than 9 square feet	II	II	II	II	II	II

For SI: 1 square foot = 0.0929 m².
NR = No Requirement.

TABLE R308.3.1(2)
MINIMUM CATEGORY CLASSIFICATION OF GLAZING USING ANSI Z97.1

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9 square feet or less	No requirement	B	A
More than 9 square feet	A	A	A

For SI: 1 square foot = 0.0929 m².
a. Use in permitted only by the exception to Section R308.3.1.

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   1. Photocell and automatic time switch control. Controls that override to ON shall not be allowed unless the override automatically return the photocontrol and automatic time switch control to its normal operation within 6 hours, or
   2. Astronomical time clock. Controls that override to ON shall not be allowed unless the override automatically return the astronomical clock its normal operation within 6 hours and which is programmed to automatically turn the outdoor lighting OFF during daylight hours, or
   3. Energy management control system which meets all of the following requirements. At a minimum provides the functionality of an astronomical time clock in accordance with Section 110.9 of the standards; meets the Installation Certification requirements in Section 130.4 of the standards; meets the requirements for an EMCS in Section 130.5 of the standards; does not have an override or bypass switch that allows the luminaire to be always ON; and, is programmed to automatically turn the outdoor lighting OFF during daylight hours.

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air-impermeable product or shall have a layer of air-impermeable product installed in direct contact with the underside of the structural roof sheathing for proper condensation control with the balance of the insulation being air-impermeable below it. (Note: Air-permeable insulation alone may be applied directly below the structural sheathing when rigid insulation with an R-value of R-5 minimum is installed directly above the structural roof sheathing for condensation control) **[CRC R806.5]**

City of Santa Barbara ADU Proto Types

Santa Barbara County, CA

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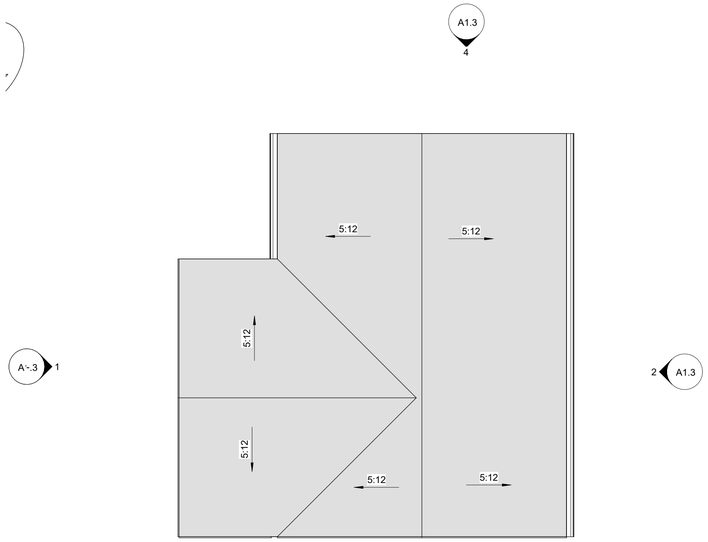
Lucrezia DeLeon

Initial Submittal

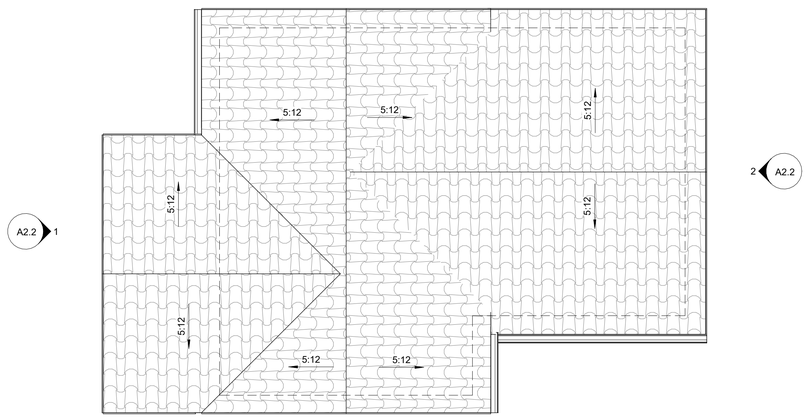
Revisions:

Sheet Title:
Elevations - Craftsman - 450 SF

Sheet No.:
A2.3



250 SF ADU Roof Plan



400 SF ADU Roof Plan

1 Roof Plan - 250 SF + 400 SF - Studio ADU
1/4" = 1'-0"

City of Santa Barbara ADU Proto Types

Santa Barbara County, CA

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Lucrezia DeLeon

Initial Submittal

Revisions:

Sheet Title:

Roof Plans

Sheet No.:

A4.0

TAKAGI

Residential / Commercial Gas
Tankless Water Heaters

Tankless Non-Condensing Water Heaters

Fully modulating, gas fired, tankless water heater specifically designed for residential and commercial applications. Supplies hot water to domestic hot water systems and can be used with water storage tanks, recirculation systems, and/or combined domestic & heating applications.

FEATURES:

MAXIMUM FLOW RATES UP TO 10.0 GPM

AVAILABLE IN NATURAL GAS OR PROPANE (LP)

OUTDOOR MODELS INCLUDE REMOTE CONTROL AS A STANDARD FEATURE

INDOOR MODELS INCLUDE BOTH A REMOTE CONTROL AND POWER CORD AS STANDARD FEATURES

LOW NOx EMISSIONS

COMPLIES WITH LEAD FREE STANDARDS

HEAT EXCHANGER (T-D2 MODELS) IS CONSTRUCTED OF COMMERCIAL GRADE COPPER

SAFETY FEATURES:
- Built in Freeze Protection
- Manual Reset Hi-Limit
- Overheat Cutoff Fuse
- Inlet and Outlet Thermistors for Constant Temperature Monitoring
- Flame Sensor

EASY-LINK UP TO 4 UNITS (T-D2 MODELS):
- With no additional parts or accessories needed

VENTING AND COMBUSTION
- 4" Category III Vent
- Vertical or Horizontal Installation
- 50' Max Length, 5 Elbows max (90° elbows = 5' equivalent length)
- Power Vent Power Vent or Power Direct Vent
- Electronic Ignition - No Pilot Light
- 3" Combustion Air Intake (with optional kit)

OPTIONAL ACCESSORIES
- Complete Line of Category III Venting
- Recess Box (outdoor models)
- Pipe Cover
- Direct Vent Conversion Kit (indoor models)
- Isolation Valve Kits
- Backflow Preventer
- Concentric Termination Kits

WARRANTY
- 15-year limited warranty on heat exchanger in residential applications
- 5-year limited warranty on heat exchanger in commercial applications
- 5-year limited warranty on all parts

INDOOR MODELS
T-KJR2-IN, T-K4-IN, T-D2-IN

OUTDOOR MODELS
T-K4-OS, T-D2-OS

T-D2 models only

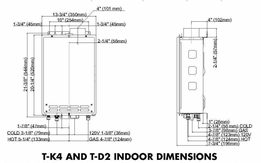
ANSI Z21.10

TAKAGI

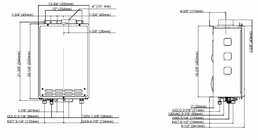
MODEL NUMBER	TYPE	GAS CONSUMPTION INPUT		INLET GAS PRESSURE		UEF	MAXIMUM GPM*	HOT/COLD CONNECTIONS	GAS CONNECTION	DIMENSIONS IN INCHES			APPROX SHIPPING WEIGHT (LBS)
		MINIMUM BTU/H	MAXIMUM BTU/H	MINIMUM IN. W.C.	MAXIMUM IN. W.C.					HEIGHT	WIDTH	DEPTH	
Indoor Models													
T-KJr2-IN-N	Natural	19,500	160,000	4.0	10.5	0.79	6.6	3/4" NPT	3/4" NPT	20-1/4	13-3/4	7-3/4	38
T-KJr2-IN-P	Propane	19,500	160,000	8.0	14.0	0.79	6.6	3/4" NPT	3/4" NPT	20-1/4	13-3/4	7-3/4	38
T-K4-IN-N	Natural	11,000	190,000	4.0	10.5	0.80	8	3/4" NPT	3/4" NPT	20-1/4	13-3/4	9-1/2	43
T-K4-IN-P	Propane	11,000	190,000	8.0	14.0	0.80	8	3/4" NPT	3/4" NPT	20-1/4	13-3/4	9-1/2	43
T-D2-IN-N*	Natural	11,000	199,000	4.0	10.5	0.80	10	3/4" NPT	3/4" NPT	20-1/4	13-3/4	9-1/2	45
T-D2-IN-P**	Propane	11,000	199,000	8.0	14.0	0.80	10	3/4" NPT	3/4" NPT	20-1/4	13-3/4	9-1/2	45
Outdoor Models													
T-K4-OS-N	Natural	11,000	190,000	4.0	10.5	0.80	8	3/4" NPT	3/4" NPT	20-1/4	13-3/4	9-1/2	43
T-K4-OS-P	Propane	11,000	190,000	8.0	14.0	0.80	8	3/4" NPT	3/4" NPT	20-1/4	13-3/4	9-1/2	43
T-D2-OS-N**	Natural	11,000	199,000	4.0	10.5	0.80	10	3/4" NPT	3/4" NPT	20-1/4	13-3/4	9-1/2	45
T-D2-OS-P**	Propane	11,000	199,000	8.0	14.0	0.80	10	3/4" NPT	3/4" NPT	20-1/4	13-3/4	9-1/2	45

TKJr2 models are only available for Indoor installations.
1.5-150 PSI water pressure. 40 PSI or above recommended for maximum flow.
*Current numbers based on factory testing. 0.5 GPM required for activation, 0.4 GPM required for continuous fire after initial ignition.
**Suitable for commercial applications.
Indoor models are certified from sea level to 6,000 ft. elevation. Outdoor models are certified from sea level to 6,000 ft. elevation.

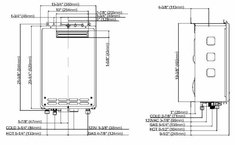
T-KJR2 INDOOR DIMENSIONS
CLEARANCES: TOP 12", BOTTOM 12", FRONT 24", BACK 1", SIDES 3"



T-K4 AND T-D2 INDOOR DIMENSIONS
CLEARANCES: TOP 12", BOTTOM 12", FRONT 24", BACK 1", SIDES 3"



T-K4 AND T-D2 OUTDOOR DIMENSIONS
CLEARANCES: TOP 36", BOTTOM 12", FRONT 24", BACK 1", SIDES 3"



DuctlessAire Model # DA1221-H2 ★★★★★ (503)
Energy Star 12,000 BTU 1 Ton Ductless Mini Split Air Conditioner and H...
$1,005.82

Product Overview | **Specifications** | Questions & Answers | Customer Reviews

Air handler depth (in.)	7.44	Condenser depth (in.)	13.11
Air handler height (in.)	11.69	Condenser height (in.)	21.81
Air handler width (in.)	31.57	Condenser width (in.)	31.50

Details

Air Conditioner Product Type	Mini Split Unit	Decibel Rating	24 dBA
Air direction/circulation	2-way	Filter Type	Washable
Air handler weight (lb.)	18.1	Included	Heater,Remote Control,Self-diagnostic tools
Amperage (amps)	4.05	Mini Split Features	Auto cool,Automatic shutoff,Fan only option,Overload protection,Sleep setting,Timer,Wireless remote control
BTU Cooling Rating	12000 BTU	Minimum Outdoor Temperature (F)	-13
BTU Cooling Rating	12000	Mount Location	Wall Mount
BTU Heat Rating	12000	Number of Fan Speeds	3
BTU Heat Rating	12000 BTU	Number of cool settings	1
Color	White	Returnable	90-Day
Color Family	White	Voltage (v)	220v
Color/Finish	White	Voltage (volts)	220
Condenser weight (lb.)	81.60	Wattage (watts)	1080,920
Coverage Area (sq. ft.)	600	Zone Capacity	Single Zone
Decibel (Sound) Rating	24 dBA		

Bosch 160,000 BTU .92 UEF Tankless Water Heater Indoor Direct Vent
Model: T9800 SE 160 Item Number: 73648

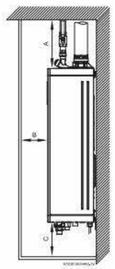
Features | **Specifications** | Reviews

Product Line	Greentherm
Medium	Hot Water
Fuel Type	Natural Gas
Combustion Type	Condensing
Vent Type	Direct Vent
Storage Type	Tankless
Mount Type	Wall
Installation Location	Indoor
Includes Pump	No
Gas Conversion Kit	Included
UPC	052575110431

Performance

Flow Rate at 40F Temperature Rise	8.0 GPM
Flow Rate at 50F Temperature Rise	6.4 GPM
Flow Rate at 60F Temperature Rise	5.4 GPM
Flow Rate at 70F Temperature Rise	4.6 GPM
Maximum Input Capacity	160000 BTU
Minimum Input Capacity	9000 BTU
Uniform Energy Factor	0.97
Minimum Flow Rate	0.45 GPM
Ultra Low NOx Emissions	Yes

Clearances



Description	Unit	Recommended Minimum clearance*
TOP (A)	Inch	12
FRONT (B)	Inch	1
BACK	Inch	0
SIDES	Inch	1
FLOOR (C)	Inch	12

City of Santa Barbara ADU Proto Types
Santa Barbara County, CA

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Lucrezia DeLeon

Initial Submittal

Revisions:

Sheet Title:

Equipment Specs

Sheet No.:

A5.0

Keynotes - Exterior Elevations	
Note	**Comment**
1	Asphalt Shingle Roofing
2	James Harding Panel Siding
3	Board and Batten Vertical Siding
4	Craftsman Style Exterior Trim Window and Door
5	Spanish S-Tile Clay Roofing
6	Smooth Trowel Stucco - Santa Barbara White
7	Slider window with Matte Black Trim

City of Santa Barbara ADU Proto Types

Santa Barbara County, CA

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Stamp/Signature:

Lucrezia DeLeon

Initial Submittal

Revisions:

Sheet Title: **Color and Materials Board - Craftsman + Spanish Colonial Revival Options**

Sheet No.: **A3.1**