



Residential (R-3) Standard Plan Check Corrections

Address:		Permit number:	
Project type:	<input type="checkbox"/> New Construction	<input type="checkbox"/> Addition	<input type="checkbox"/> Alter./Remodel
Plan check date:	Re-check date:	2 nd re-check date:	
Plan checker:			
Plan check company:		Plan checker email:	

INSTRUCTIONS

1. Please provide a response to all the items on this correction list and red lines on the construction documents.
2. In the left-hand margin of the circled/listed corrections, please indicate the sheet number and detail or note number on the plans where the corrections are made. Be as specific as possible.
3. The LISTED or CIRCLED comments are specific correction items applicable to this project. Except for items under 'A- GENERAL', these items are required for ALL submittals, as applicable.
4. Plans resubmitted without a response to all the corrections will be returned to applicant and may result in delayed review time and additional plan check fees.
5. Revisions or additions must be fully clouded with a revision mark.

Each set of plans shall include, but not be limited to:

- Complete plot plan showing yard setbacks, easements, lot dimensions, distances between buildings, size of building, etc.
- Fully dimensioned floor plan of each level showing what is existing, proposed, and to be demolished. Provide dimensioned interior wall partitions, and location. Provide location and type of electrical fixtures, outlets and switches, main electrical panel with amperage rating and smoke detectors. Provide location, flow rate and type of proposed plumbing fixtures, show new connection to existing building drain or sewer (if applicable). Provide location and BTU rating of existing or proposed heating system.
- Fully dimensioned roof plan, including roof eaves, overhangs, rakes, gables.
- Fully dimensioned foundation plan.
- Building sections: Provide dimensioned full-height / width "cross-cut" building sections, specify fire resistive wall assemblies.
- Exterior Elevations: Provide elevations that detail vertical dimensions of existing or proposed wall(s), door(s), window(s), chimneys and projections. Specify existing or proposed wall and roof material finishes and ventilation locations.
- Architectural details
- Door & window schedule – identify all "Egress" door/windows, specify size, configuration, type of glazing, type (e.g. casement, single hung etc.) and show locations on plans.
- Structural foundation, roof, and floor plans, with referenced construction details

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A. General

1. Please number all sheets and provide a sheet index on the cover page.
2. Please provide a 4"x 4" square in the upper right corner of each page to allow for Building Division approval stamp.
3. A survey of the lot may be required by the Building Official to verify that the structure is located in accordance with the approved plans
4. Multiple sheets have not been signed. Please provide a signature on each sheet of the individual responsible for the preparation of the sheet. Final drawings which will be approved for permit issuance shall be signed by the respective design professional on each sheet (electronic signature is acceptable).
5. Provide a title block on all sheets that includes the following:
 - Site address
 - Design professionals name, address, and telephone number
6. Provide property owner's name, address, and telephone number on cover sheet. Also, provide project description for complete scope of work and list all the applicable codes in the title sheet. Scope of work to include square footage of existing residence, remodeled area, and new additions.
7. Include basic project information on the cover sheet including:
 - Use
 - Square footage
 - Occupancy Category
 - Number of Stories
 - Type of Construction
 - If the building is sprinklered or not sprinklered
8. Clearly indicate what is "proposed" and "existing" on the site plan.
9. Separate permits are required for grading, photovoltaic systems, fire sprinklers, as-built structures, retaining walls, swimming pools, demolition, detached accessory structures, outdoor cooking facilities, etc. Clearly note this on the site plan.
10. All permits related to the proposed project shall be issued at the same time, or separate plans and plan review will be required for items not issued with this review. Provide additional permit worksheets for the following:
 - Accessory structures, detached patio covers, and trellises or gazebos.
 - Masonry or concrete fences over 3.5 ft above grade, or, within 3 feet of the property line
 - Retaining walls over 4 ft. high, measured from the bottom of the foundation to the top of the wall and any retaining wall within 3 ft. of property line regardless of height.
 - Electrical and plumbing for exterior improvements detached from the house (such as: BBQ, fountain, fire feature).
11. Provide fully dimensioned site plan to scale. That includes:
 - Vicinity Map and North Arrow.
 - Building footprint showing all projections and dimensions from the property lines and adjacent structures.
 - Property lines, street, alley, easements with new and existing building location.
 - Lot dimensions and front, side and rear distances to property lines.
 - Distances between buildings.
 - Indicate existing ground slope grades and finish material.

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- Clearly show the locations, sizes of the water lines, gas lines, sewer lines and electrical service and/or feeders.
 - Indicate the location of the water, gas, and electrical meters.
 - All structures and improvements on the parcel shall be shown with their uses accurately noted on the site plan; an accurate and complete review cannot be conducted without this being shown.
12. Indicate current Code Editions of the applicable codes: CRC, CBC, CEC, CMC, CPC, CGBSC and the California Energy Code.
 13. Draft the plans to scale and indicate the scale for all sheets and details.
 14. Provide a legend on appropriate sheets for any symbols, abbreviations, notations, etc. used on the plans.
 15. All deferred submittals shall be shown on the title sheet, with a note that states; "Deferred submittals to be reviewed by project architect or engineer of record and certified prior to submittal for plan review."
 16. Void or delete all items, details, and notes that do not pertain to this project.
 17. Buildings shall be provided with approved address identification. Address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches in height with a stroke width of not less than 0.5 inch. Where required by the fire code official, address identification shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole, sign or means shall be used to identify the structure. Address identification shall be maintained. [R319.1]
 18. Show where drainage will terminate to an approved drainage way and not on adjacent properties or how the drainage will be retained onsite.
 19. FLOOR PLAN: Show all dimensions and label use of each room as well as location, size, and type of windows and doors, electrical fixtures and appliances, plumbing and heating and cooling fixtures. Show the location and type of all braced and shear walls. List floor area (itemize garage and porch areas).
 20. FOUNDATION PLAN: Submit a dimensioned plan including exterior and interior footing. Label and locate porches, patios, decks, garage, etc. Locate and note size of anchor bolts, rebar, straps, and hold-downs on plans. Note size, number, and position of crawl space vents.
 21. EXTERIOR ELEVATIONS: Draw minimum of four (4) elevation views showing all openings, wall, and roof finish materials, original and finish grade, building height, stepped footing outline, crawl vents, attic vents and roof pitch.
 22. FRAMING PLANS: Note framing members and sheathing for floor and roof plans, framing for ceiling plans. Show size and spacing of joists, rafters, and beams with grade of lumber to be used. Carry all vertical and lateral loads to footings.
 23. CROSS SECTION: Provide true section through building showing structural elements, earth to wood clearances, floor to ceiling heights, roof slopes, etc. Note typical finishes and value/location of thermal insulation.
 24. DETAILS: Submit foundation, floor, roof, beam connection, special framing and flashing details as necessary for construction.

B. FOUNDATION

1. Provide geotechnical investigation report as required by CRC section 401.4 and CBC section 1803.5.11
2. Show the size, type, location and grade of reinforcement; include the location/length of lap splices on the foundation plan/details.

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3. Slope drainage 6" within the first 10ft. from the foundation wall. If physical obstructions or lot lines prohibit the 10ft distance, a 2-5 percent slope shall be provided to an approved alternative method of diverting the water away from the foundation. Impervious surfaces shall also be sloped a minimum of 2 percent for 10ft away from structures to an approved drainage way. [CRC R401.3]
4. Show the type/location of hold-downs, straps, and anchors. [ACI-318-14]
5. A 2-inch thick layer of sand over a vapor barrier meeting ASTM 1745 (15MIL) over 2 inches of sand, over a 4-inch thick base of ½ inch or larger clean aggregate.
 - A concrete mix design, which will address bleeding, shrinkage, and curling will be required where the vapor barrier is applied directly over 4-inch of ½ inch or larger aggregate.
6. Provide complete details for the slab-on-grade, continuous footings, and pads.
 - Minimum 3-1/2" concrete slab on grade. [R506.1]
 - Minimum 6-mill polyethylene vapor barrier with joints lapped not less than 6-inches. [R506.2.3]
 - Support for reinforcement to maintain reinforcement between center and upper one third of slab for the duration of the concrete pour. [R506.2.4]
 - Slab below grade supported on minimum 4-inch base course of crushed stone or gravel passing 2-inch sieve. [R506.2.2]
7. Call out foundation bolt size and spacing on foundation plan. The foundation bolts shall be ½ inch diameter for SDC D and 5/8-inch diameter for SDC E or F.
 - The bolts shall be located in the middle third of the width of the sill plate.
 - Provide minimum two bolts per plate with bolts located not more than 12 inches and not less than 7-bolt diameters.
 - Anchor bolts shall be embedded a minimum 7 inches into concrete.
8. Provide minimum of 1-#4 reinforcing bar at top and bottom of continuous footings. [R403.1.3]
9. Minimum 3" X 3" X 0.229-inch plate washer.
10. The plate washer may be diagonally slotted when a standard cut washer is provided between the nut and the plate washer and the diagonal cut does not exceed 1-3/4-inches long and the width of the cut is not more than 3/16-inch larger than the bolt diameter." [R602.11.1]
11. Foundations with stem walls shall be reinforced with minimum of one No. 4 bar within 12 inches of the top of the stem wall and one No. 4 bar within 3 to 4 inches from the bottom of the footing. [R403.1.3.1]
12. Slabs on grade cast monolithically with turned down footings shall have a minimum of one #4 bar at the top and bottom of the footing or one #5 bar or two #4 bars in the middle third of the footing depth. Where the slab is not cast monolithically with the footing, #3 or larger vertical dowels with standard hooks on each end shall be provided at 48 inches o.c. (SDC D0 and above) [R403.1.3.3]
 - The bottom bar shall be within 4 inches of the bottom of the footing and shall have minimum 3-inch concrete cover. [R403.1.3.3, R403.1.3.5.3]
13. Where a construction joint is created between a footing and a stem wall, a minimum of one No. 4 bar shall be installed at 4 feet maximum spacing. The bar shall extend to within 3 inches clear of the bottom of the footing, have a standard hook in, and extend a minimum of 14 inches into the stem wall. [R403.1.3.1]
14. Provide details for stepped footing when slope of bottom of footing will exceed 1:10 (V:H) slope. Top surface of footings shall be level. [R403.1.5]
15. Add note to plans: If adverse soil conditions are encountered, a soils investigation report may be required. [R401.4]
16. Wood framing members, including wood sheathing, that rest on exterior foundation walls and are less than 8 inches from exposed earth shall be of naturally durable or preservative-treated wood. [R317.1(2)]



17. Structural observation is required for this project. Note on plans and list all required stages of observation. [Structural Observation form](#)
18. Special inspection is required on this project. Provide a statement of special inspection on the first page of the structural notes which outlines the special inspections to be performed, and the corresponding frequencies (continuous or periodic). [Statement of Special Inspection form](#)
19. Show minimum 18-inch under floor clearance from grade to bottom of floor joists and minimum 12inch clearance to bottom of girders. [R317.1(1)]
20. Provide note on plans: Stumps and roots shall be removed from the soil to a depth of at least 12" below and adjacent to building/foundation.
21. All exterior braced wall panels shall be supported by continuous foundations. All interior braced wall panels in buildings with a plan dimension greater than 50ft shall be supported by continuous foundations. [R403.1.2]

C. GENERAL REQUIREMENTS

1. An automatic residential fire sprinkler is required. [CRC R313.3 and/or NFPA 13D]
2. Sleeping rooms must have a window or exterior door for an emergency exit, sill height not more than 44 inches above the floor, 5.7 square feet of openable area, 24 inches clear opening height, 20 inches clear opening width and shall open directly into a public street, alley, yard, or exit court. Windows _____ do not comply. [CRC R310.1- R310.2.1- R310.2.2]
3. Window wells shall comply with section. [R310.2.3]
4. Specify window size and type (how it opens) for both existing and new windows for bedroom(s) adjacent to new addition so that emergency egress requirements may be verified.
5. Where windows are not provided, provide a whole-house mechanical ventilation system in accordance with the California Mechanical Code and artificial light producing 6 foot-candles (65 lux) at 30" in height. [R303.1, Exceptions 1 & 2]
6. Habitable rooms shall have a floor area of no less than 70sf. [R304.1]
7. Show a 7' minimum ceiling height for habitable rooms, hallways, and portions of basements containing these spaces. [R305.1]
8. Bathrooms, toilet rooms, and laundry rooms shall have a ceiling height of not less than 6 feet and 8 inches. [R305.1]
9. For rooms with sloped ceilings, the required floor area of the room shall have a ceiling height of not less than 5 feet and not less than 50 percent of the required floor area shall have a ceiling height of not less than 7 feet. [R305.1 Exception (1)]
10. Show a 6'-8" minimum ceiling height for non-habitable basements. [305.1.1]
11. Exterior openings that open into porches and sunrooms areas used for light and ventilation shall have 40% of the exterior walls area open and the enclosure shall comply with CRC Appendix H. [R303.1 Exception (3)]
12. Show location of heating equipment on the plans. Heater shall be capable of maintaining a minimum room temperature of 68°F at a point 3 feet above the floor and 2 feet from exterior walls in all habitable rooms at the design temperature. [R303.10]
13. Smoke alarms shall be installed in the following locations:
 - In each sleeping room.
 - Outside each separate sleeping area in the immediate vicinity of the bedroom.
 - On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics.

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- In dwelling 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.
 - 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 this section.
 - In the hallway and in the room open to the hallway in dwelling units where the ceiling height of a room open to a hallway serving bedrooms exceeds that of the hallway by 24 inches or more.
14. Smoke alarms shall receive their primary power from the building wiring provided that such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms with integral strobes that are not equipped with battery backup shall be connected to an emergency electrical system. 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. [R314.6]
15. Where more than one smoke alarm is required to be installed within an individual dwelling or sleeping unit, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed. [R314.4]
16. Carbon monoxide alarms in dwelling units shall be installed and maintained in accordance with the manufacturer's published instructions in the following locations [R315.3]:
- Outside of each separate sleeping area in the immediate vicinity of the bedrooms.
 - On every occupiable level of a dwelling unit, including basements.
 - Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.
17. Where more than one carbon monoxide alarm is required to be installed within an individual dwelling unit in accordance with Section R315.3, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual dwelling unit.
18. Physical interconnection of carbon monoxide alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.
19. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and, where primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. [R315.6]
20. Combination carbon monoxide and smoke alarms shall be permitted to be used in lieu of carbon monoxide alarms. Combination carbon monoxide/smoke alarms shall comply with Section R315 and all requirements for listing and approval by the Office of the State Fire Marshal for smoke alarms. [R315.4]
21. Structural observation is required for this project. Note on plans and list all required stages of observation.
22. The plans shall provide a statement specifically listing all required special inspections for the project. Special inspections shall be as required by Section 1704 of the CBC.
23. Townhouses shall comply with Section R302.2 with 1-hour common wall construction for sprinklered buildings and 2-hr for non-sprinklered buildings. Common walls shall be without plumbing or mechanical equipment, ducts, or vents in the cavity of the common wall.
24. For duplexes and townhouses provide the following:
- Floors and walls separating dwelling units in the same building shall not be of less than 1-hour fire-resistive rated construction. [R302.3]
 - Provide sound transmission ratings (STC) not less than STC 50.
25. Where floor assemblies are required to be fire-resistance rated, the supporting construction of such walls shall have equal or greater fire-resistive-rating. [R302.3.1]

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- 26. Where a windowsill is located higher than 72" above adjacent grade or finished surface on the opposite side, the lowest part of the opening shall be 24" minimum above the room finish floor surface. Operable sections of window shall not permit openings that allow passage of 4-inch sphere where such openings are located within 24" of the finished floor. [R312.2.1]
- 27. One-hour wall assemblies shall extend from the foundation to the underside of the roof sheathing. [R302.3]
- 28. Newly constructed dwellings shall comply with Aging-in-place and fall prevention [R327]:
 - At least one bathroom on the entry level shall be provided with reinforcement for grab bars, where there is no bathroom on the entry level, at least one bathroom on the second or third floor of the dwelling shall comply with R327.1.1. Provide construction detail showing compliance with this requirement.
 - Electrical receptacle outlets, switches and controls shall be located no more than 48" measured from the top of the outlet box and not less than 15" measured from the bottom of the outlet box above the finish floor. [R327.1.2]
 - Doorbell buttons shall not be installed more than 48" above exterior floor or landing. [R327.1.4]
- 29. Show attic ventilation type, size, and location. Vents shall meet the following requirements: [R806.2] Openings shall be placed so as to provide cross ventilation of the attic space.
 - The net free ventilating area shall not be less than 1/150 of the attic area.
 - Openings shall have corrosion-resistant wire mesh or other approved material with 1/16" minimum and ¼" maximum opening.
 - 50% of the required ventilation area must be located at least 3 ft. above eave or cornice vents with the balance provided by eave or cornice vents.
 - Where the ratio of 1/300 is used to vent the attics, not less than 40% but not more than 50% of the vents shall be located not more than 3 ft. below the ridge.
 - Unvented enclosed rafters and decks shall comply with CRC Section R806.5. Provide construction detail showing compliance with this requirement.
 - Provide roofing specifications (ESR Report or other approved listing), including roof assembly fire classification, on the plans. Show roof pitch.
 - Provide 2% slope at flat roofs and decks and show drainage methodology. Where drains and overflow are required, provide detail showing overflow piped separately and 2" higher than roof drain. [R903.4.1]
 - Specify the listing/labeling agency and listing number for: _____. Listing agency to be ANSI accredited for type of listing.

D. EXTERIOR WALLS

- 1. Exterior walls of dwellings, guesthouses, garages, carports and/or accessory structures closer than 5 ft. (3 ft. if sprinklered) to the property line shall be 1-hour fire-resistance-rated construction. [Table R302.1(1) and (2)]
Fire-rated assemblies shall be one of the following:
 - Listed in GA-600 (Gypsum Association Fire Resistance Design Manual).
 - Per 2022 CBC, Table 721.1(2).
 - Other tested and listed assembly by an approved listing agency.
 - Provide approved assembly (including attachments) detail on plan.
- 2. No openings are permitted in the exterior walls, including vents, of Group R-3/U



3. Projections of dwelling units and accessory buildings without an automatic residential fire sprinkler protection are not permitted less than 2 feet to the property line and are required to be 1-hour fire rated on the underside with a fire separation distance between 2 feet and 5 feet. [Table R302.1 (1)]
4. Eaves are not permitted in group R-3/U occupancies closer than 2' to the property line. Dimension all eave-to-property-line distances on plans and sections.
 - Projections in sprinklered structures located between 2' and 3' from the property line (and between 2' and 5' from the property line in non-sprinklered structures) shall be of at least 1-hour fire-resistance-rated construction or heavy timber. The roof eave fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave if solid fire blocking is provided from the wall top plate to the underside of the roof sheathing. [Table R302.1(1) and (2)]
5. Walls of dwelling units and accessory buildings without an automatic residential fire sprinkler protection with a fire separation distance less than 5 feet are required to have a full one-hour rating. [Table R302.1 (1)]
6. Walls of dwelling units and accessory buildings with an automatic residential fire sprinkler protection, with a fire separation distance less than 3 feet are required to have a full one-hour rating. [Table R302.1 (2)]
7. Where the exterior walls of non-sprinklered group R-3/U occupancies are located between 3' and 5' from the property line, the total area of protected and unprotected openings (including vents) is limited to 25% of the wall area on each floor (not including garage wall). Provide area calculations on exterior elevations. [Table R302.1(1)]
8. Exterior stairways with one open side serving as an element of a required means of egress are not permitted closer than 3 ft. to the property line. Open side of exterior stair plus other openings on the secure exterior wall shall be limited per Table R302.1(1) and (2).
9. Window wells are not permitted to be located within 3 feet of property line. [Table R302.1 (1) & (2)]
10. Fire blocking is required in concealed spaces 10' o.c. horizontal, vertically at the ceiling and floor levels, connections between horizontal and vertical spaces, concealed spaces between stair and landing, openings around vents, pipes, ducts, cables, wires, chimneys and fireplaces. [R302.11]
11. Provide details of the deck/balcony and specify method of waterproofing. List ICC approval number for decking material. Show two percent minimum slope. [R903.1]
12. The minimum net area of under-floor space ventilation shall not be less than the floor area/150. [R408.1]
13. Access shall be provided to all under-floor spaces. The floor access shall be a minimum 18" by 24" and openings through a perimeter wall shall be not less than 16" by 24". [R408.4]
14. Wood joists or the bottom of a wood structural floor closer than 18" or wood girders closer than 12" to the exposed crawl space shall be pressure treated or naturally durable to decay. [R317.1, item 1]
15. All wood framing members that rest on concrete or masonry exterior foundation walls and are less than 8" to the exposed ground shall be pressure treated or naturally durable to decay. [R317.1, item 2]
16. Sills and sleepers in direct contact with concrete or masonry that is in direct contact with the ground and girders with less than ½" clearance to masonry and concrete shall be pressure treated or naturally durable to decay. [R317.1, item 3 & 4]
17. Note on plans that "Field-cutting ends, notches and drilled holes of preservative-treated wood shall be treated in the field in accordance with AWPA M4". [R317.1.1]

E. FRAMING

1. Call out all metal straps and hangers.
2. Show location of purlins and struts (kickers) to reduce rafter spans and support ridges, hips, valleys, etc.
3. Show on plans, rafter & ceiling joist size, spacing, span direction, and support locations.
4. Show drag trusses with additional lateral loads over shear walls. Callout drag load on plans.

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5. Studs in bearing walls are limited to 10 feet in height unless an approval design is submitted. [R301.3, Table R602.3.1(5)]
6. Where the roof pitch is less than 3:12 (V:H) structural members that support rafters and joists, such as ridge beams, hips, and valleys shall be designed as beams. Provide calculations. [R802.3]
7. Provide designed ridge beam for vaulted ceiling when rafter ties are not provided. [R802.3]
8. Specify on plan, at vaulted ceiling areas, balloon (full height) studs at interior and exterior walls.
9. Sleepers or sills on a concrete or masonry slab in direct contact with earth unless separated from such slab by an impervious moisture barrier shall be of naturally durable or preservative-treated wood. [R317.1]
10. Protection of wood and wood-based products from decay shall be provided in the locations specified in Section R317.1 by the use of naturally durable wood or wood that is preservative treated in accordance with AWPA UI. [R317]
11. Subterranean termite control shall be provided by one of the following methods. Provide information on the plans. [R318.1]:
 - Chemical termiticide treatment.
 - Termite baiting system.
 - Pressure preservative treated wood.
 - Naturally durable termite-resistant wood.
 - Physical barriers as provided in Section R318.3.
 - Cold formed steel framing
12. Verify framing meets the maximum deflection criteria per Table-R301.7.
13. Exterior balconies and decks shall be designed to support a minimum uniformly distributed live load of 60 psf. Cantilevered balconies must be checked for live load only at the cantilever portion in accordance with *ASCE 7, Section 4.3.3*
14. Exterior landings, decks, balconies, stairs and similar facilities shall be positively anchored to the primary structure to resist both vertical and lateral forces or shall be designed to be self-supporting. Attachment shall not be accomplished by use of toenails or nails subject to withdrawal. [R311.5]
15. Deck supporting a live load of 50lbs per sq. ft. plus 10lb per sq. ft dead load shall have the ledger attached with ½" hot dipped or stainless-steel lag screws/bolts per CRC Table 507.9.1.3(1). The lag screws/bolts shall be staggered and have an edge distance top and bottom of 2" and 2"-5" from the ends. See CRC section R301.5 for an alternate connection using hold-down devices. Deck ledgers shall not support concentrated loads from beams or girders and shall be 2x8 minimum in dimension [R507.9.1.1]
16. Provide deck lateral load connections at each end of the deck and at deck intersections. [R507.9.2]
17. Exterior deck support posts shall be cross-braced in two directions for lateral stability if over 4ft in height above grade. Deck framing shall be anchored to the building with connectors not subject to withdrawal. [R507]
18. Attached canopies on buildings shall be designed to resist the wind pressure forces per *ASCE 7, Section 30.11*.
19. Provide framing support under point load or bearing wall supporting roof framing at _____, and show location of supported post above on floor framing.

Studs supporting two floors, ceiling, and roof must be 3 x 4 or 2 x 6 at 16 inches on center. [Table R602.3. (5)]
20. Separate submittal is required for engineered roof trusses. Submit structural calculations and plans including truss profiles, member sizes and connection details for all roof and floor trusses prior to issuance of building



permit. Specify Manufacturer, product name, and either LARR, ICC, or IAPMO evaluation report number for truss connector plates. [R802.10]

21. Specify the header size at door, window, and other openings in bearing walls 22. Detail is required for header support at the corner windows (see marked plans).
23. Wood framed structures with basements or more than 2 stories in height shall be prepared by a licensed architect or engineer. [R301.1.3.2]
24. Provide engineered design in accordance with 2022 CBC, R301.2.1, R301.2.2, and ASCE 7-16
25. Provide material specifications for _____ on the plans.
26. Submit structural design/analysis calculations for: _____
27. Provide design criteria on the plans to specify the risk category, the wind load based on 110 mph, all seismic force resisting systems and associated R and Ω values and identify the Seismic Design Category. ASCE 7, Table 1.5-1 and Table 12.2-1.
28. Specify on the plan the design live loads used for roof and floor loads. [Table R301.5].
29. Provide on construction drawings, the design dead load of solar photovoltaic panels including rack system in areas of framing designed for installation or future installations of solar panels.
30. Provide on title sheet soils engineer's name, address, telephone number, reference of report number, date and any supplemental reports, etc. List soils allowable design values on foundation plan. [R401.1]
31. Soils engineer to review and approve final foundation plan, foundation details, shoring plan, pool plan, precise grading and drainage plan and erosion plan. This correction will remain until the permit is issued.
32. Structural observation is required for this project. Complete the City of Downey's structural observation form (provided in the link) and include it on the first page of the structural notes [Structural Observation form](#).
33. Special inspection is required on this project. Provide a statement of special inspection on the first page of the structural notes that outlines the special inspections to be performed, and the corresponding frequencies (continuous or periodic) [Statement of Special Inspection form](#).

F. STRUCTURAL

1. This building contains structural elements that are either unconventional or exceed the prescriptive limitations of the California Residential Code. These elements shall be designed in accordance with accepted engineering practice by a design professional. [R301.1.3]
2. Clearly identify all braced wall lines on plans and identify location and length of all braced wall panels on each braced wall line. Provide 3x sill and framing members where allowable shear value exceeds 350 plf.
3. All braced wall panels and interior bearing walls shall be supported by a continuous foundation. [R403.1.2]
4. Provide specific details where required to clarify the construction.
5. Show panel index, type, orientation and nailing for sheathing.
6. The braced wall panels at exterior walls and all interior braced wall panels in buildings with a plan dimension greater than 50' in Seismic Design Category D_o, D₁ & D₂ shall be supported by continuous footings. [R403.1.2]
7. Braced wall panels shall begin within 10 feet from each end of a braced wall line. [R602.10.2.2]
8. The distance between adjacent edges of braced wall panels along a braced wall line shall not be greater than 20 feet. [R602.10.2.2]
9. Method PFH-Portal Frame with Hold Downs (PFH) may only be used at detached garage door openings in accordance with Section R602.10.6.2 and Figure R602.10.6.2.
10. Braced wall panels shall comply with the following:
 - Minimum panel width for the Wood Structural Panel (WSP) method shall be 4 feet for wall heights not exceeding 10 feet. [Table R602.10.5]

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- Gypsum Board (GB) and Portland Cement Plaster (PCP) shall have height to width ratios not exceeding 1:1. [Table R602.10.3(3) footnote e]
 - Gypsum board shall be applied to the opposite side of the bracing material, unless the required bracing length has been increased by the appropriate adjustment factors. [R602.10.4.3]
11. Braced wall lines and braced wall panels shall be designed in accordance with Section R602.10.7.
 - Show the braced wall panel type on the plans.
 - Indicate braced wall panel length adjustment factors used.
 - Show locations and lengths of all braced wall panels on the plans.
 12. Show braced wall panels connection to floor framing or foundations. [R602.10.8]
 13. Alternate Braced Wall Panel (ABW) shall be constructed in accordance with Figure R602.10.6.1. The hold down force shall be in accordance with Table R602.10.6.1. Alternate braced wall panel cannot be mixed with other types of bracing methods within a braced wall line
 14. Tie-downs: Hold-downs are required for braced wall panels with any uplift force.
 15. Wind design velocity pressure calculation must consider topographic effects on escarpments, ridges, and hills that meet all of the conditions of ASCE 7, Section 26.8.1.
 16. Wind loads for components and cladding shall be per ASCE 7, Chapter 30.
 17. For braced walls with openings, provide design and detailing in accordance with R602.10.8.
 18. Where required per R301.1.3, provide engineered design to meet the requirements of Force-transfer Shear Walls per AWC SDPWS, Section 4.3.5.2 or as Perforated Shear Walls per AWC SDPWS, Section 4.3.5.3.
 19. Cripple wall bracing shall have length as specified in Tables R602.10.3(1) and R602.10.3(3) and with an increase of 1.15 times the required length, shall have gypsum board applied to the opposite side of the bracing material and shall have a spacing between panels not exceeding 14 feet. [R602.10.10]
 20. Provide details for transfer of shear wall hold-down forces to foundation for shear walls above first floor.
 - Provide design of drag/struts and drag/strut connections.
 - Identify drag/struts on plans and specify drag/strut nailing.
 21. Provide grade beam design for continuous footings supporting lateral force resisting elements.
 22. All exterior braced wall panels shall be supported by continuous foundations. All interior braced wall panels in buildings with a plan dimension greater than 50ft shall be supported by continuous foundations. [R403.1.2]

G. EGRESS

1. Every residence and dwelling unit shall have at least one continuous and unobstructed path of vertical and horizontal egress travel from all portions of the building without requiring travel through a garage. The required egress door shall open directly into a public way or to a yard or court that opens to a public way. [R311.1]
2. In every bedroom, habitable attic, and basement containing habitable space (except basements housing only mechanical equipment space not exceeding 200 sq. ft.) provide an emergency escape and rescue opening meeting all of the following: [R310]
3. The third floor shall have a maximum 50' travel distance from any occupied point to an egress stairway or ramp. [R311.4]
4. The minimum width of hallways shall not be less than 36". [R311.6]
5. Basements shall have at least one exterior emergency escape and rescue opening that shall open directly into a public street, alley, yard, or exit court. Each sleeping room at basement shall have its emergency egress and

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rescue opening unless it is exempted per R310.1- Exception 2. Escape windows with a finished sill height below adjacent ground elevation shall have a window well and ladder per CRC R310.2.3. [R310.1]

6. Where bars, grilles or similar devices placed over any emergency escapes, rescue openings, or window wells the minimum net clear opening size shall comply with Sections R310.2.1 through R310.2.3 and shall be releasable and removable from the inside without the use of a key, tool, or any special knowledge or effort.

[R310.4]

- A net clear opening area of not less than 5.7 sq. ft. (5.0 sq. ft. for grade – floor window).
- Minimum clear opening height of 24".
- Minimum clear opening width of 20".
- The bottom of window opening shall not be more than 44" from the floor.
- Shall open directly into a public way, public ally, yard or court. [R310.1]
- Window control opening device shall not reduce the required net clear opening area of the window.

[R312.2.2]

- Provide a well for escape window from basement.
 - Area of window well to be 9 sq. ft. minimum with 3' minimum dimension.
 - Provide a ladder from window well if deeper than 44".
7. Every dwelling unit shall have at least one swinging exit door, minimum clear height of 6'-6", and minimum clear width of 32". [R311.2]
8. Revise plans to indicate that a landing, with a width not less than the width of door and length in the direction of travel of not less than 36 inches, will be provided on each side of doors.
9. The elevation of landing shall not exceed 1 ½ inch difference than the threshold of the doorway (7 3/4 inch if door does not swing over the landing or steps) in each direction.
10. Revise plans at door from _____ to show compliance. [R311.3 & R311.3.1]
11. Specify that the maximum slope of any landing shall not exceed ¼ inch per foot. [R311.3] 12. Indicate that the corridor/hall to _____ room shall be 36 inches minimum clear width. [R311.6]
13. The minimum clear width of stairways is clear 36" above the handrail.
14. Handrails shall not project more than 4.5" on either side of the stairway and the minimum clear width of the stairway at and below the handrail height shall be 31.5" and 27" when installed on one side and both sides, respectively. [R311.7.1 & R311.7.8.2]
15. Provide section and details of interior and exterior stairway showing:
- Maximum rise of 7 ¾" and minimum run (tread) of 10". [R311.7.5]
 - Provide a nosing between 0.75" and 1.25" on stairways with solid risers where tread depth is less than 11". [R311.7.5.3 and Exception 1]
 - Minimum clear width of 36". [R311.7.1]
 - Minimum headroom of 6'-8". [R311.7.2]
 - Alternating tread devices and ship ladders shall not be used as an element of a means of egress. R311.7.11 and [R311.7.12]
16. Provide details of the winding tread walk line 12" clear from the inside turn. [R311.7.4]
17. Provide detail of spiral stairways that show compliance with R311.7.10.1.
- Minimum clear width at and below the handrail is 26".
 - Have a minimum tread depth of 6.75" at the walk line.
 - All treads are identical with a maximum rise of 9 1/2".
 - Minimum headroom of 6'-6" shall be provided. Walk line radius is not greater than 24.5".

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18. Handrails are required on at least one side of a continuous run of treads or flight with four or more risers. [CRC R311.7.8]
19. Provide dimensioned details of handrail grips showing a minimum edges radius of 0.01 inch and shall have a one of the following:
 - Circular cross-sectional diameter shall be between 1 ¼" and 2". Non-circular handrails shall have a perimeter dimension between 4 and 6 ¼ inches with a maximum cross section of dimension of 2 ¼ inches. [R311.7.8.5 (1)]
 - Handrails with a perimeter dimension > 6 ¼ inches shall have a graspable finger on both sides of the profile between 1 1/4" to 2 ¾" beginning within ¾" from the top of the profile and achieve a minimum 5/16" depth within 7/8" below the widest profile point and shall continue a minimum 3/8" to a level not less than 1¾" below the tallest portion of the profile. [R311.7.8.5 (2)]
20. Handrails shall be continuous except at a turn they are permitted to be interrupted by a newel post and have a minimum clear distance between the wall and handrail grip of 1 ½ inches. [R311.7.8.3 & R311.7.8.4]
21. Where guards are used as handrails at the sides of stairs they shall have a height between 34-38 inches. [R312.1.2, Exception 2]
22. Provide a 42-inch-high guardrail at balconies landing and decks located more than 30" vertically to the floor or grade below. [R312.1]
23. Provide a detail of the guard (including a handrail on open sides of the stairway) showing that a 4" diameter sphere may not pass through the open space between intermediate rails and pickets. The open space between the riser tread and bottom rail of the guard shall not allow a 6-inch diameter sphere to pass through. [R312.1.3]
24. Provide connection calculations and details for all guardrails to withstand a 200-lb force at top of the railing acting in any direction, and min 50-lb per linear foot for intermediate guard components. The loads are not required to be cumulative.
25. Show a ½ inch gypsum board at enclosed space under the stairway. [R302.7]
26. Provide a stairway cross-section showing minimum clear headroom of 6'-8". [R311.7.2]
27. There shall be not more than 151" vertically between floor levels or landings. [R311.7.3]
28. Dimension landings at top and bottom of stairs measured in the direction of travel not less than the stair width. [R311.7.6]
29. Openings between intermediate balusters shall preclude the passage of a 4" diameter sphere. [R312.1.3]
30. The triangular openings formed by the riser, tread, and bottom rail shall preclude the passage of a 6" diameter sphere. [R312.1.3, Exception 1].
31. Openings between intermediate balusters on the open side of stairs shall preclude the passage of a 4-3/8" diameter sphere. [R312.1.3, Exception 2].

H. ROOFING

1. Provide detail of roof construction assembly. [R902.1]
2. Specify ICC approval number for tile and special roof coverings. [R905.1]
3. Specify slope of roof
4. For roof covering specify: [R902.1.2]
 - Type/Material
 - Weight
 - Roof slope(s) of all areas on the roof plan.
 - Manufacturer specifications [R902.1.2]

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- Current approved listing number
 - Built-up roofs shall have a minimum slope of ¼-in. per foot (2%) for drainage.
5. Asphalt shingles shall be used on roof slopes of two unit vertical to 12 units horizontal
 6. Tiles shall be installed on roof slopes of 2 ½ vertical in 12 units horizontal [R905.2.2 & R905.3.2]
 7. For roof slopes from two units vertical in 12 units horizontal up to four units vertical to 12 units horizontal, underlayment shall be two layers. [R905.2.2]
 8. Roof slope is not adequate for the type of roof covering specified.
 9. Show locations of all required roof and roof attic vents on roof and elevation plans.
 10. For each enclosed attic space with a maximum vertical height greater than 30 inches, provide a minimum of 22 x 30 inches attic access. Attic access shall be located at a hallway or other locations with ready access. [R807.1]
 11. Roof Ventilation calculation is required on plans [R806.1].
 12. Enclosed attic and enclosed rafter spaces shall have cross ventilation for each separate attic space. A net free ventilating area of not less than 1/150 of the space ventilated. [R806.2]
 13. Provide cross ventilation for attic and each enclosed rafter space as specified in CRC Section R806. The total net free ventilating area shall not be less than 1/150 or 1/300 when a Class I or II vapor barrier is installed on the warm in-winter side of the ceiling for zones 14 and 16 and not less than 40% and not more than 50% of the required ventilating area is located in the upper portion of the attic. [R806.2]
 14. Coordinate all locations of required roof and roof attic vents on roof and elevation plans.
 15. Unvented attic assemblies shall comply with R806.5.
 16. Provide detail at eave vents to show a minimum 1" space between the insulation and bottom of the roof sheathing and at the location of the vent. [R806.3]
 17. Roof and deck area drains to be designed for a ____ per hour rainfall per Table D 101.1. [CPC 1101.12.1]
 18. Provide details of roof drain and overflow. Overflow drains shall have separate independent piping and have an inlet flow line locate 2" above the low point of the roof. Overflow scuppers shall have an area 3 times the roof drain, a minimum opening height of 4", and have an inlet flow line located 2" above the low point of the roof. [R903.4.1]
 19. Draftstops shall be provided in any concealed space where there is usable space both above and below the concealed space. The concealed space shall not exceed 1,000 square feet. [CRC R302.12]
 20. Exposed attic floor insulation shall have a critical radiant flux of not less than 0.12 watt per square centimeter per ASTM E 970. [R302.10.4 & R302.10.5]
 21. A roof cricket or saddle must be installed on the high side of any chimney or penetration such as a skylight that is more than 30" in width.

I. GARAGE

1. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Revise the plans. [R302.5.1]
2. Ducts penetrating wall or ceiling separations between a garage and a dwelling unit shall be constructed of minimum 26 gage sheet metal and shall have no openings into the garage. Show on plans. [R302.5.2]
3. Private garage shall be separated from the residence and its attic, structure(s) supporting floor/ceiling assemblies used for separation required by CRC Section R302.6, and garages located less than from a dwelling unit on the same lot shall be protected by a minimum ½ -in gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than a 5/8-in type X gypsum board. [R302.6]
4. Doors between the garage and private residence shall be self-closing and self-latching. [R302.5.1]

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5. Provide the minimum 1-3/8 inch solid-core wood door, a solid or honeycomb core steel door not less than 1-3/8-inch-thick, or a 20-minute fire rated door between the garage and residence unless both are protected by an automatic residential fire sprinkler system. [R302.5.1]
6. Garage and/or carport shall be separated from the dwelling unit by a vertical wall from the slab thru the attic to the roof sheathing with minimum ½” gypsum board on the garage side. Show on plans.
[Table R302.6]
Exception: A separation is not required between a carport and the dwelling provided the carport is open on two or more sides and there are not enclosed areas above. Also coordinate to cross-section plans if applicable.
7. Garages beneath habitable rooms above shall be separated by 5/8” gypsum board on the garage side. Show on plans. (Table R302.6) Also coordinate to cross-section plans if applicable.
8. Structures supporting floor/ceiling assemblies in a garage or carport (columns or beams in the garage) shall have not less than 1/2 “gypsum board protection. [Table R302.6]
9. Garages located less than 3’ from a dwelling on the same lot shall have not less than ½” gypsum board applied to the interior side of all exterior walls that are within that area. [Table R302.6] Exception: Dwellings protected by an automatic fire sprinkler system need only be self-closing and self-latching.
10. Garage floors shall be of noncombustible material. The area of the floor used for parking of vehicles shall be sloped to drain toward the main vehicle entry door. [R309.1]
11. Carports shall be open on at least two sides. Carport floor surfaces shall be of noncombustible material or asphalt.
12. The area of the floor used for parking of vehicles shall be sloped to drain toward the main vehicle entry. [R309.2]

J. LIGHT AND VENTILATION

1. Wall between _____ and _____ should be 50 % open and unobstructed and provides an opening of not less than 1/10 of the floor area of the interior room or 25 square feet whichever is greater. [R303.2]
2. Net window opening for ventilation at _____ room shall be a minimum of 4 % of the floor area. [R303.1]
3. For the purpose of determining light and ventilation requirements, rooms shall be considered to be a portion of an adjoining room where not less than one half of the area of the common wall is open and unobstructed and provides an opening of not less than one-tenth of the floor area of the interior room and not less than 25 square feet. [R303.2]
 - Exception: Openings required for light or ventilation shall be permitted to open into a sunroom with thermal isolation or a patio cover, provided that there is an openable area between the adjoining room and the sunroom or patio cover of not less than one-tenth of the floor area of the interior room and not less than 20 square feet (2 m2). The minimum openable area to the outdoors shall be based on the total floor area being ventilated.
4. Required glazed openings shall open directly onto a street or public alley, sunroom additions, yard or court located on the same lot. [R303.9]
5. Required glazed openings may face into a roofed porch where the porch abuts a street, court or yard and the longer side of the porch is at least 65% unobstructed and the ceiling height is not less than 7 feet.
6. Eave projections shall not be considered as obstructing the clear open space of a yard or court.
7. Required glazed openings may face into an area under a deck, balcony, bay or floor cantilever provided a clear vertical space at least 36 inches high is provided.
8. Sunroom addition: Required glazed openings shall be permitted to open into sunroom additions or patio covers that abut a street, yard or court if in excess of 40 percent of the exterior sunroom walls are open, or are enclosed only by insect screening, and the ceiling height of the sunroom is not less than 7 feet. [R303.9.1]

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9. All habitable rooms shall have an aggregate glazing area of not less than 8% of the floor area of the room. Natural ventilation shall be through windows, skylights, doors, louvers or other approved openings to the outdoor air.
10. Specify window size and type (how it opens) for both new and existing windows at rooms adjacent to new addition so that minimum light and ventilation requirements may be verified. Minimum window area shall be 8 % of the floor area square and 50% openable. [R303.1]
11. For habitable rooms other than kitchens, the glazed areas need not be openable where the opening is not required by Section R310 and a whole-house mechanical ventilation system or a mechanical ventilation system capable of producing 0.35 air changes per hour in the habitable rooms is installed in accordance with the California Mechanical Code.
 - For kitchens, the glazed areas need not be openable where the opening is not required by Section R310 and a local exhaust system is installed in accordance with the California Mechanical Code.
 - The glazed areas need not be installed in rooms where Exception 1 is satisfied and artificial light is provided that is capable of producing an average illumination of 6 foot-candles (65 lux) over the area of the room at a height of 30 inches above the floor level.
 - Use of sunroom and patio covers, as defined in Section R202, shall be permitted for natural ventilation if in excess of 40 percent of the exterior sunroom walls are open, or are enclosed only by insect screening.
 - The windows, doors, louvers and other approved closeable openings not required by Section R310 may open into a passive solar energy collector for ventilation required by this section. The area of ventilation openings to the outside of the passive solar energy collector shall be increased to compensate for the openings required by the interior space.
 - Glazed openings may open into a passive solar energy collector provided the area of exterior glazed opening(s) into the passive solar energy collector is increased to compensate for the area required by the interior space.

K. GLAZING

1. Exterior windows and sliding doors shall be tested by an approved independent laboratory and bear a label identifying manufacturer, performance characteristics and approved inspection agency to show compliance with AAMA/WDMA/CSA 101/I.S.2/A440. [R609.3]
2. Note on plan "Each pane of safety glazing installed in hazardous locations shall be identified (acid etched, sand blasted, ceramic fired, etc.) by a manufacturer's designation, the manufacturer or installer and the safety glazing standard which it complies. Multi-pane assemblies shall be identified. [R308.1]
3. Glazing in swinging, sliding, and bifold doors 9 square feet or less shall be a minimum category classification of I (CPSC 16 CFR 1201) and II (CPSC 16 CFR 1201) when more than 9 square feet or sliding. [Table R308.3.1 (1), R308.3.1]
4. Glazing within 24" of either side of the door in the plane of the door in a closed position or glazing on a wall less than 180 digress from the plane of the door in a closed position and within 24" of the hinge side of an in-swinging door where the vertical edge of the door is less than 5' from the walking surface shall be safety glazed. [R308.4.2]
5. Glazing over 9 square feet in area with bottom edge less than 18" above the floor and exposed top edge greater than 36" above the floor shall be safety glazed. [R308.4.3]
6. Glass used in handrails and guards shall be safety glazed. [R308.4.4 & R308.4.4.1]

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7. Glazing in door and enclosures for hot tubs, whirlpools, saunas, steam rooms, bathrooms, showers less than 5' above the standing surface shall have a minimum category classification of II (CPSC 16 CFR 1201). [Table R308.3.1 (1) & R308.4.5]
8. Glazing in walls and fences enclosing indoor and outdoor swimming pools, hot tubs and spas when the bottom edge of the glazing is less than 5' above a walking surface and it is within 5' horizontally of the water's edge shall have a minimum category classification of I (CPSC 16 CFR 1201) or B (ANSI Z97.1) when 9 square feet or less in area and II (CPSC 16 CFR 1201) or A (ANSI Z97.1). [R308.4.5 & Table R308.3.1 (1) & (2)]
9. Glazing adjacent to stairway, landings and ramps where the bottom exposed edge of the glazing is less than 3' above the plan of the adjacent walking surface shall be safety glazing. [R308.4.6]
10. Glazing adjacent to bottom landing of a stairway within 3' vertically and within a 5' horizontal arc less than 180 degrees from the bottom tread nosing shall be safety glazing. [308.4.7]
11. Glass block shall have a minimum face thickness of 3/16", original units, polyvinyl butyral coated, and comply with R607. [R607.2]
12. Louvered windows and jalousies shall be a minimum 3/16" thick, maximum 48" in length, and have smooth edges. [R308.2]

L. FINISHES

1. Specify and detail the veneer material, listing, thickness, backing, anchorage, footings, and support over openings. [R703.8]
2. Exterior stone in Seismic Design Category D (D2) shall not exceed the limits of Table R703.8. (2) and shall not exceed 4" thick.
3. Masonry veneer up to 5" thick installed over backing of wood or cold-formed steel according to Table R703.3(1) and Figure R703.8 shall be limited to first story above grade [R703.8].
4. Submit an interior finish schedule (specify fasteners, fastener spacing, coating thickness, number of coats, etc.). [R702]
5. Indicate vertical supports for anchored veneer and air spacing. [R703.8]
6. Provide specifications for lath, plaster and drywall to conform to the requirements of CRC Chapter 7.
7. Show exterior wall construction assembly. A minimum of one layer of No. 15 asphalt felt, free from holes and breaks, complying with ASTM D 226 for Type 1 felt shall be applied over studs of all exterior walls. Specify that two layers of Grade D or 60-minute Grade D paper shall be applied over all wood base sheathing. [R703.2, R703.7.3]
8. Specify a minimum 0.019" (No. 26 galvanized sheet gage) corrosion-resistant or plastic weep screed located below foundation plate line and 4 inches above grade on all exterior stud walls or 2-inches above paved areas. [R703.7.2.1]

M. FIREPLACES

1. Provide complete details for masonry fireplaces, including firebox and chimney construction in accordance with R1003 & R1001.
2. Indicate chimney ducts, reinforcing, ties to building, etc. [R1003 & R1001]
3. Provide 2-inch minimum clear air space between chimney and wood construction from the front face and sides, and 4-inch from the back face. [R1001.11]
4. List manufacturer's name and third-party approved listing number.
5. Factory-built fireplaces shall be tested in accordance with UL 127.

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6. Factory-built fireplaces shall be listed and labeled and shall be installed in accordance with the conditions of the listing. [R1004.1].
7. Fireboxes that burn solid fuel shall be provided with a chimney spark arrester. [R1003.9.2]
8. Show height of the chimney to be 2' feet above any portion of a building within 10 feet, and not less than three feet from point where chimney passes through roof. [R1003.9]
9. Provide Seismic reinforcing for Masonry and concrete chimney. [R1003.3]
10. Provide anchoring detail for masonry heater to foundation. [R1002.4]

N. SKYLIGHTS

1. Specify manufacturer's name and ICC approval number for skylights. [R308.6.9]
2. Specify glazing material shall be fully tempered, heat-strengthened, wired, approved rigid plastic, or laminated in accordance with. [R308.6.2]
3. Screen is not required when fully tempered meeting the requirements listed in R308.6.5. [R308.6.5]
4. Provide skylight details to show flashing and 4-inch minimum mounting height. [R308.6.8]
5. Submit calculations, specifications, and construction details for skylights that are not third party approved. For fully tempered or heat strengthened glass, a retaining screen meeting the requirements of Section R308.6.7 shall be installed below the glass. [R308.6.3]
6. A roof cricket or saddle must be installed on the high side of any chimney or penetration such as a skylight that is more than 30" in width.

O. Energy Compliance

1. Submit (2) electronically signed AND registered sets of Title 24 Energy Compliance Calculations.
2. The energy calculations shall be made part of the plans. Note: The Responsible Person's Declaration Statement shall be signed by the architect or designer of the plans not the Energy consultant.
3. Clearly show compliance throughout the plans how the building will meet the minimum requirements shown in the energy calculations (radiant barrier on roof plan, insulation in cross sections, mechanical requirements on utility plans, minimum duct insulation, lighting and switching requirements on the electrical plan, etc.).
4. Solar photovoltaic Systems are required for all new buildings and shall be submitted under a separate permit.
5. Provide complete solar photovoltaic plans OR submit documentation, information and calculations how one of the exceptions has been met for all newly constructed dwellings (including changes of use). If a shading exception is used then the information shall be provided on the site plans and with calculations showing how the shading exception is being met based on the type of object, distance away, height, etc. [CEC 110.10(a)1]
6. Provide an itemized list of all fenestrations in energy documentation. Identify exterior doors and windows with method similar to window schedules.
7. Specify U-factors and Solar Heat Gain Coefficient (SHGC) values for all fenestrations on window and door schedules. Add note to schedules: "Fenestrations must have temporary and permanent labels."
8. Architectural and structural construction specified conflicts with envelope construction requirements. Structural drawings show ___ rafter depth and energy analysis require ___ rafter depth. Revise by coordinating, sections, details and/or specifications on plans.
9. In bathrooms, garages, laundry rooms, utility rooms and walk-in closets at least one luminaire in each of these spaces shall be controlled by an occupant or vacancy sensor providing automatic-off functionality. [CEnC Section 150.0(k).2. E. i]
10. The conditioned floor area for all floors in the energy calculations shall match the floor areas shown on the cover sheet of the plans.

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11. The orientation on the energy calculations shall match the orientation shown on the site plan.
12. All energy calculations shall be based on Climate Zone 8, except for anything north of Vista Del Rio, which is climate zone 9
13. Hot water heater type does not match with energy documentations. Revise plans accordingly.
14. Isolation water valves required for instantaneous water heaters 6.8kBTU/hr and above. Valves shall be installed on both cold and hot water lines. Each valve will need a hose bib or other fitting allowing for flushing the water heater when the valves are closed. [CEC 110.3(c)6]
15. ALL luminaires must be high efficacy. [CEC 150.0(k)1A]
16. Add the following Indoor Lighting Controls notes on the drawings [CEC Section 150.0(k)2]:
 - Add auto-off controls for lighting in drawers and cabinets.
 - Undershelf, display cabinets, switched outlets controlled separate from ceiling lighting. Lighting in habitable spaces shall have accessible wall-mounted dimming controls.
17. Luminaries recessed in insulated ceilings must meet five requirements [CEC 150.0(k)1C]:
 - They must be rated for direct insulation contact (IC).
 - They must be certified as airtight (AT) construction.
 - They must have a sealed gasket or caulking between the housing and ceiling to prevent flow of heated or cooled air out of living areas and into the ceiling cavity.
 - They may not contain a screw base sockets They shall contain a JA8 compliant light source.
18. Joint Appendix A (JA8) certified lamps shall be considered high efficacy. JA8 compliant light sources shall be controlled by a vacancy sensor or dimmer
19. In bathrooms, garages, laundry rooms, and utility rooms, at least on luminaire in each of these spaces shall be controlled by a vacancy sensor or occupant sensor provided the occupant sensor is initially programmed like a vacancy sensor (manual-on operation). [CEC 150.0(k)2I]
20. All exterior lighting shall be high efficacy, be controlled by a manual on/off switch and have one of the following controls (the manual switch shall not override the automatic control device) (CEC 150.0(k)3A):
 - Photo-control and motion sensor.
 - Photo-control and automatic time switch control.
 - Astronomical time clock control turning lights off during the day.
21. Provide a gasket/ insulation on all interior attic/under-floor accesses. [CEC110.7]
22. Provide a duct sizing plan, calculation and/or sizing chart showing compliance with minimum supply and return air duct requirements per California Green Building Standards Code 4.507.2 and California Energy Code 150.0(m).
23. Provide verification on the plans how the building will meet the minimum ventilation and acceptable indoor air quality requirements per ASHRAE Standard 62.2. Window operation is not a permissible method of providing the whole building ventilation airflow required. This is subject to HERS testing (clearly label this on the plans). The following label must be attached to the fan switch: "To maintain minimum levels of outside air ventilation required for good health, the fan control should be on at all times when the building is occupied, unless there is severe outdoor air contamination."
24. Radiant barrier shall be installed, and it shall also be installed on all gable ends per the manufacture's specifications.
25. Proposed scope of work requires HERS verification. All energy documentation forms must be registered with one of the following HERS provider:
 - California Energy Registry (formerly CHEERS)
 - California Certified Energy Rating & Testing Services (CalCERTS)

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26. Provide Energy Storage Systems (ESS) ready shall meet the following: [CEC150.0(s)] A) At least one of the following shall be provided:

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

27. For new construction and additions greater than 1000 sf., provide a whole-building mechanical ventilation system in accordance with the Fan Ventilation Rate or Total Ventilation Rate Method. Include ventilation system sizing calculations on the plans.

28. A minimum 100 CFM indoor air quality fan is required in the kitchen and shall be HERS verified.

29. In kitchen specify the local exhaust system vented to outdoors, the minimum exhaust rate shall follow table 150.0-G. At electric range add note on plan: no gas hook up at stove.

30. New construction shall comply with the following Electric Readiness requirements s [CEnC Section 150.0 (t)-(v)]:

- Heat pump space heater ready: if a natural gas or propane furnace is installed, add the following notes on plan [CEnC Section 150.0(t)]:
 - o Install dedicated 240-volt, 30-amp branch circuit wiring within 3 ft from the furnace and accessible to the furnace with no obstructions.
 - o Reserve space on the main electrical service panel to allow for the installation of a double pole circuit breaker for future furnace installation.
- Electric cooktop ready: if a gas or propane cooktop serves individual dwelling units, add the following notes on the plan [CEnC Section 150.0(u)]:
 - o Install dedicated 240-volt, 50-amp branch circuit wiring within 3 ft from the cooktop and accessible to the cooktop with no obstructions.
 - o Reserve space on the main electrical service panel to allow for the installation of a double pole circuit breaker for future cooktop installation.
- Electric clothes dryer ready: if a clothes dryer location has gas or propane plumbing, add the following notes on the plan [CEnC Section 150.0(v)]:
 - o Install dedicated 240-volt, 30-amp branch circuit wiring within 3 ft from the clothes dryer and accessible to the clothes dryer with no obstructions.
 - o Reserve space on the main electrical service panel to allow for the installation of a double pole circuit breaker for future clothes dryer installation.



P. BATHROOMS

1. Bathroom or service room minimum window areas shall not be less than 3 square feet and 50 % openable or, provide a mechanical ventilation system exhausted to the outside capable of providing 50 cubic feet per minute for intermittent ventilation 25 cubic feet per minute for continuous ventilation. [R303.3]
2. Each bathroom containing a bathtub, shower, or tub/shower combination shall be mechanically ventilated for purposes of humidity control in accordance with the California Mechanical Code
3. Window operation is not a permissible method of providing exhaust for humidity control.
4. Show 30-inch clear width for water closet compartments and 24-inch clearance in front of a water closet. [CPC, 402.5]
5. Bathrooms and powder rooms are required to have at least one GFI receptacle outlet within 36 inches of each lavatory. [CEC 210.52(D)]
6. Net area of shower enclosure shall be not less than 1,024 sq. inch (7.1 sq. ft.) of floor area, and a minimum of 30 inches diameter circle. [CPC 408.6]
7. Bathrooms, toilet rooms, and laundry rooms shall have a ceiling height of not less than 6 feet and 8 inches. [R305.1]
8. The ceiling height above bathroom and toilet room fixtures shall be such that the fixture be capable of being used for its intended purpose. [R305.1 Exception (2)]
9. A shower or tub equipped with a showerhead shall have a ceiling height of not less than 6 feet and 8 inches above an area not less than 30 inches by 30 inches at the showerhead. [R305.1 Exception (2)]
12. Bathrooms, water closet compartments and other similar rooms shall be provided with glazed area in windows of not less than 3 sq. ft., one half shall be openable. [R303.3]
 - Exception: The glazed areas shall not be required where artificial light and a local exhaust system are provided. The minimum local exhaust rates shall be 50 cubic feet per minute for intermittent ventilation or 20 cubic feet per minute for continuous ventilation in accordance with the California Mechanical Code, Chapter 4. Exhaust air from the space shall be exhausted directly to the outdoors.
13. Bathroom Exhaust fans: Each bathroom containing a bathtub, shower or tub/shower combination shall be mechanically ventilated for purposes of humidity control in accordance with the California Mechanical Code, Chapter 4; and the California Green Building Standards Code, Chapter 4, Division 4.5. [R303.3.1]

Q. GREEN BUILDING

1. The Residential Green Building Standards Mandatory Measures Application checklist shall be made part of the submitted plans. (Division A4.6).
2. 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, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site (CGBSC 4.106.2):
 - Retention basins of sufficient size shall be utilized to retain storm water on site.
 - Where storm water is conveyed to a public drainage system, collection point, gutter, or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency.

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3. All new residential construction with attached private garages shall have the following for electric vehicle (EV) charging stations [CGBSC 4.106.4]:
 - a. Install a minimum 1-inch conduit capable of supplying a 208/240V branch circuit to a suitable box location for EV charging. The other end shall terminate to the main service and/or subpanel.
 - b. The main panel and/or subpanel shall be of sufficient size to install a 40-ampere dedicated branch circuit. The dedicated overcurrent protection space shall be labeled "EV CAPABLE".
4. Multiple shower heads serving a single shower shall have a combined flow rate of 1.8 gpm or the shower shall be designed to allow only one shower outlet to be in operation at a time. [CGBSC 4.303.1.3.2]
5. Residential projects shall comply with either a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient Landscape Ordinance (MWELO), whichever is more stringent.
6. Automatic irrigation system controllers installed at time of final inspection shall have weather or soilbased controllers and/or weather-based controllers with rain sensors. Soil moisture-based controllers are not required to have rain sensor input. [CGBSC 4.304]
7. Submit a construction waste management plan. Recycle and/or reuse a minimum of nonhazardous construction and demolition waste. [CGBSC 4.408.2]
8. (Clearly note on the plans) At time of final inspection, a building operation and maintenance manual, compact disc, etc. shall be provided containing the following: [CGBSC 4.410]
 - Directions that manual shall remain onsite for the life of the building
 - Operation and maintenance instructions for equipment, appliances, roof/yard drainage, irrigation systems, etc.
 - Information from local utility, water and waste recovery providers.
 - Public transportation and carpool options e. Material regarding importance of keeping humidity levels between 30-60 percent.
9. Clearly note on the plans how the project will meet minimum pollutant control requirements for adhesives, sealants, caulks, paints, carpet, resilient flooring systems, etc. [CGBSC 4.504]
10. Duct openings related to HVAC systems shall be covered with tape, plastic, sheet metal or other methods to reduce the amount of water, dust and debris which may enter the system. [CGBSC 4.504.1]

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