



# CITY OF ORANGE BUILDING DIVISION

300 E. Chapman Avenue, Orange, California 92866

## RESIDENTIAL PLAN REVIEW LIST:

<b>PLAN CHECK DATE</b>	<b>1<sup>st</sup></b>	<b>2<sup>nd</sup></b>	<b>3<sup>rd</sup></b>
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<b>PLAN CHECK NO.</b>	<b>REVIEWED BY</b>	<b>PHONE NO.</b>

<b>JOB ADDRESS</b>	<b>APPLICANT</b>	<b>PHONE NO.</b>

<b>ARCHITECT</b>	<b>PHONE NO.</b>	<b>OWNER</b>	<b>PHONE NO.</b>

Before approval for code compliance or issuance of a building permit, the plans and application for this construction project require the information, revisions and corrections indicated below. The approval of plans and specifications does not permit the violation of any section of the building code, or other ordinance or state law.

<b>USE OF STRUCTURE</b>	<b>TYPE OF CONSTRUCTION</b>	<b>OCCUPANCY GROUP</b>	<b>NO. OF STORY</b>
<b>SFR</b>	<b>V-B</b>	<b>R-3 / U</b>	

<b>VALUATION</b>	<b>AREA SQ. FT</b>

**Please be advised that approval must be obtained by the applicant, from the following departments prior to building permit issuance:**

√	<b>Building Division</b>	<b>(714) 744-7200</b>		<b>Planning (Zoning)</b>	<b>(714) 744-7220</b>
	<b>Fire Department</b>	<b>(714) 288-2541</b>		<b>Police (Security)</b>	<b>(714) 744-7327</b>
	<b>Orange County Health</b>	<b>(714) 667-3650</b>		<b>Public Works (Engineers)</b>	<b>(714) 744- 5561</b>
	<b>Planning (Landscape)</b>	<b>(714) 744-7220</b>		<b>Public Works (Traffic)</b>	<b>(714) 744-5540</b>

**It is the applicant's responsibility to determine the project status for the departments listed above.**

## **INSTRUCTIONS:**

- A. Numbers in parenthesis refer to code sections of the 2007 editions of the California Building Code (CBC), California Plumbing Code (CPC), California Mechanical Code (CMC), or California Electrical Code (CEC).
- B. Resubmit marked original and three signed, corrected sets of plans, two signed sets of all calculations and this plan review list for recheck. Separate sheets for response may be used if necessary.
- C. Each sheet of the architectural and structural plans must bear the signatures, registration number and expiration date of an architect or engineer registered in the State of California.
- D. See the marked up plans and calculations for additional required corrections. The marks on the plans are to be considered "typical" and apply to all similar conditions on the plans, not just the areas that are marked up. The marked up plans and calculations shall be re-submitted to the city.
- E. Incomplete, indefinite or faded drawings or calculations will not be accepted.
- F. Incorporate all comments as marked on checked set of plans and calculations and this corrections sheet.

## ***GENERAL REQUIREMENTS***

### **A. General Requirements:**

- 1. Add notes to the plans:
  - a. All new doors and windows must comply with Building Security Standard, Ordinance # 7-79
  - b. Building address shall be provided on the building in such a position as to be plainly visible and legible from the street. (501.2)
  - c. Provide survey stakes prior to foundation inspection to verify lot lines.
- 2. Provide the following design data on the first sheet:
  - a. APN (Assessor parcel number)
  - b. Occupancy groups (R-3/U)
  - c. Type of construction (V-B)
  - d. Number of stories.
  - e. Floor area ( i.e. Bldg., Garage, Patio..)
  - f. Surface water quality notes( see attached)
  - g. Soil Classification
  - h. Seismic Design Category
  - i. Special inspection statement
  - j. Structural observation list, if required by engineer.
  - k. Statement by design professional regarding special inspection for Seismic Resisting system & Component list and Seismic Resisting testing list.
  - l. Items of deferred submittal
- 3. Provide notes and details for high hazard fire areas. (1603, Section 15.36.020, Orange Municipal Code).

4. Provide a complete plot plan showing:
  - a. Location and size of all structures on the lot.
  - b. Identify all property lines and easements, streets, etc. Provide lot dimensions and dimensions from centerline of street or alley to property lines.
  - c. Show north arrow.
  - d. Distances between buildings (main house, detached garage, accessory buildings, etc.).
  - e. Distances (setbacks) between buildings and property lines.
5. All sheets of plans must be wet-signed by a professional responsible for the document preparation.
6. The plans shall be drawn to scale.
7. Clearly indicate on floor plan the location of existing walls, new walls, and walls to be removed. Please provide Wall Legend.
8. Submit a site utility plan. Specify size, material and location of the sewer, gas, water, and electrical services.
9. A Cal-OSHA permit is required for excavations deeper than 5' and for shoring and underpinning. Contractor to provide a copy of OSHA permit.
10. Submit electrical, mechanical and plumbing plans.
11.
  - a. Exterior wall openings are limited to 10% of unprotected and 15% of protected openings between 3 feet and 5 feet of property line. Indicate type of openings on the plan. **(Table 704.8)**
  - b. No exterior wall openings are permitted within 3 feet of property line.
12. Room dimensions **(1208)**
  - a. Specify on the plans - ceiling heights – habitable space = 7'6"; kitchen, halls, bathrooms = 7'-0".
  - b. Provide minimum floor area = 70 sq. ft., minimum dimension in any direction = 7-ft.; and at least one room = 120 sq. ft. minimum Please show the required ceiling height on building section. **(1203.1)**
13. Light and ventilation:
  - a. Provide glazing = 0.08 x floor area , with openable portion = 0.04 x floor area . **(1205, 1203.4.1)**
  - b. A roofed porch over a required window shall have a 7'(2134mm) minimum ceiling height. Any room may be considered as portion of an adjoining room when one-half of the area of the common wall is open and unobstructed; provides a minimum opening = 0.10 x the interior room floor area or 25 sq. ft., whichever is greater.
  - c. Provide exhaust ventilation at bathrooms or similar rooms. **(1203.4.2.1)**
  - d. Yards and Courts – minimum yards = 3-ft.; (6-ft. when windows on both sides), Court shall not be less than 10-ft. **(1206)**
14. Provide emergency escape from sleeping rooms and basements ()
  - a. The escape windows shall have a minimum net clear opening of 5.7 sq. ft. (0.53m<sup>2</sup>), with 24" (610mm) minimum net clear height and 20" (508mm) minimum net clear width. Escape

- window shall have a finished sill height not more than 44" (1118mm) above the floor. Except: 5 sq. ft net area for the window on the ground level.
- b. Bars, grilles or similar devices must not block the min. emergency escape. (1026)
15. Garages (406.1):
- a. Garage area shall be limited to 1000 sq. ft. Unless provision of 406.1.2 are met. (406.1.1)
  - b. No opening allowed from the garage into a room used for sleeping purposes. (406.1.4)
  - c. Specify 1/2" (16mm) type "x" gypsum board on the garage side of the wall (detail wall and finish to extend to the roof sheathing).
  - d. Specify 5/8" (16mm) type "x" gypsum board on ceiling of garage where living areas are above. Walls can be protected with 1/2" type "x" gypsum board. (302.4 Ex. 3)
  - e. Specify self-closing and tight-fitting, 1-3/4" thick solid-core or 20-minute rated door at the separation wall between the garage and residence. (302.4 Ex. 3; Building Security Standard).
  - f. The garage floor surface shall be of noncombustible materials or asphalt paving materials. (406.1.3)
  - g. Provide minimum area, clear width, length and height – contact Planning Department for requirements.
16. **Smoke detectors: (CBC 907)**
- a. Provide smoke detector(s) in the following locations – in each sleeping area, in the corridor or area giving access to each sleeping area, on each floor and in the basement, in close proximity to the top of the stairway. Where ceiling height of a room open to the hallway exceeds 24", additional smoke detector required.
  - b. Note on the plans – "Smoke detectors shall sound an audible alarm in all sleeping areas of the dwelling unit in which they are located."
  - c. In new construction, smoke detectors shall receive their primary power from the building wiring and be equipped with a battery back-up. (907.2.10.2)
17. **Doors:**
- a. Specify minimum door = 32" x 6'-8". (1008.1.1)
  - b. Provide a landing each side of the door – landing width to match the door width and length of 44". (1008.1.5), Dimension on the plan, threshold = 3/4" maximum. (1008.1.6)
18. **Stairways: (1009)**
- a. Show on plans/details:
    1. Provide stairway framing plan.
    2. A minimum (36") clear width. (1009.1)
    3. A maximum 7.75" rise {4" minimum} and 10" minimum tread. (1009.3 Ex. 4)
    4. Stairway landing(s) depth (36") min., shall not exceed 48". (1009.4)
    5. A minimum headroom over the stairs of 6'-8". (1009.2)
    6. Handgrip portion of handrail shall not be less than 1-1/4" nor more than 2" cross-section diam. Dimension having a smooth surface with no sharp corners.
    7. Handrails not less than 34" (864mm) or more than 38" (965mm) above the nosing of tread. (1012.2)
  - b. Provide complete notes and details for rise, run, handrails, guardrails, etc. (including all structural information and calculations).
  - c. Provide 1/4"(32mm) to 2"(51mm) handgrip 1/2"(38mm) from wall.
  - d. Handrail(s) shall be continuous the full length of the stairs. Ends shall be returned or terminate in posts.

- e. The intermediate railings of stair handrails must be spaced such that a 4" (102mm) sphere cannot pass through any portion of the railing. A 6" (152mm) space is allowed at the triangular space between the risers, tread and bottom rail.
  - f. Enclosed usable space under interior and exterior stairways shall be protected on the enclosed side as required for one-hour fire-resistive construction.
  - g. Provide calculations and framing plan for steel stairway.
19. **Winding stairs:** (1009.3.1)
20. **Guards:** (1013)
- a. Specify a minimum height of 42"(1067mm) with intermediate rails spaced such that a sphere 4.375"(111mm) in diameter cannot pass through; (6"(152mm) allowed at triangular openings formed by riser, tread and bottom rail). (1013.3.exc.5)
  - b. Provide structural calculations and details (including base connection) – design guard to withstand a lateral force of 200 lb applied at top of rail; and for intermediate rails apply 50 lbs (1'X1' area) lateral force . (1607.7.1)
21. **Weather Protection:**
- a. Provide notes and details for weather-resistive barriers, flashing, counter-flashing, etc. (1503)
  - b. Detail corrosion-resistant weep screed minimum of 4" above the earth or 2" above paved areas. (2512.1.2)
22. Walk balconies, decks and exterior stairway exposed to the weather and sealed underneath shall be waterproofed and sloped a minimum of ¼" unit vertical in 12 units horizontal (2%) for drainage. Specify manufacturer and ICC report number of waterproofing on the plans.
23. Show location of safety glass in hazardous locations: (2406)
- a. Glazing in doors (including wardrobe doors) and within 24" of the door.
  - b. Glazing in doors and enclosures for bathtubs, showers, hot tubs, saunas, swimming pools, etc.
  - c. Glazing for all windows adjacent to bathtubs, etc.
  - d. Glazing less than 18" above the floor.
  - e. Glazing in railings.
  - f. Glazing in walls enclosing stairway landings.
  - g. Operable windows located more than 6 feet above finished grade or other surface below, the lowest part of the clear opening of the window shall be minimum 24 inches above the finished floor surface of the room in which the window is located.(CBC1405.12.2)
24. **Fireplace and chimneys:** (CBC 3102)
- a. All chimneys shall terminate 24" (610mm) minimum above the highest part of the roof within 10-ft. (3048mm); but shall not be less than 3' above the highest point where the chimney passes through the roof. (213.9)
  - b. factory-built chimneys shall comply with the manufacturer's listing, whichever is greater. Show on plan, spark arrester. (213.9.1)
  - c. Combustible materials shall not be placed within 6" (152mm) of the fireplace opening. No such material within 12" (305mm) of the fireplace opening shall project more than 1/8" (3mm) for each 1" (25mm) clearance from such opening. (2111.11)(21111.13.1)
  - d. Specify hearth material at fireplace(s). (2111.10)

- e. Hearth must extend 16" (406mm) in front of and 8" (203mm) beyond each side of the fireplace opening when it is less than 6-sq.ft. (0.56m<sup>2</sup>); or 20" (508mm) in front of and 12" (305mm) beyond each side when opening is 6-sq. ft. (0.56m<sup>2</sup>) or larger. Dimension hearth and specify fireplace's opening size. (2111.10)
  - f. Please provide structural calculations and details for masonry fireplace and chimney.
25. **Pre-fabricated fireplace:**
- a. Specify make, model number and ICC report number of metal fireplaces on plans. (2111.13.1)
  - b. The ICC# shown on plan for fireplace does not exist. To verify please provide a current copy of ICBO the report.
  - c. Please provide ICC# for prefabricate chimney. Show detail connection between masonry fireplace and prefabricate chimney.
26. **Veneer:**
- a. Provide notes and details of veneer attachment for adhered veneer , and anchored veneer (1405).
  - b. Provide non-combustible support for anchored veneer – Limit deflection and design for reduced stresses.
27. **Attic access and ventilation:**
- a. Show location(s) of 20" x 30" (559mm by 762mm) attic access with 30" (762mm) minimum clear headroom. Locate access in a hallway, corridor or other readily accessible location. (1209.2)
  - b. Provide weatherstrip or seal at the attic access panels to prevent drafts.
  - c. Specify net free ventilating area of attic vents. Minimum area required is 1/150 of the attic space. If 50% of the vents are provided in the upper portion of the space at least 3-ft. (914mm) above the eave vents with the remaining 50% provided by eave vents, then the required area may be reduced to 1/300 of the attic space. The opening shall be a min. of 1/8" and not exceed 1/4". (1203)
28. **Under-floor access and ventilation:** (1203.3)
- a. Show location(s) of 18" x 24" (457mm x 610mm) under-floor access within 20-ft. of plumbing cleanouts.
  - b. Specify net free ventilating area of under-floor vents. Minimum area required is 1/150 of the under-floor space. Distributes openings around the perimeter and provide cross ventilation.
29. **Roofing requirements:**
- a. A class A roof is required. Show roofing specifications on the roof plan. Please indicate on plans the ICC/UL# for the roofing material.
  - b. Specify the pitch of the roof on the plans. (1507)
  - c. Specify roof sheathing & nailing schedule.
30. **Skylights (CBC 2405)**
- a. Specify size and glazing material for skylights. If glass, comply with CBC Chapter 24. If plastic, specify manufacturer and ICC report number on plans.
  - b. Provide detail of skylight curb assembly showing minimum 4" (102mm) high curb. (2405.4)

31. **Energy Conservation –Title 24 energy forms & calculations:**

- a. Provide documentation to demonstrate compliance with the California Energy Regulations.
- b. Revise conditioned floor area to match plans.
- c. Revise fenestration area to match plans; area is under-stated.
- d. Updated form MF-1R and CF-1R with signatures must be shown on plans.
- e. Glazing U-values should be specified on the plans to match assumption in the energy calculations.
- f. Provide compliance with lighting requirements in bathrooms & kitchen (40 lumens per watt).
- g. Main lighting fixtures installed in the kitchen and bathrooms shall be fluorescent or approved equal, and activated by the first switch in the room.
- h. At vaulted ceiling, R-30 insulation requires 2x12-framing depth. To verify the thickness of insulation, please provide specifications for R-30 insulation.
- i. When radiant barrier is required, specify it on the roof as well as gable en.
- j. Provide Kitchen light worksheet WS-5R.

32. **Electrical:**

- a. Show location and size of electrical service main and sub-panel(s) on plans.
- b. To verify the size of electrical panel(s), please provide load calculations.
- c. Provide one wall switch-controlled lighting outlet in every habitable room, bathroom, hallway, stairway (each level), attached garage, and detached garage with electrical power; and at the exterior side of outdoor entrances or exits. (210-70-a CEC)
- d. In all habitable rooms provide receptacle outlets such that no point along the floor line in any wall space is more than 6-ft. (1.83m) from an outlet. Wall space includes any space 2-ft. (610mm) or wider, fixed panels in exterior walls, fixed room dividers (ex. free-standing bar-type counters, railings, etc.). (210-52(a) CEC)
- e. At kitchens and dining room (210-52-c CEC):
  1. Wall counter space - provide receptacle outlets at each wall counter space 12-in. (305 mm) or wider; and installed so that no point along the wall line is more than 24-in. (305 mm) from an outlet.
  2. Island and peninsular counter space – provide at least one receptacle outlet.
  3. Provide two or more dedicated 20 Amp small appliance branch circuits. (210-52-b CEC)
- f. Provide one receptacle outlet in bathrooms (adjacent to each basin location, and do not install face up), laundry area, hallways (of 10-ft. or more in length), basement, attached garage, and in each detached garage with electric power; at exterior of building (accessible at grade level at the front and back of the dwelling), etc. (210-52 CEC)
- g. Reminder – do not install receptacle outlets face up in the working space or countertop. (210-52 CEC)
- h. Provide ground-fault circuit-interrupter protection (GFCI) for all 125-volt, single-phase 15- and 20-ampere receptacles installed in bathrooms, kitchens at counter-tops, bar sinks, garages (except dedicated outlets) and outdoors within 6'-6" (1.98m) of grade. (210-8(a) CEC)
- i. Provide a dedicated 20 Amp circuit to serve the required bathroom receptacle outlets. (210-52-d CEC)
- j. Provide weather protection for all receptacles installed outdoors. (410-57 CEC)

33. **Mechanical:**

- a. Specify the BTU rating of the heating system. System shall be capable of maintaining a room temperature of 68 F (20 C.) at a point 3'(914mm) above the floor in all habitable rooms. **(CBC 1204.1)**
- b. Show the mechanical equipment, ductwork being extended into the new area on the plan.
- c. Show location and size of combustion air supply ducts or openings to the FAU compartment.
- d. Show location of supply & return air vents as well as thermostat.
- e. Attic furnaces and cooling equipment shall comply with the following **(CMC)**:
  - 1. Have a 30"x30" (762mm by 762mm) minimum attic access opening within 20-ft. (6096mm) of the equipment.
  - 2. Have a continuous 24" (610mm) wide solid floor access path thereto.
  - 3. Have a 30" (559mm) deep working platform at control side(s).
  - 4. Have an electric outlet and a light fixture (controlled by switch at the access point) at the furnace.

**34. Plumbing:**

- a. At water closet – provide minimum 15” each side of water closet centerline and 24” minimum in front of water closet. Show dimensions on the plans. **(CPC)**
- b. Shower area walls shall be finished with a hard, non-absorbent surface to a height not less than 70" (1778mm) above the drain inlet. Provide shower specifications. **(CPC)**
- c. Provide minimum shower area - 1024-sq. inches, capable of encompassing a 30” circle. (414.7 CPC) Show dimensions on the plans.
- d. Provide devices to absorb high pressures resulting from the quick closing of the quick-acting valves from the washer and dishwasher, etc. **(CPC)**
- e. Note on plans:
  - 1. Water closets shall be an ultra low flush type with 1.6 gallons maximum per flush. **(402.2 CPC)**
  - 2. Control valve for shower or tub-shower shall be of the pressure balance or thermostatic mixing valve type. **(418 CPC)**
- f. Provide an active I.A.P.M.O. research report or approved listing for the 'Spa' tub.

**35. Water heater : (510.0 UPC)**

- a. Show how the water heater in the garage is to be elevated to a point where the pilot, burner and switches are located a minimum of 18" (0.5m) above the floor. Or meet CPC 508.14
- b. Show how water heater in garage will be protected from automotive damage. CPC 508.14(2)
- c. Provide water heater straps (one at 1/3 from the top and one at 1/3 from the bottom of the water heater).

**B. Structural Requirements:**

**General**

- 1. Notes on the first sheet: “The structural elements, workmanship and materials shall comply with the 2007 CBC, CPC, CMC, and CEC Code Editions.
- 2. The new calculations shall reference and comply with the 2007 **CBC**. Please update formulas, design stresses, schedules and computer sheets as necessary
- 3. Key or identify all sections and details as to their location on the plan or elevation views.

4. Submit structural calculations to justify the adequacy of the structural joists, beams and headers due to dead and live loads.
5. The Engineer or Architect of Record shall be identified on the building plans. (106.3.4)
6. To help facilitate plan check of calculations, please provide a building schematic in the calculations showing framing directions and spans; beam locations and spans; posts and footings, etc.
7. Submit structural calculations / design details for \_\_\_\_\_
8. Provide a framing fastening **schedule** on plan for Conventional Light-Frame Construction.(Table 2304.9.1)
9. Add the following **material specifications** and/or notes to plans:
  - a. Specify type and grade of plywood: Douglas fir-Larch, Structural I (or CDX).
  - b. Specify grade and species of all lumber.
  - c. Identify grade symbol and lamination species per (Table 5-A, 05 NDS Supp).
  - d. Note on plans. "Field Welding to be done by welders must be approved by the City of Orange
  - e. Continuous inspection by a deputy inspector is required for (Structural steel) (reinforcing steel) (light gage steel).
  - f. For concrete ( $f_c' = 2500$  psi (minimum)) with no special inspection
  - g. For reinforcing steel.
10. Specify on the plans manufacturer, ICC number, design stresses, special inspection, etc. for Parallam, expansion anchors, epoxy, etc.
11. **Roof framing:**
  - a. Show location of purlins and struts (kickers) to reduce rafter spans and support ridges, hips, valleys, etc.
  - b. Provide beams (structural framing) where conventional framing is not used.
  - c. Provide calculations for structural ridges, hips, and valleys.
  - d. Tributary loads appear under-stated, review for uniform and point loads.
  - e. At existing and new roof, please show interior support (kicker/brace) locations for rafters, hips, valleys, and ridges. State all assumptions.
  - f. Where existing bearing walls/beams have been removed, please provide new beams. Provide calculations as necessary. See redmarked plans.
  - g. Calculate rafter-to-ceiling joist lapped connection
  - h. Reminder – at vaulted ceiling area, R-30 insulation requires 2x12 framing minimum.
  - i. Add notes on the plan:
    4. "The roof sheathing to be approved by the building inspector before application of roofing."
    5. Roof tile manufacturer name, ICC number, and maximum tile weight.
    6. Type, size and spacing of fasteners to be used at ceiling ties.
12. **Second floor framing and low roof framing:**
  - a. Show on plans, floor joist size, spacing, span direction and support locations.
  - b. Where existing bearing walls/beams have been removed, please provide new beams. Provide

- calculations as necessary. See redmarked plans.
  - c. Revise plans to match calculations
  - d. Provide calculations for joists, headers and beams, etc.
  - e. Tributary loads appear under-stated, review for uniform, line and point loads.
13. Show on the plans – roof and floor plywood specifications and layout.
14. Garage floors which support private or pleasure-type cars must be designed per (Section 1607.4).
15. **Trusses** – provide the following notes on the plans:
- a. Deferred submittal for pre-fabricated trusses:
    - 1. Submit two (2) sets of truss calculations and plans to the city for separate plan check.
    - 2. The truss calculations and plans shall include review of roof, mechanical and lateral loads (chord/strut & brace loads); also include review of top chord and bottom chord for axial + flexure between panel joints.
    - 3. The Engineer or Architect of record shall review and approve truss design for loads, location, and suitability for intended use.
    - 4. The truss calculations and plans shall be “wet” stamped and signed (include expiration date) by a licensed civil/structural engineer.

**Lateral:**

**1. General:**

- a. Design of Seismic loads based on ASCE 7-05
- b. Design review for wind loads based on ASCE 7-05
- c. Note on plans. "All diaphragm and shear wall nailing shall utilize **common nails** or **galvanized box.**"
- d. Plywood roof panels shall be bonded with intermediate or exterior glue where exposed to the weather.
- e. Specify plywood panel index.

**2. Roof and floor diaphragm:**

- a. Please review second-floor diaphragm loads per formula 12.1-1 of ASCE7-05.
- b. Provide details, properly referenced, of the anchorage, system between the wood roof and floor diaphragms and the concrete or masonry walls.

**3. Chords and struts:**

- a. Provide calculations and details for **drag strut** connections to shear walls. See checked plans.
- b. Design and detail chord/struts around diaphragm openings.
- c. Note on the plans, typical top plate splice (U.N.O.).
- d. Detail struts across blocking (specify strap & nailing to develop loads in the diaphragm); at low roof to walls; etc.

**5. Wall framing:**

- a. Show size, type and location of all brace wall panels. Clearly show required braced wall lines (25 ft. o.c. maximum for Conventional Light-Frame Construction.) (2308.9.3)
- b. Structural framing not using Conventional Light-Frame Construction Provisions of Section 2308 requires the plans and calculations to be signed and sealed by an architect or civil/structural engineer licensed in the State of California.
- c. Specify on plan, at vaulted ceiling areas, balloon (full height) studs at interior and exterior walls.

- d. Please calculate (state all assumptions) and detail wall framing to support vertical plus lateral (out-of-plane) loads – review studs, headers, posts, etc.
- e. Add notes on the plan:
  - 1. “fireblocked walls shall be fireblocked so that no space exceed 8 ft in height.”
  - 2. Specify that **foundation sills** shall be pressure treated, or foundation grade Redwood.(2304.11.2.4).
- f. Doubled joists are required under parallel bearing partitions.
- b. Limit height:length of plywood (wood structural panels) shear walls to 2:1. Provide complete calculations (including deflection) and details where straps are used at openings to reduce the effective height of shear walls.
- c. Provide details of the lateral connectors for the top and bottom of the interior non-bearing walls.
- d. The following applies to all shear walls with a shear value greater than 350 plf. These walls shall be clearly identified on the plans. (Table 2306.4.1 footnote e & I) Provide the following:
  - 1. 3x foundation sill plates.
  - 2. 3x studs and blocks between adjacent panels.
  - 3. 1/2" edge distance for plywood boundary nailing.
  - 4. Stagger nails if nail spacing is less than 2" o.c.
  - 5. Square plate washers shall be used with all anchor bolts.  
1/2" bolt – 3"x3"x0.229" washer plate
- e. Note on plans. "All **bolt holes** shall be drilled diagonally 3/16" larger than the bolt diameter and a slot length not to exceed 1 3/4".
- f. Specify holdowns at \_\_\_\_\_.
- g. Specify shear wall number
- h. To reduce wall pier heights (at header and/or window sill plate) - specify strap size and nailing; detail strap to extend across the full length of the shear wall panel.

**36. Simpson strong-wall:**

- a. Please note the ICC approval number on the plans.
- b. Provide complete strong-wall notes and details.

**37. Drywall and stucco shear walls:**

- a. Clearly identify wall locations on the plans.
- b. Allowable shear walls values of walls sheathed with lath, plaster or gypsum board comply with Table 2306.4.5.
- c. Reminder:
  - 1. Drywall values on ceiling assemblies shall be reduced 50 percent for earthquake loads. (Table- 2508.5, Note b)
  - 2. Specify drywall and stucco shear wall nailing and blocking in the shear wall schedule on the plans. (Table-2506.4.5)

**38. Foundation:**

- a. Specify on foundation plan the foundation dimensions.
- b. Soil bearing pressure is limited to 1500 lbs/sq ft unless soils report recommends otherwise. (1804 & table 1804.2).
- c. Specify reinforcement in the pad footings (minimum of #4 @ 12"o/c. each way).
- d. Anchor bolts – specify minimum of 1/2" diameter x 7" length of anchor bolt with 3" x 3"

- 0.229" plate washers.
- e. Pad footings – include tributary loads (existing and new) which are super-imposed onto the pad footing area. Provide calculations and state all assumptions. Reminder – Live load reduction applies to foundations design, please revise calculations.
- f. Provide footings at the following locations
- g. Specify footing size at
- h. Please provide a detail at the new concrete slab adjacent to existing floor framing / concrete slab:
  1. Show protection of existing wood framing from concrete and soil.
  2. Provide positive connection of new concrete slab and footing to existing concrete stem wall/slab/footing.
- i. Show on the plans – finished grade / slope information (ex. location of top & bottom of slope, slope rise & run, total height of slope (including slope height on adjacent properties, etc.). Detail footing setbacks and deepened footings. (1806.5)
- j. Detail curb/stem wall at garage exterior-wall footing.
- k. Detail step (change in elevation) in the concrete slab between garages.
- l. Noted on the plan: “The contractor shall notify inspector prior to starting excavations or any grading work.”
- m. Noted on the plan: “extend all excavations for footings below natural grade as shown on structural drawing.”
- n. Noted on the plan: “all excavations for footings must be inspected and approved by inspector prior to pouring of concrete.”
- o. Noted on the plan: “All fill shall be placed in maximum 2" layers and compacted to 90% density to support footings.”
- p. Sill plates shall be 8" min. above grade. Reminder: alternate detail of 3 1/2" wide, 2" tall curb can be added on to meet the requirement.
- q. Please review foundation to distribute the overturning forces to the soil, include review of the continuous footing as a grade beam. ( )

**39. Retaining wall:**

- a. Clearly show on the plans, the location of the retaining walls.
- b. Use min. soil lateral pressure = 100 psf/ft deep, or provide soils report. Revise calculations.
- c. Design for lateral load on top of retaining wall.
- d. Review anchor bolt capacity in masonry, adjust spacing as required.
- e. Calculations and details are required for retaining walls over 42" in height, measured from the bottom of the footing to the top of the wall. If retaining wall is supporting a surcharge or sloping earth, calculation is required.

**40. Review of soil report by**

- a. Each set of plans shall have a copy of the soil report (“wet“ stamped & signed).
- b. Revise foundation plans, sections and details.
- c. Reminder – soil report shall be for this referenced project and updated for the 2007 CBC.
- d. Please provide site seismic coefficients :
  1. Site class definition (Table 1613.5.2)
  2. Latitude, Longitude
  3. Seismic Design Category (SDC)

**ADDITIONAL CORRECTIONS**

- 1.
- 2.
- 3.
- 4.