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## SINGLE FAMILY DWELLING PLAN CHECK CORRECTION SHEET

|                            |                      |                            |                 |                    |                |           |                                |  |
|----------------------------|----------------------|----------------------------|-----------------|--------------------|----------------|-----------|--------------------------------|--|
| Project Address            |                      |                            |                 |                    |                |           | Plan Check Number<br><b>BS</b> |  |
|                            | Name                 | Address                    |                 |                    |                |           | Phone No.                      |  |
| Owner                      |                      |                            |                 |                    |                |           |                                |  |
| Applicant                  |                      |                            |                 |                    |                |           |                                |  |
| Architect                  |                      |                            |                 |                    |                |           |                                |  |
| Engineer                   |                      |                            |                 |                    |                |           |                                |  |
| Work Description           |                      |                            |                 |                    |                |           |                                |  |
| Bldg Use                   | Type of Construction | Occupancy                  | Number of Story | Floor Area (SQ FT) | Fire Sprinkler | Fire Zone | Project Valuation              |  |
| SFD                        |                      |                            |                 |                    |                |           |                                |  |
| Plan Checker               |                      |                            |                 |                    |                |           |                                |  |
| Phone No.                  |                      | Fax No.                    |                 | Email              |                |           |                                |  |
| (310) 285-                 |                      | (310) 273-0972             |                 | @beverlyhills.org  |                |           |                                |  |
| 1 <sup>st</sup> Check Date |                      |                            |                 |                    |                |           |                                |  |
| 2 <sup>nd</sup> Check Date |                      | 3 <sup>rd</sup> Check Date |                 |                    | Approval Date  |           |                                |  |
|                            |                      |                            |                 |                    |                |           |                                |  |

YOUR APPLICATION FOR A PERMIT, TOGETHER WITH PLANS AND SPECIFICATIONS, HAS BEEN EXAMINED AND YOU ARE ADVISED THAT THE ISSUANCE OF A PERMIT IS WITHHELD FOR THE REASONS HEREINAFTER SET FORTH. THE APPROVAL OF PLANS AND SPECIFICATIONS DOES NOT PERMIT THE VIOLATION OF ANY SECTION OF THE BUILDING CODE, OR OTHER CITY ORDINANCE OR LAW.

**INSTRUCTIONS:**

- ◆ Comments below are correction items applicable to this plan check. Please respond to all comments.
- ◆ All plans, calculations, and specifications on which comments have been made are considered a part of the plan check and must be returned at the time of resubmittal, with two revised sets of plans including all documents and this correction sheet. Inked-on corrections are not acceptable.
- ◆ In the left-hand margin of the corrections, please indicate the sheet number and detail or note number on the plans where the corrections are made. Be as specific as possible.
- ◆ Incorporate all comments as marked on the checked set of plans, calculations, and this correction sheet on the revised plans. Resubmit marked original plans and two corrected sets of plans, calculations, and this plan review list. Incomplete or unreadable drawings or calculations will not be accepted.
- ◆ The plan check engineer will be available for conference and telephone calls at the telephone number and hours indicated above. Please contact the plan check engineer if you have any questions or for plan review appointments.

## APPLICATION AND PERMITS

1. Valuation is low. It should be \$\_\_\_\_\_. Correct the application and pay a supplemental plan check fee of \$\_\_\_\_\_.
2. Note on the first sheet of the plans: "A separate application and permit is required for:
  - a. Grading/excavation/backfill/removal and recompaction
  - b. Walls and paving located within the required front setback
  - c. Retaining walls over 3 feet in height
  - d. Garden walls over 6 feet in height
  - e. Swimming Pools/spa
  - f. Accessory buildings
  - g. Game Courts
  - h. Fire sprinkler system
  - i. Demolition of any existing structure which required a building permit to be constructed.
    - 1) Sewer shall be capped and approved (Obtain plumbing permit). Note: If the structure is connected to a sewer, the sewer must be capped prior to the issuance of the demolition permit.
    - 2) Buildings or structures shall be certified as being free from asbestos by a certified person or firm prior to issuance of the demolition permit. A building permit is required for asbestos removal.
  - j. Tree removal
  - k. Electrical work
  - l. Mechanical work
  - m. Plumbing work"
3. Comply with protection of adjoining property by giving a 10 day written notice (by certified mail) by attaching a letter to adjacent property owners, of intent to excavate where excavation is deeper than the foundation of adjoining building and located closer to property line than the depth of excavation.
4. The permit application must be signed by the property owner, or licensed contractor, or authorized agent at the time the permit is to be issued:
  - a. For owner-builder permits: Owner's signature must be verified by notarization or personal identification or a notarized authorization letter for an agent to pull permit.
  - b. For contractor building permits: Prior to the issuance of a building permit, the contractor shall have the following:
    - i. Certificate of workers Compensation Insurance made out to the Contractor State License Board.
    - ii. Notarized Letter of Authorization for agents.
    - iii. Copy of Contractors State License or pocket ID.
5. Provide temporary shoring plans for excavations that remove the lateral support from a public way or an existing building. Excavations that remove the lateral support from a public way or an existing building. Excavations adjacent to a public way require Public Works approval prior to issuance of building permit.
6. Storm water provisions are required to be shown on the plans in accordance with the following requirements of Section 106.4.3.
  - a. All construction sites with less than one acres of disturbed soil, or creating no more than 40,000 square feet of impervious area shall implement the Best Management Practices identified on Attachment "A".
  - b. In addition to the requirements of Attachment "A", medium construction sites of two or more acres and up to, but less than five acres of disturbed soil or creating more than 40,000 square feet of impervious area shall prepare a Storm Water Management Plan (SWMP) and/or erosion control plan. The plans shall show all BMPs necessary to control and prevent discharge of sediments and other pollutants generated by the construction activities specific to each site, see Attachment "B". Included as part of the SWMP, the permittee or contractor must also complete and sign Attachment "C", and the Statement of Understanding. The SWMP for all medium construction site projects shall be reviewed and approved by the Subdivision Plan Checking Section. All sediment and pollution prevention measures identified on the plans shall be in place and maintained for the duration of the project or until no longer deemed necessary by the responsible City/County inspector.

- c. In addition to the requirements of medium construction sites listed above, large construction sites with five acres or more disturbed soil are required to comply with the State General permit for Construction Activity. These permits require the submittal of a Notice of Intent to the State Water Resources Control Board and development of a Storm Water Prevention Plan (SWPP). The developer is required to show proof of these submittals by completing Attachment "D".
7. The SWPP can be submitted in lieu of the SWMP for review and approval prior to issuance of a building permit provided that the SWPP incorporates all of the City/County requirements. The SWMP or SWPP for all large construction site projects shall be reviewed and approved by the Subdivision Plan Checking Section.
8. The first sheet of the plans must:
  - (a) Contain the name and address of the owner and designer, site address, and list all consultants (engineer, energy, soils, etc.), associated with the project [CBC 106 Appendix, 105.3 Appendix].
  - (b) Show applicable building data including floor area, classification of each occupancy group, type of construction, area of each story, area of addition, number of stories, building height, and applicable codes. Indicate if sprinklered. Provide assessor's parcel number (APN) if new area is proposed.
  - (c) List the systems that are deferred submittals. Note the following on plans: "Deferred Submittals shall be reviewed by architect or engineer of record prior to submittal to the Building Official." [CBC 106 Appendix]
9. A complete plot plan is required showing side yard and lot dimensions, distances between adjacent buildings, easements, oak trees, private sewage system including expansion areas, slopes, drainage, public right of way, existing buildings, and north arrow. Locate and detail construction of new fences/walls [CBC 106 Appendix]. Clarify new and existing structures/construction and specify if under a separate permit or future work.
10. Buildings adjacent to ascending or descending slopes shall be setback according to the requirements of CBC 1805.3 and Figure 1805.3.1.
11. Plans and calculations are required to be prepared under the supervision of a registered engineer or licensed architect. For plans and/or calculations prepared by a registered engineer or licensed architect, the first sheet of calculations and each sheet of plans containing structural notes, plans, or details, must bear the seal (including expiration or renewal date) and original signature of the responsible Engineer/Architect (CA B&P code). If project is designed per soils/geology report's recommendation, provide soils engineer or geologist's review stamp on foundation plans and details.
12. Structural observation is required for this project. Note on plans and list all required stages of observation.
13. The current design codes have changed. Please submit design and plans based on the 2007 CBC, CPC, CMC, and CEC.
14. Identify current code years on the first sheet of the plans. 2007 CBC, CMC, CPC, CEC along with the 2005 T-24 Energy Standards.
15. Provide an index of drawings on the cover sheet of the plans.
16. Please reference all applicable details on the plans and omit those that do not apply.

**ARCHITECTURAL REQUIREMENTS:**

17. *Additional corrections may follow from the City Plan Check Engineer for zoning and other city regulations. Please coordinate with City Plan Check Engineer.*
18. *Show how roof drainage is conducted to the street on the plot plan:*
  - a. *Sheet flow drainage shall maintain a minimum 1/4" per foot slope.*
  - b. *Drainage to the alley is not allowed unless approval from the Public Works Division is obtained.*
19. *Show location and height of all fences and hedges on the plot plan.*
20. *Provide a soils report for new construction.*
21. *Provide a survey by a licensed surveyor for new construction.*
22. *Submit Mechanical, Plumbing, and Electrical plans to plan check for new construction or more than 50% of remodel.*

23. *An automatic sprinkler system is required for new construction or an alteration/addition over 50% of the value of the existing structure [CA Fire Code 903.2].*
24. *An approved weatherproofing consultant must certify the installation of weatherproofing on all retaining walls which are adjacent to the interior areas of the building [BH 305.9].*
25. *For new construction, an approved weatherproofing consultant must certify that the weatherproofing elements of the building have been installed in accordance with the approved plans, all relevant codes, and the manufacturer's specifications [BH 305.9].*
26. *This development includes six (6) or more dwelling units and a diagram is required to be posted at the primary entrance to the building/buildings indicating the identification pattern and location of each dwelling unit [BH 501.2.3].*
27. *This structure is to be used for human occupancy and is being constructed in the Very High Fire Hazard Severity Zone and therefore shall comply with the following:*
  - a. *All exterior walls and eaves shall be of one-hour fire-resistive construction [BH 3703.1].*
  - b. *Structures constructed over slopes shall have under-floor and deck areas enclosed to the ground with one-hour fire-rated enclosures [BH 3703.2].*
28. *This structure is in a Hillside Building District and the site has slopes exceeding three (3) horizontal to one vertical therefore:*
  - a. *A geological and foundation investigation report is required by a geologist and a civil engineer registered in California [BH 3602.1].*
  - b. *Surface runoff shall be directed to catch basins and non-erosive devices which shall conduct runoff to a street or alley and shall be designed to accommodate a three (3") inch per hour rainfall [BH 3604].*
  - c. *Eave gutters and downspouts shall be installed to collect all roof water and deposit it through non-erosive devices to a street or alley. The gutters, downspouts, and non-erosive devices shall be sized to accommodate a three (3") inch per hour rainfall.*
29. *Provide 1 hour construction and fire sprinkler at Porte-cochere within 3 feet from the property line.*
30. *In existing and new construction, required smoke alarms shall receive their primary power from the building wiring and shall be equipped with a battery backup. Smoke alarms shall emit a signal when the batteries are low [BH 907.2.10.2].*
31. *A fire-retardant roof covering or roof assembly that is listed as a Class A assembly in accordance with ASTM E 108 or UL 790 is required. Wood is not permitted to be used as a roof covering material. Provide roofing material ICC/UL number. [BH 1505.1]*
32. *Provide calculations for establishing grade plane as per Section 502.1. Attach calculations and identify established grade plane on the elevation plans and site plan.*
33. *Specify the use of all areas on the floor plan.*
34. *Walls of R-3 buildings between 3 and 5 ft to property lines shall be one hour rated construction and have a maximum of 25% of unprotected/protected openings, including vents. [CBC Table 602 and 704.8, Including footnotes]*
35. *Walls of U-1 buildings between 3 and 5 ft to property lines shall be one hour rated construction, have a maximum of 15% of unprotected/protected openings, including vents, and shall have a 30" parapet when the area exceeds 1,000 square feet. [CBC Table 602 and 704.8 (including footnotes) and Sec 704.11]*
36. *Walls closer than 3 ft to property lines shall be one hour rated construction, have no openings, and shall have 30 inch parapets when the building floor area exceeds 1,000 square feet on any floor. [CBC Table 602 and 704.8 and Sec 704.11]*

Additionally, show by details or notes the following requirements:

- a. *Show a section and dimension the location of the PL.*
- b. *Detail the one-hour parapet materials, the non-combustible materials and height.*
- c. *If a parapet exception is used, detail completely each specific construction requirement including roof material and rating; roof-ceiling framing and one-hour fire restive construction; roof openings.*
- d. *Add the following note: "No wall openings or wall or roof mechanical vent openings are permitted within 3 ft of the PL."*

37. Walls closer than 3 ft to property lines shall be one hour rated construction, have no openings, and shall have 30 inch parapets when the building floor area exceeds 1,000 square feet on any floor. [CBC Table 602 and 704.8 and Sec 704.11]
38. Projections, including eaves, are not permitted for Group R-3 occupancies at 2 ft or closer to the property line. Projections from > 2 ft to ≤ 3 ft to the property line shall be of 1-hour fire-resistive construction. [CBC 704.2, 704.2.3]

Additionally, show by detail or notes the following requirements:

- a. Provide a section specifying eave length, distance to property line, and protection detail.
  - b. Show how roof drainage will not be directed over the property line onto adjacent property.
39. Projections, including eaves, are not permitted for Group U-1 occupancies at 3.4 ft or closer to the property line. Projections from > 3.4 ft to ≤ 5 ft to the property line shall be of 1-hour fire-resistive construction. [CBC 704.2, 704.2.3]
  40. The following are required for an attached garage: [CBC 406.1.4]
    - a. Garages beneath habitable rooms shall have no less than  $\frac{5}{8}$ " type 'x' gypsum board on the garage side. All other garages shall have a minimum  $\frac{1}{2}$ " gypsum board on the garage side.
    - b. Self-closing, tight fitting (minimum 1-3/8" thick), solid core/solid wood or 20-minute rated door at openings into dwelling.
    - c. Openings from garage into a room used for sleeping purposes are not permitted.
  41. Every sleeping room and basements shall have at least one exterior door or window opening directly into a yard or exit court for emergency egress. Indicate each opening, which satisfies this requirement on plan or schedule [CBC 1026]. Windows must provide:
    - a. Minimum 5.7 square feet of clear, openable area,
    - b. Minimum clear width of 20", minimum clear height of 24"
    - c. Have a finished sill height not more than 44" above the floor. Note this on the plan or schedule.
    - d. If finish sill height is below grade, provide minimum 36"x36" window well with a fixed ladder. Window well must extend below windowsill for drainage.
  42. All habitable rooms must be provided with natural light, 8% minimum of room floor area [CBC 1205.2], and ventilation, 4% minimum of the room floor area [CBC 1203.4.1]. Show all window sizes and types on plans or schedule. Window(s) in \_\_\_\_\_ provide inadequate area.
  43. Where openings below grade provide natural ventilation, the outside horizontal clear space measured perpendicular to the opening shall be 1½ times the depth of the opening measured from adjoining ground level to the bottom of the opening [CBC 1203.4.1.2].
  44. In lieu of natural ventilation in bathrooms containing a bath and/or shower and similar rooms, a mechanical system, complying with CMC 403.7, Table 4-1 and CBC 1203.4.2.1 and 1203.1, may be provided.
  45. Dimension on the plans the 24" clear in front of toilet and 30" minimum wide toilet compartment (15" to CL) [CPC 407.6].
  46. Show on plans: Minimum 1,024 square inch area and 30" diameter in shower compartment [CPC 411.7].
  47. Wall coverings in showers and tubs to be cement plaster, tile, or equal to 70" above drain. Enclosures must be of approved safety glazing and doors must swing out of showers. Windows in enclosure walls shall be labeled safety glazing when less than 60" above the drain. [CBC 1210.3, CPC 411.7, CBC 2406.3]
  48. Required ceiling height is 7 ft 6 in minimum and 7 ft minimum in kitchens, halls, and bathrooms [CBC 1208.2].
  49. Hard-wired smoke alarms with battery backups are required. Show all locations with a symbol on the plan. [CBC 907.2.10]
    - a. Centrally located in rooms and corridors giving direct access to each sleeping area.
    - b. On ceiling inside each sleeping room.
    - c. On each story of multistory dwellings and in basements.
    - d. In the adjacent room where the ceiling height exceeds that of the hallway by 24" or more.
    - e. In split-levels, detectors shall be installed on the upper level. If the lower level contains sleeping areas, then it too shall be equipped with a detector.

- f. When sleeping areas are on an upper level, the detector shall be located in close proximity to the stairway.
  - g. In rooms with high or sloped ceilings 24" above that of the adjacent hallway leading to sleeping areas.
  - h. Note on plans: "Detectors shall sound an alarm audible in all sleeping areas of the dwelling unit which they serve."
  - i. Detectors are required in existing dwellings when an addition, alteration, or repair is made.
50. Show size and locations of screened under-floor cross-ventilation equal to 1/150 of area [CBC 1203.3]. Specify the number of vents required on plan.
  51. An 18" by 24" (minimum) crawl hole(s) is required for access to all under-floor areas [CBC 1209.1]. Show on foundation plan.
  52. A corrosion-resistant weep screed is required below the stucco a minimum 4"/2" above grade/slab [CBC 2512.1.2].
  53. Specify type, manufacturer, and ICBO number (or submit other approved testing agency report) for elastomeric weatherproof walking surface material to be used on all exterior decks and balconies over enclosed construction. Minimum slope ¼"/ft is required for drainage. [CBC 2304.11.5, 1507.10.1]
  54. Unless roofs/decks are sloped to drain over the edge, roof/deck drains are required at each low point. Overflow drains of the same size are required 2" above each low point and connected to independent drain lines. [CBC 1503.4, CPC 1101.11.2 and 1108]
  55. Show slope(s) of roof; specify type of roof covering, underlayment, fasteners, and flashing requirements. [CBC Chapter 15]
  56. The roof slope is not adequate for the proposed roofing material [CBC Chapter 15].
  57. Attic with over 30" headroom must have access opening (22"x30" minimum). Show the opening located in a corridor, hallway, or other readily accessible location. [CBC 1209.2, CMC 904.11]
  58. Show details of cross ventilation for attic/rafter spaces equal to 1/150 of under roof. [CBC 1203.2]
  59. Chimneys shall extend 2 ft above any part of the building within 10 ft. Factory-built chimneys shall terminate 3 ft minimum above the roof opening penetration. Submit complete design/details for construction of masonry fireplace, chimney, and foundation. Show how masonry/metal chimneys are anchored to floor, ceiling, and roof levels. [CBC 2113.3, 2113.9]
  60. Provide an approved spark arrester at each chimney meeting the requirements of CBC 2113.9.1. Factory built chimneys shall terminate in a listed factory built chimney cap. No other architectural feature is permitted without manufacturer's approval.
  61. Specify make, model, and ICC number for manufactured fireplace [CBC 2111.13.1] and/or skylight(s).
  62. Provide adhered or anchored details for masonry veneer. Specify anchors, backing, footings, and support over openings. [CBC 1405]
  63. Show or note fire block requirements on plans. Fire blocking shall be installed at the locations specified in CBC Sections 717.2 through 712.7, including:
    - a. Concealed spaces of stud walls and partitions, floor and ceiling at 10 ft maximum intervals both vertically and horizontally
    - b. Interconnections between concealed vertical and horizontal spaces
    - c. Concealed space between stair stringers at top and bottom run.
    - d. At openings around vents, pipes, ducts, and chimneys (non-combustible materials);
  64. Two exits are required from a second/third story/occupied roof/basement >2,000 square feet [CBC Tables 1004.1.1 and 1015.1]. Show minimum exit separation requirement per CBC Section 1015.2.1 is met.
  65. One exit doorway 3 ft wide (minimum) by 6 ft 8 in high (minimum), with a minimum clear width of 32" shall be provided. [CBC 1008.1.1]
  66. Required exterior exit stairways are not permitted less than 10 ft to a property line. Other exterior stairways are not permitted closer than 3 ft to a property line. [CBC 704.2, Table 704.8, and 1024.3]
  67. Notes and details are required to show the following for all interior & exterior stairways/steps [CBC 1009].
    - a. Minimum 36" wide stairway and landings.

- b. Maximum 7.75" rise, minimum 10" run for private stairways.
  - c. Dimension headroom over stairs to show 6 ft 8 in minimum from nosing of tread.
  - d. Guardrail on open side of stairs over 30" above floor or adjacent grade. Guardrail must be 42" high. Openings between rails shall be less than 4" up to 34" high and 8" above 34" high.
  - e. Handrail (required for 4 or more risers) 34" to 38" above tread nosing, 1½" clearance to wall, 1¼" to 2" in cross section, with ends returned to wall or terminate at newel or safety post. Show handrail continuous for the length of the stairs.
  - f. Openings between handrail balusters shall preclude the passage of a 4<sup>3/8</sup>" sphere. The triangular openings formed by the riser, tread, and bottom rail shall preclude the passage of a 6" diameter sphere.
  - g. Handrail/guardrail connection details adequate to withstand a 200 pound concentrated load at a right angle to the top rail.
  - h. Sections and details to clearly show how all stairways are to be constructed, including framing, connections, footings, and stringer size, spacing and maximum cut. Provide design of stringers.
  - i. Enclosed usable space under stairs is to be protected by ½" gypsum board.
  - j. Note on the plans: "All stairways shall have an illumination level on tread runs of not less than 1 foot-candle (11lux)." [CBC 1205.4]
68. Winder treads must be a minimum of 10" at the narrow end and 11" minimum at 12" from the narrow side of the tread. [CBC 1009.3]
69. Spiral stairways shall not serve as the required exit for an area exceeding 250 square feet. Provide design and details for treads, including radius, arc, rise and run. [CBC 1009.8]
70. Every door shall have a level landing on each side. Thresholds at doorways shall not exceed 0.75" for sliding doors or 0.5" for other doors. The threshold may be 7.75" maximum when the door is an exterior door that is not a component of the required means of egress and the door does not swing over the landing. Exterior doors shall have a concrete landing (36"x36" min.) with a minimum slope of ¼" per foot for drainage. Detail landing and threshold drop at doors. [CBC 1008.1.4, 1008.1.6]
71. Guardrails are required at floor and roof openings, landings, balconies, and at open sides of stairs over 30" in height. Detail or note the following to show compliance: [CBC 1013, 1607.7.1]
- a. Guardrails to be 42" minimum in height.
  - b. Open guardrails shall have intermediate rails or an ornamental pattern such that a 4" sphere cannot pass through.
  - c. Guardrail connections to withstand a 200 pound concentrated load applied at a right angle to the rail. Provide structural connection detail and submit structural calculation to justify design.
72. Tempered glazing shall be provided at hazardous locations as identified in CBC 2406.3. Note and show all required locations on plans. Hazardous locations include, but are not limited to the following:
- a. Glazing in all doors
  - b. Glazing in bath and shower enclosures
  - c. Glazing within a 24" arc of a door edge
  - d. Panels over 9 square feet having the lowest edge less than 18" above the finish floor and having a top edge greater than 36" above the floor,
  - e. All glazing in guardrails
  - f. Glazing 5 ft from top or bottom of stairways with bottom edge less than 60" above walking surface
73. Show the location of the FAU, return air grille, water heater, and electrical panel on the floor plans.

### **ENERGY REQUIREMENTS:**

74. The plans must show conformance with the latest State Title 24 Energy Standards. Energy calculations must be submitted. Forms CF-1R and MF-1R, completed and signed by the document author and the owner/designer, are to appear on the blue-line prints (i.e., "sticky-backs"). Show all of the required insulation and other mandatory features on the plans either by notes or details.
75. Show how dwelling is provided with comfort heating facilities capable of maintaining 68°F at 3 ft above the floor [CBC 1204.1]
76. Provide fluorescent lighting in bathrooms and kitchen for general lighting. Locate switch and lighting fixture to show compliance. [Title 24-150k]
77. Indicate that windows are dual glazed and labeled. Window frames shall be consistent with those indicated in the energy calculations. (U-values)

78. Provide minimum stud/rafter sizing to accommodate insulation. Provide 1" minimum clearance between insulation and roof sheathing for rafter space ventilation. Where rafter space ventilation is required, provide 2x12, 2x8 and 2x6 for R-30, R-19, and R-13 respectively.

## **CONSTRUCTION/STRUCTURAL REQUIREMENTS:**

### **General Requirements**

79. List required special inspections per CBC 1704 on the first sheet of the plans.
80. Structural observation is required for this project. Note on the first sheet of the plans. Specify all stages at which structural observation is to be performed, what is to be observed, when structural observation reports will be submitted, etc..
81. Indicate grade and species of framing lumber, glu-lam beams, treated sill plates, specifications of concrete, mortar and grout, grade of masonry units, structural steel specifications and grade of reinforcing steel.
82. Cross-reference all calculations to structural elements (joists, beams, shear walls, etc.) on framing plans or provide calculation key plan sketch.
83. Details and sections are required where indicated on plan check set.
84. Delete notes and details that do not apply.
85. Reference/key/identify all sections and details as to location on plans, elevations, sections, and detail sheets.
86. Clearly show and indicate all new, existing, and removed walls and construction.
87. Ensure structural and architectural plans are consistent.
88. Submit design and details by licensed engineer or architect for retaining walls that retain more than 3 ft of earth or supporting any surcharge. Detail locations of walls, walls and footings dimensions, reinforcing steel, and back drains (and outlet), etc.

### **Foundation Requirements**

89. *Concrete and masonry foundation walls shall be designed in accordance with Chapter 19 or 21 [CBC 1805.5].*
90. Submit a soils/geology report and addendums for this project. Plans shall include all soils engineer's recommendations and notes, including required inspection of excavations, backfills, and back drains. Project soils/geologist to sign and stamp foundation plans and details. Expansion index greater than 20 requires special design considerations. Provide recommendations and design.
91. Provide the following note on plans: "All foundation excavations must be observed and approved by the Project Engineering Geologist and/or Project Geotechnical Engineer prior to placement of reinforcing steel."
92. Provide/verify by calculations that existing/proposed foundation system is adequate to support the applied vertical loads at 1,500 psf soil bearing pressure or per soils report. [CBC 1804.2, Table 1804.2]
93. Specify slab-on-grade thickness, reinforcing, and underlayment [CBC 1910.1].
94. Provide design for foundation piers. Design/calculations are required to justify pad footings supporting posts.
95. Unless a soils report specifies otherwise:
- a. Use a maximum soil bearing pressure of 1,500 psf. [CBC 1804.2, Table 1804.2]
  - b. Foundations are assumed to be on expansive soil and shall conform as follows:
    - i. Foundations shall extend 18" and 24" below grade respectively for interior and exterior footings.
    - ii. Exterior walls and interior bearing walls shall be supported on continuous foundations.
    - iii. Four continuous No. 4 bars. Two bars 4" from top and two bars 4" from bottom of footings.

- iv. Floor slabs 4" thick over 2 layers of 2" fill sand with moisture barrier membrane between and reinforced with No. 4 bars at 16" o/c each way positioned at center of slab thickness.
  - v. Note on plans: "Saturate the soil to a depth of 18" prior to casting of concrete."
96. Show foundation sections 12"/15"/18" wide, 6" thick and 12" deep and indicate below undisturbed ground surface (or engineered compacted fill and submit soils report). [CBC Table 1805.4.2]
  97. Buildings/foundations must be set-back from adjacent slopes. Show sections to verify.
  98. Show the locations of all hold down hardware on foundation plan per structural calculations. Note on plans: "All hold down hardware is to be secured in place prior to foundation inspection."
  99. Show foundation anchor bolt size and spacing on foundation plan. Note or show the following on plans:
    - a. Minimum of ½" diameter A.B. at SDC D or 5/8" at SDC E or F embedded 7" into footing and spaced 6 ft o.c. (maximum).
    - b. Minimum two bolts per piece of sill plate and one located within 12" and not less than 7 bolt diameter or 4-3/8" of each end of each sill plate.
    - c. Sill bolt diameter and spacing for three-story raised floor buildings shall be specifically designed.
    - d. 3" x 3" x 0.229" plate washer shall be used on each anchor bolt.
  100. Specify size, spacing, I.C.B.O. number and manufacturer of expansion, wedge, or adhesive anchors to be used on existing footing. Provide justification for use including noting edge distance and embedment depth on plans.
  101. Minimum clearance of untreated wood members above earth is 12" for girders and 18" for joists. Show and dimension. [CBC 2304.11.2.1]
  102. Exterior foundations supporting wood shall be min. 8" above from the exposed earth or 6" above from at least 18" wide asphalt or concrete slab. [CBC 2304.11.2.2]
  103. Show/detail on plan for posts or columns that are exposed to weather shall be at least 1" above the floor/slab or 6" above exposed earth. [CBC 2304.11.2.7].
  104. Show/detail on plan for posts or columns in enclosed crawl spaces or unexcavated area shall be at least 8" above from the exposed ground. [CBC 2304.11.2.7].
  105. Provide detail for stepped footings when slope of the footing exceeds one in ten [CBC 1805.1].

### **Framing Requirements (Vertical Loads)**

106. Provide design for combined loading (DL+LL+WIND) on exterior wall studs and posts spanning over 10 ft where indicated on plan. Wall studs are to run continuous without intermediate plate (i.e., full height, balloon framing) unless calculations are provided for an alternate design. Note the use of full length studs (balloon frame) on exterior walls of rooms with vaulted ceiling. [CBC Table 2308.9.1]
107. Submit design/details for trussed rafters, or add the following "Deferred Submittal" note on the first sheet of the plans: "Truss calculations and layout plan will be reviewed by the Arch/Engr of record and submitted to the Building Department prior to installation."
108. For roof and floor diaphragms specify structural panel thickness, grade, span rating or panel index, nailing schedule, and panel layout [CBC Table 2306.3.1].
109. Specify the size, spacing, and direction of roof rafters, ceiling joists, and/or floor joists.
110. Beams, girders, doubled joists, walls, or other bearing partitions are required under parallel bearing partitions. [CBC 2308.8.4]
111. Solid blocking or cross-bridging of floor joists is required in accordance with CBC Section 2308.8.2. Show compliance on plans.
112. Show size(s) of all headers over openings [CBC 2308.9.5 and Table 2308.9.5].
113. Detail lateral support for the top of interior non-bearing walls when manufactured trusses are used [CBC 1607.13].

- 114. A ridge board/valley/hip minimum 2" greater than joists in nominal depth is required. Design as a load-bearing member if roof slope is less than 3" in 12". [CBC 2308.10 and 2308.10.4]
- 115. Roof purlins may be used to reduce the span of rafters within the allowable limits. Purlins to be a minimum same size as rafters, the maximum span for 2x4/2x6 is 4 ft/6 ft, with braced struts not over 8 ft in unbraced length and not flatter than 45 degrees from horizontal to a bearing wall or partition. [CBC 2308.10.5]
- 116. Provide rafter ties, design and support ridge/hips/valleys as beams, or provide other design for roof support when ceiling joists are not parallel to roof rafters.
- 117. Positive connections shall be used for all post-beam connections to ensure against uplift and lateral displacements. Show and detail.
- 118. Studs supporting two floors and a roof must be framed of 3x4 or 2x6 members [CBC Table 2308.9.1].

#### **Framing Requirements (Lateral Loads)**

- 119. *Design of structures with rigid diaphragms shall conform to Section 12.3.2 and 12.8.4 of ASCE 7 [CBC 2305.2.5].*
- 120. *Wood structural panel diaphragms shall not be considered as transmitting lateral forces by rotation [CBC 2305.2.5].*
- 121. *Hold-down connectors shall be designed to resist shear wall overturning moments using approved cyclic load values or 75 percent of the allowable earthquake load values that do not consider cyclic loading of the product [CBC 2305.3.7.1].*
- 122. *Note on the plans: Hold-downs shall be re-tightened just prior to covering the wall framing [CBC 2305.3.7.1].*
- 123. *Shear walls sheathed with lath, plaster, or gypsum board shall not be used below the top level in a multi-level building [CBC 2306.4.5].*
- 124. *Braced wall lines shall be supported by continuous foundations [CBC 2308.3.4].*
- 125. *Braced wall panel construction types shall not be mixed within a braced wall line [CBC 2308.12.4].*
- 126. Bracing of the exterior walls and main cross-stud partitions shall conform to CBC 2308.12, conventional light-frame construction in seismic design category D or E, or submit an engineered lateral design and calculations.
- 127. Light-frame construction of unusual shape, size, split-level, or more than one story shall be designed to resist lateral forces. Submit lateral design calculations and detail all required structural elements on the plans. [CBC 2308.1.1]
- 128. The lateral design is to be based on the most restrictive of either the wind or seismic forces per CBC 1609 and 1613, respectively.
- 129. Wind analysis that does not comply with the conditions of ASCE 7-05, Section 6.4, Simplified Procedure, shall comply with the Analytical Procedure [ASCE 7 6.5].
- 130. Seismic analysis that does not comply with the conditions of ASCE 7 12.14, Simplified Base Shear Design, shall comply with the Equivalent Lateral Force Procedure per ASCE 7 12.8.
- 131. When assuming flexible horizontal diaphragms for lateral force distribution, the base shear and lateral design shall meet the requirements of CBC 1613.6 and ASCE 7 12.3.1.
- 132. Show location of project on seismic maps to identify seismic design coefficients to be used. Alternatively, you may choose to use <http://earthquake.usgs.gov/research/hazmaps/design> and print out the design values and submit a copy with your resubmittal.
- 133. Provide overturning calculations for all shear wall panels. Detail how all overturning loads are carried down to foundation through intermediate elements. [CBC 2305.3.7]
- 134. Provide grade beam calculations and details where proposed or existing foundations resist overturning moments or as indicated. Justify use of existing foundation to resist overturning forces.

135. Provide details of the construction of wood shear walls and diaphragms:
  - a. Collector members (drag struts) shall be designed and detailed to transmit tension and compression forces into lateral resisting elements.
  - b. Perimeter members at floor/roof openings shall be detailed to distribute the shearing stresses.
  - c. Diaphragm chord and tie members shall be in the plane of the diaphragm. Detail nailing and connection of diaphragm to chord and ties.
  - d. All parts of structure shall be tied and interconnected.
  - e. Note: "Plywood shall have framing or blocking at all edges of all sheets in shear walls."
  - f. Note on plans: "All diaphragm and shear wall nailing shall utilize common nails with full heads."
  - g. Limit braced walls to the following height to width ratios: 2:1 wood structural panels, 1½:1 gypsum wallboard and portland cement plaster (stucco) [CBC 2305.3.4 and Table 2305.3.4].
  - h. Double sided panels and panels with allowable shear exceeding 350 plf require 3" minimum framing members and staggered nailing for all members receiving edge nailing. Detail anchor bolts and sole plate nailing. [CBC 2305.3.11 and Table 2306.4.1]
  - i. Specify on plans, the required nail penetration depth of sole plate nailing along lines of shear walls. Where 3" nominal sole plates are required, provide calculation to justify nailing. Lag screws may be required.
136. Specify on the plans all shear walls, sheathing materials (stucco, gyp. bd., and plywood) including thickness and grade, and spacing of fasteners. Reference walls with key to nailing schedule [CBC 106.4.3]. Show length of shear walls on the plans.
137. Use details and sections to show how lateral shear is transferred from diaphragms through intermediate elements to shear walls and to the foundation. All blocking, nailing, and fasteners at intermediate elements shall be detailed to have a minimum capacity of the shear wall below. Note on plans: "Shear walls shall run continuously from foundation to roof/floor framing."
138. Detail how interior shear walls are connected (through the floor or ceiling/attic space) to the floor/roof diaphragm above.
139. Show the location of all upper-floor hold down hardware on the appropriate plan(s).

**RETURN THIS SHEET WITH ALL ORIGINAL AND REVISED PLANS AND SPECIFICATIONS WHEN CORRECTIONS HAVE BEEN MADE**

**Please resubmit corrections to:**

**City of Beverly Hills - Building & Safety Division  
455 North Rexford Drive, Suite 100  
Beverly Hills, CA 90210**