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CITY of NAPA

ARCHITECTURAL COMMENTS:

1. Show the location of address numbers on building elevations which are clearly visible from the adjacent access street or road. Sheet ___, UBC 502

2. Amend plans to specify _____ exterior wall is one-hour rated with no openings as it is located less than 3 feet from property line. Further, provide details for this one-hour wall with a 30 inch high one-hour rated parapet above the roof, being sure to include a reference to the "listed" one-hour assemblies. Sheet/Detail ___, UBC 503.2 and Table 5-A, 709.4

3. Amend plans/detail ____/section____ to specify 1-hour materials on the exterior side of the carport _____ exterior wall, which is located less than 3 ft to a real or assumed property line. Sheet/Detail ___, UBC 503.2 and Table 5-A

4. Plan checker has determined that the proposed building may be three stories in height. As several restrictive code requirements will apply (e.g., cast iron drain/waste/vent material; two required exits from third story, maintained a minimum distance apart; etc.) if this building is defined as three stories in height: please amend site plan and elevations (and possibly floor plans) to specify roof, floor, natural and finish grade elevations completely around the building to clearly show the information necessary to make this determination (be sure to review UBC 220 to show appropriate elevations). Sheet ___, UBC 220 and Table 5-B

5. Your building appears to exceed the allowable height limit of Table 5-B for Type ___ construction: revise building height to conform based on type of construction or clarify on the plans that the maximum allowed height is not exceeded. Sheet ___

6. Specify 5/8" Type "x" gyp board from foundation to roof sheathing at separation wall between garage and residence. Sheet ___, UBC 302.4 Ex. 3

7. Specify 5/8" Type "x" gyp board on ceilings and supporting members (e.g., beams, columns and bearing walls) where living areas are above. Sheet ___; UBC 302.2, 302.4 Ex. 3

8. The plans show the garage "fire wall separation" extending to the garage ceiling; and the ceiling is shown protected with a single layer of 5/8" type "X" gyp. Because the ceiling is used as a part of the garage-to-dwelling fire separation, amend plans to: (1) change spacing of rafters/ceiling joists/trusses to maximum 16" o.c. OR specify two layers 5/8" type "X" gyp applied to the shown 24" o.c. spacing of rafters/ceiling joists/trusses per UBC TABLE 7-C, Item #21; and (2) specify 5/8" Type "x" gypboard on all supporting members (e.g., beams, columns and bearing walls) under the "fire protected" garage ceiling. Sheet ___; UBC 302.2, 302.4 Ex. 3

9. Amend plans to specify that the 5/8" Type "X" gyp board on the underside of the second floor over garage (which separates garage from living area above) is applied to joists or floor trusses spaced at a maximum 16" o.c.; or reference the one-hour listing on the plans for the assembly currently shown which has wood joists/trusses spaced at 24" o.c. Sheet/Detail ___; UBC 302.4 Ex. 3, 703.2

10. Provide protection for the column(s) in the garage (the fire-resistant sheathing protecting them) which may be exposed to damage from moving vehicles in an approved manner (26 GA. sheet metal up to 3 feet). Sheet/Detail ___, UBC 704.2.5

11. Specify a 1-3/8 inch minimum solid core or 20-minute rated door with self-closure at separation wall between garage and residence. Sheet ___, UBC 302.4 Ex. 3

12. Specify that all air ducts penetrating the separation wall or ceiling between the garage and living area shall be a minimum of 26 GA. Sheet 5, UBC 302.4 Ex. 3

13. Revise eave overhang and/or other projections beyond the exterior wall to extend no further than (a) ___ inches beyond the exterior wall (i.e., a point 1/3 the distance from an assumed vertical plane located where fire-resistive protection of openings is first required due to location on property); nor (b) any closer than 24 inches to the property line. Sheet/Detail ___, UBC 503.2.1

14. Amend plans to reduce the depth of projection of eaves at side and rear walls so that no portion of eave is closer than 30 inches to the property line. Sheet ___, UBC 1204

15. Amend the plans for shower and tub/shower walls to specify a smooth, hard, nonabsorbent surface (e.g., ceramic tile) over a moisture resistant underlayment (e.g., w.r. gyp) to a height of 70 inches above the drain inlet. Sheet ___, UBC 807.1.3

16. Specify a minimum clear space of 30 inches wide at the water closet, extending at least 24 inches in front. Sheet ___, UBC 2904

17. Revise the floor plan to eliminate the garage opening directly into a room used for sleeping purposes. Sheet/Detail ___, UBC 312.4

18. Amend the windows in _____ to provide the minimum required means of emergency escape from basement and bedrooms _____. Specify that the escape opening has a minimum net clear opening of 5.7 square feet; minimum net clear opening height of 24 inches; and minimum net clear opening width of 20 inches. Further, specify such windows have sill heights not more than 44 inches above the floor and opens directly to street, public alley, yard or exit county. Sheet ___, UBC 310.4

19. Amend the plans to specify the type and size of natural light source (window, skylight) with an area of not less than 1/10 of the floor area with a minimum of 10 square feet in the following rooms: _____. Sheet ___, UBC 1203.2

20. Amend the plans to specify the type and open able size of natural ventilation by means of an opening (window, open able skylight) with an area of not less than 1/20 of the floor area with a minimum of 5 square feet in the following rooms: _____. Sheet ___, UBC 1203.3

21. Specify a mechanical ventilation system capable of providing five air changes per hour in the following rooms: bathrooms, water closet compartments, and similar rooms_____. Sheet ___, UBC 1203.3

22. Amend the plans to specify a minimum ceiling height of 7 foot 6 inches in the following rooms: _____. Sheet ___, UBC 310.6.1

23. Specify new, permanently wired smoke detectors with battery backups. Sheet ___, UBC 310.9.1.4

24. Amend the floor plans to show additional smoke detectors: (1) immediately outside each bedroom; (2) directly above top of stairs; (3) at least one at every floor. Sheet ___, UBC 310.9.1.4

25. Specify that shaft enclosures for openings extending vertically through floors and that such enclosures shall have fire-resistive construction as set forth in Table No. 6-A. Sheet/Detail ___, UBC 711

26. Specify a method of providing a weather-resistive barrier at the exterior walls. Sheet/Detail ___, UBC 1402.1

27. Specify the fire rating for members carrying masonry or concrete walls in buildings over one story in height. A minimum of one-hour fire protection, or the fire-resistive requirement of the wall (whichever is greater) shall be provided. Sheet/Detail ___, UBC 704.4

28. Specify that the parapet walls are not less than 30 inches in height. Sheet/Detail ___, UBC 709.4

29. Revise the eave overhangs and similar architectural projections to comply with UBC 705. Sheet/Detail ___

30. Provide guardrails at floor (walking surface) locations which are more than 30 inches above grade. Specify a minimum height of 36 inches with intermediate rails spaced such that a sphere 4 inches in diameter cannot pass through. Sheet/Detail ___, UBC 509

31. Specify pressure treatment for wood in contact with the earth or embedded in concrete or masonry. Sheet/Detail ___, UBC 2306.2

32. Specify a 6 inch minimum earth-to-wood separation. Sheet/Detail ___, UBC 2306.8

33. Specify an 18 inch minimum clearance from the earth to the bottoms of the floor joists. Sheet/Detail ___, UBC 2306.3

34. Specify a 12 inch minimum clearance from the earth to the bottoms of the girders. Sheet/Detail ___, UBC 2306.3

35. Locate an 18 inch x 24 inch crawl space access on the floor and/or foundation plan. Sheet/Detail ___, UBC 2306.3

36. Specify a P.T.D.F. or Foundation Redwood sill at foundation. Sheet/Detail ___, UBC 2306.4

37. Amend the plans to specify that concrete pedestals within the crawlspace project a minimum of 6 inches above exposed earth. Revise the bottom of the wood post to be at lease 1 inch above concrete or other paving where exposed to water splash. Sheet/Detail ___, UBC 2306.5

38. Amend the plans to specify that exterior concrete piers project a minimum of 8 inches above exposed earth. Sheet/Detail ___, UBC 2306.5

39. Specify the types, sizes and locations for crawl space cross-ventilation on the foundation plan and/or elevations. Sheet/Detail ___, UBC 2306.7

40. Amend the foundation plan to clarify how cross ventilation will be provided to under floor areas partially or entirely surrounded by interior grade beams (which tend to block ventilation). Sheet ___, UBC 2306.7

41. Amend the floor plans to specify draft stops in the wood frame floor construction containing concealed space where there is usable space above and below the concealed space. Such draft stops should be installed so that the area of the concealed space does not exceed 1,000 square feet. Draft stopping should divide the concealed space into approximately equal areas. Sheet/Detail ___, UBC 708.3.1.1.1

42. Specify draft stop construction on the plans. Draft stopping materials should not be less than 1/2-inch gypsum board, 3/8-inch plywood, 3/8-inch Type 2-M particleboard or other materials approved by the building department. Sheet/Detail ___, UBC 708.3.1.3

43. Specify the method of attachment for the masonry veneer (anchored or adhered). If anchored, specify 22 ga galvanized sheet metal anchor ties (with a lip or hook on extended leg engaging no. 9 ga continuous wire joint reinforcement) spaced @ 24" o.c. maximum horizontal and 16" o.c. maximum vertical – although spacing should result in one anchor per maximum 2 sq ft (e.g., anchors @ 16" o.c. vertical and horizontal). If adhered, specify an approved adhesive material and method. Sheet/Detail ___, UBC 1403.5 (adhered) 1403.6 (anchored)

44. Specify that the roof covering is Class A/B/C. Sheet ___, UBC 1504, Table No. 15-A.

45. Specify the location of a 22 inch x 30 inch minimum attic access. Sheet/Detail ___, UBC 1505.1

46. Specify the types, sizes, and locations of ventilation for the attic and enclosed rafter spaces. Sheet/Detail ___, UBC 1505.3

47. *[Where determined necessary by the Building Official]* Revise rafter sizes at enclosed rafter spaces to a minimum of 2 x __ to provide a minimum of 1 inch of air space plus thickness of insulation for ventilation (to maintain the free flow of air) at each rafter space. Sheet/Detail ___, UBC 1505.3

48. *[Where determined necessary by the Building Official]* Revise rafter sizes at enclosed rafter spaces to a minimum of 2 x __ to provide 1 inch of air space plus thickness of insulation for ventilation of each rafter space. Further, show method of providing continuous ventilation (i.e. vent holes at bottom eave and at top - could place holes in ridge board; could add holes in rafters so that ventilation occurs to adjacent cathedral rafter space but plans should carefully show how compliance with notching limitations of UBC 2316 is assured). Sheet/Detail ___, UBC 1505.3

49. Specify a minimum roof slope of ¼ inch per foot, i.e. 1 unit vertical in 48 units horizontal (2% slope). Sheet/Detail ___, UBC 1506.1

50. As the occupant load at second story exceeds 10, provide a second exit appropriately distant (i.e., 1/2 main diagonal dimension) from the other. Sheet ___, UBC 1003.1 & 1004.2.4

51. Because this building is determined to be three stories in height, amend the plans to provide a second stairway exit from the third floor (independent from the other exit until exiting the building), appropriately distant from the other. Sheet ___, UBC 1003.1 & 1004.2.4

52. Because the occupancy load it serves is at least ten (10) amend plans to specify minimum 3-foot wide door as required exit at _____. Sheet ___, UBC 1003.3.1.3

53. Revise plans to indicate that the floor or landing on each side of doors is not more than 1 inch lower than the top of the threshold of the doorway. Sheet/Detail ___, UBC 1003.3.1.6

54. Amend the floor plans to show a minimum 36 inch deep landing outside all exterior doors (not more than 8 inches lower than threshold for in-swinging doors, and not more than 1 inch lower than threshold for out-swinging doors). Sheet/Detail ___, UBC 1003.3.1.7

55. Amend plans to specify stair landings are at least _____ inches wide (i.e., not less than the width of the stairway or the width of the door swing out over it, whichever is greater). Doors in the fully open position should not reduce this required dimension by more than 7 inches. Sheet ___, UBC 1003.3.1.7

56. Specify minimum 36-inch (44-inch) deep landing in direction of travel. Sheet ___, UBC 1003.3.1.7

57. Specify minimum 36-inch (44-inch) wide corridor. Sheet ___, UBC 1004.3.4.2

58. Revise location of exterior exit balcony so it is not located in areas where openings are not permitted or where openings are required to be protected due to location on property. Sheet ___, UBC 1006.2.1

59. Specify minimum 36-inch (44-inch) wide stairway. Sheet ___, UBC 1003.3.3.2

60. Specify a maximum 3.5-inch handrail projection into the required stair width. Note that stringers and other projections such as trim are limited to 1-1/2 inches on each side. Sheet/Detail ___, UBC 1003.3.3.2

61. Specify the rise and run of the stairway on the plan (8-inch maximum rise and 9-inch minimum run may be used for stairways serving an occupant load of less than 10). Sheet ___, UBC 1003.3.3.3

62. Specify the minimum tread dimensions for "alternative stairways". Sheet ___, UBC 1003.3.3.8 (circular stairways UBC 1003.3.3.8.1, winding stairways UBC 1003.3.3.8.2, spiral stairways UBC 1003.3.3.8.3)

63. Revise stair and landing arrangement to provide maximum 12 feet vertical distance between landings. Sheet ___, UBC 1003.3.3.5

64. Specify handrail(s) at stairways with four or more risers. Sheet/Detail ___, UBC 1003.3.3.6 Ex. 3

65. Specify that handrails have a 1-1/4 - 2 inch grip able cross section, no sharp corners, height of 34 inches to 38 inches above nosing and extend continuously from top to bottom riser, and terminate at newel posts or return to walls. Sheet/Detail ___, UBC 1003.3.3.6

66. Revise location of exterior stairs so that it does not project into yards where wall openings are not permitted or protection of openings is required [i.e., for R-1's, if closer than 5 ft to PL; for R-3's, if closer than 3 ft to PL]. Sheet ___, UBC 1006.2.1

67. Specify 5/8-inch Type "x" gypboard at the walls and soffit of the enclosed usable space under the stairs. Sheet ___, UBC 1003.3.3.9

68. Specify 6-foot 8-inch minimum headroom at stairway. Sheet/Detail ___, UBC 1003.3.3.4

69. Specify a minimum 1/4 inch per ft slope for weather-exposed landings, balconies, and roof decks which are sealed underneath. Sheet/Detail ___, UBC 1402.3

70. Specify glazing material for skylights. Note screen (or other) protection as required. Sheet/Detail ___, UBC 2409

71. Provide details of construction for the masonry fireplace and chimney. Specify the anchorage and show cleanout location. Sheet/Detail ___, UBC 3102.3 & 3102.4

72. Specify the make, model number, and I.C.B.O. evaluation report number (or other approved listing) of the metal fireplace on the plans. Sheet/Detail ___, UBC 3102.5.1

73. Show the dimensions for the hearth extension at the side and front of the firebox opening. Sheet/Detail ___, UBC 3102.7.12

74. Amend the plans to specify that the chimney terminates a minimum of two feet above any part of the building or roof within 10 feet. Sheet/Detail ___, UBC Table 31-B

75. Specify a minimum 2 inches clearance from the masonry fireplace or chimney walls and adjacent combustible materials. Sheet/Detail ___, UBC 3102.7.8

76. Specify that combustible material should not be placed within 6 inches of the fireplace opening. Sheet/Detail ___, UBC 3102.7.8

77. Specify that combustible materials within 12 inches of the fireplace opening should not project more than 1/8 inches for each 1 inch of clearance from the fireplace opening. Sheet/Detail ___, UBC 3102.7.8

78. Specify a non-combustible hearth slab with non-combustible supports in front of the fireplace. Sheet/Detail ___, UBC 3102.7.11

79. Amend the plans to specify the "listing" (e.g., ICBO Evaluation Report #) for the proposed skylight(s). Sheet ___, UBC 2603.1.2

80. Specify that the exterior stucco: (1) is 3-coat, 7/8 inch minimum thick; (2) has two layers of Grade D paper under stucco where occurs over plywood sheathing; and (3) has 26 ga. galvanized weep screed at foundation plate line at least 4" above grade (or 2 inches above concrete or paving) UBC 2506,2508 **OR** provide an I.C.B.O. evaluation report number for the proposed stucco system, and reference the report directly onto the plans. Sheet/Detail ___, UBC 104.2.8

81. Provide minimum 26 ga. galvanized weep screed at foundation plate line at least 4" above grade (or 2 inches above concrete or paving). Sheet/Detail ___, UBC 2506.5

82. Note that water-resistant gypsum backing board should not be used in the following locations (UBC 2512):

    A. over a vapor retarded;
    B. in areas subject to continuous high humidity;
    C. on ceilings.

83. Specify that doors and panels of shower and bathtub enclosures and adjacent wall openings within 60 inches above a standing surface and drain inlet shall be fully tempered, laminated safety glass or approved plastic. Sheet/Detail ___, UBC 2406.3 & 2406.4

84. Specify safety (i.e. tempered) glazing at hazardous locations - such as windows adjacent to: (1) tubs, showers, and tub/showers; (2) adjacent to and within 24 inches of either edge of door _____. Identify these locations on the plans and specify safety glazing. Sheet/Detail ___, UBC 2406.4

85. Specify safety glazing in structural balustrade panels in glass railings. Sheet/Detail ___, UBC 2406.6

86. Submit design calculations for one-story detached accessory buildings used as tool and storage sheds and similar uses if the floor area exceeds 120 sq. ft.. Sheet ___, UBC 106.2

87. Amend plans to specify that protection of joints and penetrations in fire-resistive assemblies shall not be concealed from view until inspected and approved. UBC 108.5.1

88. Plans for Group R-1 shall indicate how required structural and fire-resistive integrity will be maintained where penetrations will be made. UBC 106.3.3.

89. An emergency window or door may open into an atrium complying with UBC 402 provided it opens onto an exit-access balcony and the dwelling unit has an exit or exit-access doorway that does not open into the atrium. UBC 310.4 Ex.

MECHANICAL, PLUMBING AND ELECTRICAL COMMENTS:

90. Amend the plans to specify that installation instructions for all listed equipment shall be provided to the field inspector at time of inspection. UMC 303.1

91. For all equipment on roofs with a slope more than 4 in 12, amend plans to provide a working platform to service the equipment. If the platform has a drop of more than 30 inches, or is within 10 feet of the edge of the roof, the specify a guardrail 42 inches high that will not allow a 21 inch sphere to pass through.

Note that a guardrail is also required on roofs with a slope of 4 in 12 or less and within 10 feet of the edge of a drop of more than 30 inches. Sheet ___, UMC SECTION 307.5

92. Amend the plans to specify that the termination of all environmental air ducts shall be a minimum of 3 feet from property lines or any openings into the building (i.e., dryers, bath and utility fans, etc., must be 3 feet away from doors, windows, opening skylights or attic vents). Sheet ___, UMC SECTION 504.6

93. Amend plans for decorative gas appliance shown in solid fuel fireplace to specify it shall be installed according to its listing AND to have the top damper permanently blocked open. Sheet ___, UMC SECTION 901.2

94. Combustion Air: When all air is taken from the outside and the appliance has a minimum clearance of 1 inch on the sides and back, and 6 inches clearance in front, one combustion air opening will be permitted and must be located within the upper 12 inches of the enclosure. Sized at minimum or 1 square inch per 3000 BTU but no smaller than the flow area. *Note: This 1997 code change does not permit reduced clearances in new installations where still required to have 3 inches clearance on all sides, back, and top, with a total width of the space at least 12 inches wider than the furnace and 6 inches in front at the firebox side. Sheet ___,* UMC SECTION 304.7, 702.1, T-7A ITEM 5 COLUMN II

95. Amend plans for factory-made flexible air ducts to specify they are installed according to their installation instructions and standards set by the code and to use UL 181B tape. Sheet ___, UMC SECTION 601.2 (also reflected under 1998 Energy Code changes)

96. Specify the size of water closets to be a maximum of 1.6 gallons per flush. Sheet/Detail ___, California Health & Safety Code

97. Because this building is classified as three stories in height, specify cast iron (or other approved non-plastic) materials for drain, waste and vents (DWV) -- no plastic pipe is allowed. Sheet/Detail ___, UPC 903.0

98. Specify that the shower compartments, regardless of shape, have a minimum interior floor area of 1,024 square inches, and are also capable of encompassing a 30-inch circle. Sheet ___, UPC 412.7

99. Specify that water heaters (generating a glow, spark, or flame capable of igniting flammable vapors) shall be installed 18" above the garage floor. Sheet/Detail ___, UPC 510.1

100. Specify the seismic anchorage of the water heater to include anchors or straps at points within the upper and lower one-third of its vertical dimension, the lower anchor/strap located to maintain a minimum distance of 4 inches above the controls. Sheet ___, UPC 510.5

101. Specify the size, method, and source of combustion air for gas burning appliances. Sheet ___, UMC 703 and 707

102. Specify a method of protection for the FAU and water heater in the garage from vehicle impact (e.g., bollard). Sheet ___, UMC 308.1 and UPC 510.3

103. Specify that heating and cooling equipment (which generate a glow, flame, or spark) located in garage shall be installed such that the source of ignition is at least 18" above the floor. Sheet/Detail ___, UMC 303.1.3

104. Provide the sizes and net opening areas for the high and low combustion air openings at the FAU enclosure. Sheet ___, UMC 703 and 707

105. Specify a smooth metal duct for the dryer exhaust which extends outside with a back draft damper. Sheet ___, UMC 504 and 908

106. Specify non-removable backflow prevention devices on all exterior hose bibs. Sheet ___, UPC 603

107. Specify a pressure relief valve with a drain to outside at the water heater. Sheet ___, UPC 608

108. Provide a working space in front of the furnace which is a minimum of 30 inches deep. Sheet ___, UMC 307

109. Provide a minimum of 3 inches of working space along each side (with a total of at least 12 on both sides combined), the back and top of the furnace. Sheet ___, UMC 304.7

110. Specify a 30 inch x 30 inch minimum access to the furnace in the attic. Further, specify a solid, 24 inch wide platform path from the access opening to the FAU and specify a receptacle at the FAU and a light switched at the access opening. Sheet ___, UMC 307.3

111. Specify a 30 inch x 30 inch minimum level service space in front of the furnace in the crawl space. Where the depth of the passageway exceeds 12 inches below adjoining grade, the passageway walls shall be lined with concrete or masonry extending 4 inches above the adjoining grade and have a sufficient lateral bearing capacity to resist collapse. Sheet ___, UMC 307.4

112. An LPG appliance shall not be installed in an above-grade under floor space unless such location is provided with a minimum 3 inch drain for removal of unburned gas. An LPG appliance shall not be installed in a pit or basement. UMC Section 304.6

113. Specify a permanent outlet and light fixture at the furnace in the attic. Locate the switch at the access opening. Sheet ___, UMC 306.4

114. Specify 24-inch minimum wide door to water heater compartment. Sheet ___, UPC 511

115. Amend the plans to specify that shower and tub-shower combinations shall be provided with individual control valves of the pressure balance or the thermostatic mixing valve type. Sheet ___, UPC SECTION 420.0

116. Amend the plans to specify that underground ferrous gas pipe must be electrically isolated from the rest of the gas system with a listed or approved isolation fitting installed a minimum of 6 inches above grade. Sheet ___, UPC SECTION 1211.6

117. Amend the plans to specify natural gas pipe installed under the slab (usually for an island cook top) shall be installed in a conduit not less than schedule 40 pipe with the interior diameter of the conduit not less than ½ inch larger than the outside diameter of gas piping. The conduit shall extend at least 12 inches beyond any area where the conduit is required to be installed or to the outside wall. The outer ends shall not be sealed. Where the conduit terminates within the building, the end shall be sealed. Sheet ___, UPC SECTION 1211.3

118. Amend the plans to specify that conductor wires with an insulated neutral and a four-prong outlet are required for the dryers and cooking units. Sheet ___, NEC SECTION 250-60

119. Amend the plans to specify receptacles at the front and rear of the home, and that they must be within 6 feet 6 inches of grade (and waterproof and GFCI protected). Sheet ___, NEC SECTION 210-52

120. Per NEC210-8, amend the plans to specify GFCI protection at:

    A. All outdoor receptacles.
    B. All receptacles serving kitchen counter tops.

C. Receptacles within 6 feet of a wet bar sink.

D. Garages

E. Unfinished basement, crawl spaces. Sheet ___, NEC 210-8

121. Amend the plans to specify additional receptacle outlets in the following locations:

A. 12 feet o.c. max, and within 6 feet of the end of walls. Sheet _, NEC 210-52(a)

B. Any wall space 2 or more feet wide. Sheet _, NEC 210-52(a)

C. At each kitchen and dining area counter space wider than 12 inches. Locate so that no point along the counter wall is over 24" from a receptacle. Sheet _, NEC 210-52(c)

D. In any hallway 10 feet or more in length. Sheet _, NEC 210-52(h)

NOTE that floor outlets may be used as required wall outlets when located they are within 18 inches of the wall in accordance with NEC SECTION 210-52(a).

122. Amend the plans to specify that the two small appliance branch circuits for the kitchen are limited to supplying wall and counter space outlets (note they cannot serve the dining room, outside plugs, range hood disposals, dishwashers or microwaves — only the required countertop/wall outlets including the refrigerator. Sheet ___, NEC SECTION 210-52(b)

123. Amend the plans to specify at least one receptacle outlet at the kitchen peninsula or island. Sheet ___, NEC SECTION 210-52

124. Amend the plans to specify a dedicated 20 amp circuit to serve the required bathroom outlets. This circuit cannot supply any other receptacles, lights, fans, etc.. Sheet ___, NEC SECTION 210-52

125. [Note that the required room light or switched receptacle may now be controlled by an occupancy sensor when it is in addition to the customary switch or located where the switch would normally be and has a manual override. Sheet ___, NEC SECTION 210-70(a) EXCEPTION 3]

126. Amend the plans to prohibit pendant lights, track lights or fans less than 8 feet above the top of a tub or shower water dam or within 3 feet of the edge of the tub or shower. Sheet ___, NEC SECTION 410-4(d)

127. Amend the plans to eliminate plugs within a bathtub or shower space even if enclosed in a weatherproof enclosure. Sheet ___, NEC SECTION 410-57(c)

128. Locate an electrical service panel on the plans and show the amperage size. Sheet/Detail ___

129. Locate electrical sub panel(s) on floor plan(s). Panels shall not be located in the vicinity of easily ignitable material(s) such as clothes closets. Sheet ___, NEC 240-24d

130. Specify the light fixtures in tub or shower enclosures with the label "suitable for damp locations." Sheet _, NEC 410-4(a)

T-24 ENERGY COMPLIANCE COMMENTS:

131. Provide complete Title 24 energy calculations (which were not included with initial submittal and, thus, not yet reviewed) and be sure to permanently affix fully filled-out and signed forms CF-1R and MF-1R (mandatory features checklist) directly on the plans.

132. Permanently affix fully completed and signed energy compliance forms CF-1R and MF-1R to the plans.

133. Specify the required insulation on the plans in building sections, wall sections, details, etc.). Sheet ___

134. There appears to be a discrepancy between the glazing shown on the plans and that represented in the energy calculations. Specify glazing types and areas on plans. As submitted, plans do not allow the plan checker to double-check the area of fenestrations . Sheet ___

135. Specify types and locations of various required thermal masses on the floor plans. Sheet ___

136. Amend the plans to specify fluorescent lighting in the kitchen and in bathrooms per Title 24 energy requirements, mandatory measures. Sheet ___, California Energy Code Section 150(k) 1 and 2

137. Amend the plans with regard to lighting as follows:

    A. General lighting in kitchens must provide sufficient light for basic tasks and provide a uniform pattern of illumination. A light in the corner of the kitchen, whether efficient or not, will no longer meet the requirement. The control for the general kitchen lighting must be on a readily accessible switch at one of the entrances to the kitchen.

    B. Bathroom lighting requirements require a high-efficiency light source in each room with a shower or bathtub. *A high-efficiency fixture in the toilet room alone no longer satisfies this requirement*.

    NOTE: An alternative to the bathroom lighting is to install both of the following: (1) a high-efficiency lamp in a utility room, laundry room or garage *and* (b) all lights permanently mounted to the exterior of the residence for outdoor lighting must have either high-efficiency lamps or equipped with a motion sensor.

138. Amend the energy compliance submittal to use a different compliance approach. Note that the point system is no longer a valid compliance approach. Use either the performance computer or prescriptive methods. ENERGY STANDARDS, INTRODUCTION

139. Amend the plans to specify an R-12 water heater blanket for all water heaters with an energy factor below .58. No compliance credit is given for water heater insulation. Standard water heater compliance is achieved with a non-recirculating, storage gas water heater with a .52 energy factor. Sheet ___, ENERGY STANDARDS, ARTICLE 1.3

140. For alterations: When space conditioning or water heating equipment is changed, it is limited to natural gas, LPG, or the existing fuel type. This prevents changouts to less-efficient fuel sources. Garage conversions can use existing R-11 wall insulation when modeled in. ENERGY STANDARDS, ARTICLE 1.3

NOISE ABATEMENT COMMENTS:

141. This project appears to be sufficiently close to an exterior noise source (i.e., railroad, freeway, main thoroughfare) which requires the submittal of an acoustical report. Submit such a report or confirm project structures are entirely outside the 60 dB CNEL contour lines. UBC Appendix, Chapter 12, Division II, 1208A.8.1

142. Amend plans to show/note/describe (in details, specifications, floor plans, window/door schedules, etc.) all recommendations found in acoustical report which are recommended for sound mitigation.

143. Submit a letter from the acoustical consultant which indicates plans and specifications have been reviewed and found to be in conformance with recommendations contained in the acoustical report.

144. All party walls and floor-ceilings shall provide sound insulation: walls and floors shall provide STC of 50; floors shall additionally provide IIC of 50. Please amend plans to include complete details of such walls and floors and reference the listing (i.e., reference the document -- such as US Gypsum Association Fire Resistance Design Manual -- and item number) to confirm such sound insulation is provided. UBC Appendix Chapter 12, Division II, 1208 and 1209

145. Amend plans to specify plastic pipe penetrations in acoustical party floor-ceiling or wall assemblies are prohibited (unless specifically allowed by the listed assembly you have chosen to accomplish the sound mitigation).

146. Specify treatment of penetrations in sound walls/floors for continuity of sound mitigation.

STRUCTURAL COMMENTS:

1. [For seismic zone 4] Amend plans to specify typical anchor bolts are 5/8 inch minimum nominal diameter, embedded at least 7 inches into the concrete and spaced not more than 6 ft apart, with two bolts per piece each one not more than 12 inches or less than 7 bolt diameters (4-3/8") from end. Sheet/Detail ___, UBC 1806.6

2. [For seismic zones 3 and 4] Amend plans to specify all anchor bolts are provided with 2" x 2" x 3/16" plate washers. Sheet/Detail ___, UBC 1806.6.1

3. [For 3-story raised wood floor buildings in seismic zones 3 and 4] Provide structural calculations to specifically design all anchor bolts and amend plans to specify their size and spacing throughout. Sheet/Detail ___, UBC 1806.6.1.1

4. [For seismic zone 4] Amend lateral design to result in designed shear walls being limited to a height-to-width ratio NOT exceeding 2:1 (EXCEPT on one side of the U-1 garage door opening, where the maximum height-to-width ration may be 3.5:1, provided the height of the wall does not exceed 10 ft). UBC 2315.1, TABLE 23-II-G

5. [For seismic zone 3] Amend lateral design to result in designed shear walls being limited to a height-to-width ratio NOT exceeding 3.5:1. UBC 2315.1, TABLE 23-II-G

6. [For seismic zones 3 and 4] Amend plans to provide specific and clearly delineated collector members and splices/connections to transmit tension and compression forces. Note that diaphragm sheathing cannot be sued for this purpose. Sheet ___, UBC 2315.5.2

7. [For seismic zones 3 and 4] Amend plans to provide detailed perimeter members at openings in shear walls and diaphragms. Sheet ___, UBC 2315.5.2

8. [For seismic zones 3 and 4] Amend plans to specify diaphragm chords and ties within (or tangent to) the plane of the diaphragm framing. Sheet ___, UBC 2315.5.2

9. [For seismic zones 3 and 4] For designed shear walls at _____, where the allowable shear value must exceed 350 plf, amend plans to specify minimum single 3x (nominal) framing members at foundation sill plates and at framing members receiving edge nailing from abutting panels. Sheet ___, UBC TABLE 23-II-I-1, Footnote #4

10. [For seismic zones 3 and 4] For designed shear walls at _____, where the allowable shear value must exceed 350 plf, amend plans to specify plywood joint and sill plate nailing shall be staggered in all cases. Sheet ___, UBC TABLE 23-II-I-1, Footnote #4

11. Amend plans to specify connectors for *pressure treated or fire-retardant treated wood* are hot-dipped galvanized, stainless steel, silicon bronze, or copper. Sheet/Detail ___, UBC 2304.3

12. [For stucco cripple walls] Amend plans to specify cripples walls are solid sheathed (e.g., 3/8" ply w/8d @6"/12" o.c.). Sheet/Detail ___, UBC 2320.11.5

13. For shear walls at _____ where sheathing is applied on both faces of wall AND nail spacing is less than 6 inches o.c. on either side, amend plans to specify all panel joints shall be offset to fall on different framing members OR all framing shall be 3x minimum (nominal) and nails on each side shall be staggered. Sheet ___, UBC TABLE 23-II-I-1, Footnote #3

14. Provide a specific structural design for roof framing system over _____ or amend roof framing plan to provide a conventional framed roof with rafters, ridge boards, purlins down to bearing walls, and rafter ties @ maximum 48 inches o.c.. Sheet ___, UBC 2320.12

15. Expand upon rotation design for 2nd floor diaphragm over GARAGE to include calculations that confirm diaphragm deflections do not exceed the permissible deflections of attached distributing and resisting elements (nor the maximum allowed drift).. Because horizontal plywood diaphragm deflection formula is only for blocked diaphragms, the 2nd floor diaphragm then required full blocking throughout. UBC 2315.1

    Note that deflections for blocked diaphragms shall be calculated using methods found in UBC Standard 23-2. For un-blocked diaphragms AND ONLY IF APPROVED BY THE BUILDING OFFICAL, deflections for un-blocked diaphragms may be calculated by using methods found in UBC Standard 23-2 (for blocked diaphragms) and multiplying by a factor of 2.5 (based on recommendations of APA).

16. Amend floor/roof framing plans to provide connections, straps, framing members, and anchorages of framing members around the _____opening(s) to ensure that edges are adequately reinforced to transfer all shearing (and chord and collector) stresses. NOTE THAT DIAPHRAGM SHEATHING CANNOT BE USED FOR THIS PURPOSE. Sheet ___, UBC 2315.1, 2315.5.2

17. Amend lateral design for shear walls containing openings (e.g., for shear wall(s) at _____) to provide specific designs based on rational methods for force transfer around the openings – by breaking the overall shear wall into individual piers. Note that shear wall height-to-width limitations of UBC TABLE 23-II-G apply to the overall wall as well as individual wall piers at the sides of openings. Further, be sure to amend plans to detail boundary members around the opening (resulting from the rational design) in accordance with UBC 2315.

18. Amend overturning analysis to check uplift values using actual/installed dimensions between holdown anchorage bolt and center of compression (at opposite end of shear wall) for all shear walls 4 ft or less in length (i.e., do not use the full shear wall length for overturning-uplift calculations as this is not the real "couple" arm required to resist overturning; and, although, probably not significant for longer walls, can be very significant for narrow walls).

19. Amend plans to result in a clearly dimensioned "effective length" for shear walls 4 ft or less in width. The "effective length" is the dimension from the end of the shear wall to the center of the holdown anchor bolt at the other end.

20. Note on plans that special inspection per UBC 1701 is required for the following: installation of epoxy-installed anchorages for holdown anchor bolts used at existing footings.

21. Amend calculations to include a check of the proposed "listed" epoxy-installed anchorage system used at holdowns installed into existing foundations to confirm "listed" uplift capacities exceed the actual calculated uplift demand.

22. As, apparently, several new 1st floor shear walls are being installed over existing foundations, amend SHEAR WALL SCHEDULE and foundation plans and details to clarify how it will be determined whether or not existing anchor bolts will be adequate for all new shear walls:

    1. Are the sizes, depths, and spacing of all anchor bolts known?

    2. It will likely be necessary to add new anchor bolts of some kind to make sure the design shear is transferred into the existing foundations. This will require some kind of expansion or epoxy anchorage system and they should be included in details on the plans.

    3. If expansion or epoxy type anchor bolts are to be used for transferring shear from new shear walls into the existing foundations, be sure to specify a "listed" anchor (having a current, unexpired, listing"), submit copies of the "listed" anchor report (e.g., ICBO Evaluation Report) AND note that any selected shall be "listed" as having been tested specifically for wind and seismic loads.

    Plan checker assumes that revised lateral calculations will result in certain shear walls having holdowns into existing concrete foundations. If so:

    1. It is assumed that some sort of epoxied anchorage will be used (because we are not aware that any expansion-type anchor is listed for uplift from seismic or wind loads). If so, be sure to amend plans to specify a "listed" epoxy, noting the "listing # on the plans. Be sure that the listing is current (unexpired) and submit a copy with resubmittal to plan checker.

    2. Note on plans that special inspection per UBC 1701 is required for the following: installation of expoxied anchors for holdowns.

    3. Obtain two (2) copies of the City of _____Special Inspection and Testing form and include them with your resubmittal, completely filled-out and signed by all requested parties. Note that special inspection per UBC 1701 is required for the above noted item.

23. Plans specify that holdowns will be attached to foundations with "listed" anchor bolts (i.e., Simpson SSTB-type anchor bolts). Because this structure has a crawlspace and, thus, the threaded top of the SSTB anchor bolt cannot extend continuously up to the holdown (which is located above the framed floor), amend plans to specify a method of connecting the threaded end of the SSTB to the holdown, itself. Normally this is accomplished with a threaded rod and coupler.

24. Amend lateral design to NOT use gypsum board ceilings as diaphragms as gypsum board sheathing cannot be used as a horizontal diaphragm. UBC 2513.1

25. Amend lateral design to limit use of gypsum board shear walls to those which do NOT exceed a height-to-width ratio of 2:1. UBC 2513.4

26. Amend plans to specify designed gypsum board shear walls shall be clocked where a height-to-width ratio of 1.5:1 exceeds. UBC 2513.4

27. Note that special inspection per UBC 1701 is required for the following:

    1. Rebar and continuous concrete placement. UBC 1701.5.1
    2. Bolts installed in concrete with assumed stress increases. UBC 1701.5.2
    3. During placement of rebar and prestressing tendons, and stressing and grouting of tendons in prestressed or post-tensioned concrete. UBC 1701.5.4
    4. Shop and field structural welding. UBC 1701.5.5
    5. Construction of drilled piers or piles (driving of piles; drilling of piers; testing of piles). Note that these special inspections are normally provided by the geotechnical engineer and are in addition to concrete and rebar placement special inspections. Sheet/Detail ___, UBC 1701.5.11
    6. Installation of epoxy installed anchor bolts. UBC 1701.5.15
    7. Installation of Nelson studs. UBC 1701.5.5
    8. Installation of high-strength bolts. UBC 1701.5.6
    9. Application of spray-on fire proofing materials. UBC 1701.5.10
    10. Observation of soil excavation and foundation construction operations by geotechnical engineer. UBC 1701.5.13
    11. During preparation of prisms, sampling and placing of CMU units, rebar placement, grout space inspection prior to closing cleanouts, and grouting operations for masonry wall construction. UBC 1701.5.7
    12. Taking of test specimens and placement of shotcrete per UBC 2621(j) & (k). UBC 1701.5.12

28. Obtain two (2) copies of the City of _____ Special Inspection and Testing form and include them with your resubmittal, completely filled-out and signed by all requested parties. Note that special inspection per UBC 1701 is required for the above-noted items.

29. Provide minimum structural specifications on the plans: (1) grade and species of framing lumber; (2) pressure treated mudsills; (3) concrete strength (f'c); (4) masonry CMU block grade and strength, grout strength, and mortar type; (5) rebar grade; etc.

30. Specify a minimum thickness of 3-1/2 inches is required for concrete floor slab on grade. Sheet/Detail ___, UBC 1924

31. Amend plans to specify additional ties at detail _____ which are within 5 inches of the top of the column/pier, consisting of 2 - #4 at 3 inches o.c., or 3 - #3 at 1-1/2 inches o.c. Further, specify these ties are provided with a minimum 135 degree hook (i.e., seismic hook). Sheet/Detail ___, UBC 2106.1.12.4

32. Specify concrete cover as required per UBC 1907.7.1. Sheet/Detail _

33. Amend plans to specify widths of narrow shear walls to match assumptions in structural calculations (i.e., shear walls less than about 4 ft wide). Sheet/Detail ___

34. Amend calculations to design floor and roof diaphragms to resist lateral forces in accordance with formula (31-1). Sheet/Detail ___, UBC 1631.2.9

35. Amend lateral force calculations to provide shear walls along the _____ side. Because the depth of the diaphragm normal to the open side exceeds 25 feet (or 2/3 the diaphragm width, whichever is less), rotation cannot be used to distribute shear, thus shear walls should be provided along the diaphragm edge currently shown open. Revise calculations. Sheet/Detail ___, UBC 2314.1

36. The rotation analysis provided for the plywood diaphragm over the _____ requires an additional analysis of diaphragm deflections to confirm that diaphragm deflections can be tolerated. Because diaphragm deflection formulae are based on blocked diaphragms only, be sure that resubmitted plans show that this rotated diaphragm is fully blocked. Sheet ___, UBC 2314.1

37. Expand upon rotation design for 2nd floor diaphragm over GARAGE to include calculations that confirm diaphragm deflections do not exceed the permissible deflections of attached distributing and resisting elements (nor the maximum allowed drift). Because horizontal plywood diaphragm deflection formula are only for blocked diaphragms, the 2nd floor diaphragm, then required full blocking throughout. UBC 2314

38. Provide chord force calculations for the portion of the diaphragm _____and provide notes and/or details on plans for the required splices at these chords. Sheet/Detail ___

39. Calculations indicate that the shear forces must be dragged to the following shear walls: _____: provide calculations (and add details and notes to plans for these drag members and their required splices and attachments to the shear walls). Sheet/Detail ___

40. Provide a means (key, identification characters) of correlating framing members and shear walls in the calculations with their location on the plans. Sheet/Detail ___

41. Amend lateral force calculations to reduce the dead load resisting moments in accordance with UBC 1619.1 for wind (i.e., only 2/3 of the dead load may be used to resist overturning and uplift); and UBC 1631.1 for seismic (i.e., only 85% of the dead load may be used to resist overturning and uplift). Sheet/Detail/Page ___, UBC 1619.1

42. Amend/Provide wind load calculations to calculate wind pressures based on Basic Wind Speed of ___ mph and wind Exposure ___. City/County of _____

43. Amend plans to include details for shear transfer from roof to wall, floor to wall, and walls to foundations. Please pay particular attention to interior shear wall conditions and include different details for cases where roof or floor framing is parallel versus perpendicular to shear walls.

44. As some of the walls at second floor, such as _____, do not lie in the same vertical plane as the wall at first floor, provide details to show how the shear will be transferred to the lower walls; if through the diaphragm, provide details which clearly describe the shear path from upper wall to horizontal diaphragm to lower wall. Sheet/Detail ___

45. Plans indicate that the shear wall at _____ floor is supported by a beam. Provide calculations to check the beam for dead + live + wind/seismic loads. Check uplift and connections at the ends of the beam.

46. Amend shear wall designs at _____ to determine a maximum shear capacity based on either the ply sheathing alone or the gyp alone. Because the wall has two different materials on each side (plywood on one side and gypsum board on the other), the allowable shear must be determined in accordance with UBC 2513.1.

47. Provide design and detail for anchor bolts at hold downs or specify a listed holdown anchor with a published uplift capacity (e.g., Simpson SSTB anchor bolts). The Simpson catalog (and others) do not provide pre-rated j-bolt or bent bar anchor uplift capacities (except, e.g., SSTB anchors by Simpson) and indicate that a design must be provided for these types of anchors. If not using an SSTB (or other manufacturer's comparable listed anchor), then provide a specific design and detail on plans.

48. Specify the following (or similar) note on the drawings: "Fabricated trusses: prior to fabrication of trusses, two copies of the following materials *bearing the approval of the designer (in the form of "shop drawing approval" or separate letter)* must be submitted to the building official for review at least two weeks prior to frame inspection: (1) truss layout drawings; and (2) truss calculations and details showing axial and

bending stresses and joint designs, clearly indicating that designs conform to the 1994 UBC. UBC 106.3.4.2

49. Provide calculations to check studs in tall walls at: _____ for the following combined bending and axial load conditions: (1) (dead + live) floor + (dead) roof + wind load; and (2) dead + wind load (if supporting roof only). UBC 2308, 2326.11.1, TABLE 23-I-R-3

50. Provide calculations for the connection of the studs to the foundation plate and check the anchor bolts for dead + live + seismic/wind on the inclined plane of the sloping grade beam shown at: _____.

51. Specify the roof and floor diaphragm type, thickness, and grade and nailing on the plans. Sheet/Detail ___

52. Revise floor and roof framing plans to provide details at openings which describe required edge reinforcement, transferring all shear/chord stresses. Be sure to include methods of bracing corners of openings with seismic ties. Sheet/Detail ___, UBC 2314.1

53. Specify doubled trimmer rafters and headers around openings in roof and ceiling framing. Specify framing anchors or rafter hangers where header rafters exceed 6 ft span. Sheet/Detail ___, UBC 2326.12.5

54. [For Seismic Zone 3 Only] Amend plans to specify minimum requirement for all sill plate bolts is 1/2 inch diameter bolt embedded 7-inch minimum into the concrete/masonry and spaced not more than 6 feet o.c. with a minimum of two bolts per piece with one bolt located within 12 inches of each end, each piece. Sheet/Detail ___, UBC 1806.6

55. Amend calculations (and plans) to use shear values for shear walls using gypsum board for seismic loads to be reduced to 50% of the table number 25-I values per footnote #1.

56. Specify doubled joists under and parallel to bearing partitions. Sheet/Detail _, UBC 2326.8.5

57. Amend plans to show bearing walls at: _____ to be offset from supporting girders no more than the joist depth or provide structural calculations to confirm joists, as shown, are able to support the bearing wall loads and transfer them to the girders. Sheet/Detail ___, UBC 2326.8.5

58. Regarding proposed glass block wall construction shown in _____:

Provide details/specifications for installation of glass masonry (e.g., grade and size of masonry units, type S or N mortar, lateral support and anchorage to surrounding framing continuously around edges of opening, panel anchors @ maximum 16" o.c. or by channels, etc.). Sheet/Detail ___, UBC 2110

Provide details for attachment of glass masonry to surrounding framing capable of transferring a minimum design force of 200 plf. Sheet/Detail ___, UBC 2110.3

Specify glass block panels are reinforced at maximum 16" o.c. and detailed in accordance with UBC Standard 21-10, Part I, and hot-dipped galvanized at exterior wall installations. Sheet/Detail ___, UBC 2110.4

Amend plans to show maximum 144 sq ft glass block opening and 15 ft in any dimension at exterior wall; and 250 sq ft opening and 25 ft maximum in any dimension at interior wall. Sheet/Detail ___, UBC 2110.5

Specify glass block openings are provided with expansion joints across top and both sides, free of mortar and filled with resilient material. Size of expansion joints shall be whatever is necessary to accommodate supporting member displacements, but shall be a minimum of 3/8 inch. Sheet/Detail ___, UBC 2110.6

At proposed glass block masonry wall, provide supporting wood floor members designed to limit deflection to 1/600th of their span (and be sure to use allowable stress reduction in accordance with UBC 2304.3.4, Item #1). Sheet/Detail ___, UBC 2316.1 Exception #4

59. Revise plans to eliminate use of wood members in the permanent support of CMU masonry or concrete dead load. Sheet/Detail ___, UBC 2316.1

60. Amend anchorage details to specify an additional 2 inches of embedment for anchor bolts in the tops of columns. Sheet/Detail ___, UBC TABLE 19-E, footnote #4

61. Provide calculations and details for the retaining walls as indicated on the site plan or as shown on detail _____.

62. Retaining wall supporting the driveway shall be designed for additional surcharge from the wheel loads. Accurately calculate the surcharge as the wheel load could be as near as _____ inches from the face of the wall.

63. Provide structural calculations for beams located _____ and headers located _____, which are unusually long span or high load.

64. Amend plans to specify size of headers at all openings. Sheet/Detail ___, UBC 2326.11.6

65. Provide calculations and details for the splices in the diaphragm chord members.

66. Specify on plans that glulam beam inspection certificates shall be submitted to the field inspector prior to completion of frame inspection for all glulam beams. Sheet/Detail ___

67. At the cathedral ceiling, provide straps across the ridge beam and clips at the roof- to-wall connection. Sheet/Detail ___

68. Amend plans to specify epoxied and/or drilled-in/grouted anchors at conditions where new footings are attached to existing foundations. Sheet/Detail ___

SOIL/FOUNDATION COMMENTS:

69. Provide copy of the soil report for review.

70. Submit a letter from the soil engineer confirming that the foundation plan, grading plan, and specifications have been reviewed and that it has been determined that the recommendations in the soil report are properly incorporated into the plans.

71. Specify on plans that the soil engineer shall be retained to provide observation and testing services during the grading and foundation phase of construction per soil report recommendations and that inspection and testing reports shall be submitted to the Building Department.

72. Revise foundation plans to show stepped footings along _____ which are located where the slope of ground is more than 1 foot in 10 feet. Further, please provide a stepped footing detail. Sheet/Detail ___, UBC 1806.3

73. Provide calculations for grade beams which are currently shown supporting other grade beams or provide an additional pier under the grade beam intersection (being sure to maintain the minimum recommended clear dimension between adjacent piers -- usually three pier diameters). Sheet/Detail ___

74. Provide calculations for grade beams and piers which resist unusually high uplift forces, such as at ends of shear walls _____. Check if any pier will be subjected to any uplift and, if so, provide a design which results in a depth of pier required to resist the uplift force (note that, unless otherwise indicated by the soil engineer, we will expect that skin friction for uplift will be based on one-half of the skin friction for downward force).