



CITY OF NEWPORT BEACH
COMMUNITY DEVELOPMENT DEPARTMENT
BUILDING DIVISION
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TENANT IMPROVEMENT
ELECTRICAL / MECHANICAL / PLUMBING
PLAN REVIEW COMMENTS

Project Description:

Project Address:

Plan Check No.:

Permit App. Date:

Plan Check Exp:

Use:

Occupancy:

Const. Type:

No. Stories:

Permit Valuation:

Applicant/Contact:

Phone:

Plan Check Engineer: Oliver Daluz

Phone: 949-644-3271

ODaluz@NewportBeachCA.gov

1st Review: date

2nd Review:
Italic comments

3rd Review:
By Appointment

The project plans were reviewed for compliance with the following codes and standards:

2022 CBC; 2022 CPC; 2022 CEC; 2022 CMC; 2022 Building Energy Efficiency Standards (BEES); 2022 California Green Building Standards Code (CAL Green); & Chapter 15 of the Newport Beach Municipal Code (NBMC).

The code section references are from the 2022 CBC, unless otherwise stated.

- **TO EXPEDITE PROJECT APPROVAL:** Please provide a written response indicating how and where each comment was resolved on the plans.
- Resubmit all previously reviewed plans, updated plans and supporting documents with each subsequent review.
- **AFTER 2nd PLAN REVIEW:** Please call the plan check engineer listed above to schedule a plan review appointment, to expedite project approval.
- For clarification of any plan review comment, please call the plan check engineer listed above.
- Plan review status is available online at https://css.newportbeachca.gov/EnerGov_Prod/SelfService#/home. Project status is also available using the interactive voice response system at 949-644-3255, or by speaking with a permit technician at 949-644-3288 during business hours.

GENERAL

1. Provide fire rated enclosure under stairs per Section 1011.7.3 CBC enclosure under interior stairways, or 1011.7.4 CBC enclosure under exterior stairways to use space below the exit stairway. Otherwise, per Section 1011.7.4 The open space under exterior stairways shall not be used for any purpose.

ELECTRICAL

2. All plans and electrical calculations are to be designed by a licensed professional; provide stamp with signature and expiration date. This comment will remain up to and include at the time of permit issuance.
3. Add note to electrical plans, "All work to comply with 2019 California. Electric Code."
4. Add note to plans:
 - a. "Comply with City of Newport Beach amendments to 2019 CEC. Use rigid metal conduit in all areas exposed to weather. Use ground wire inside all flexible metal conduits. Metal conduit shall not be installed in contact with earth."
 - b. "All equipment to be U.L. listed or equivalent."
 - c. "Use of general anesthesia in critical care areas which patients are subjected to invasive procedures and are connected to line operated, electro-medical devices will require an emergency power source, which requires a separate submittal and building permit."
5. Provide single line diagram; show electrical panel load schedules, conduit and conductor sizes and ground electrode detail.
6. (Placeholder for [SPD] Surge-Protective Devices requirements, listing, SCCR, etc CEC 242)
7. Electrical panel load schedules are to show the following: Number of fixtures on each circuit; Load at 180 watts per general use receptacle or U.L. nameplate rating; total wattage per each phase balanced; long continuous loads [LCL] calculations to be shown at 125%. For example, "existing load" as a description without a load assigned to it, is not an acceptable panel load schedule.
8. Provide unique circuit descriptions on panel schedule. For example: "Existing load" is not an acceptable description. CEC 408.4
9. Provide available fault current from Southern California Edison service planner and documentation of preliminary design approval, SCE "B" drawing or red line drawing.
10. Include short-circuit current rating for switchboard, switchgear, and/or panelboards. Equipment shall have an SCCR not less than available fault current. CEC 408.6
11. Provide signage detail for available fault current and date (of when calculation was performed). Signage to be applied on the enclosure at the point of supply. CEC 110.24, 408.6
12. Show grounding electrode system for all electrical service equipment / transformers / panels.
13. Show all required clearances in front of electrical services / panels / equipment per Articles: 110.26, 110.32, through 110.34.
14. Show all overcurrent devices; provide A.I.C. rating; series combination equipment will require listing information.
15. Electrical circuitry diagrams are to be accurate; provide numbers next to each circuit on plans.
16. Provide rated electrical disconnect switch at water heaters or lock-out device at circuit breakers.
17. Provide structural design on plans for support of elevated transformers. Design and calculations to be reviewed by building plan check engineer.
18. Show maximum overcurrent protection on primary and secondary side of transformers.
19. Show maximum distance (25 feet) from transformer to secondary overcurrent protection.
20. Provide information on type, size and location of transformers, with required clearances.

21. Provide a primary disconnecting means within sight of transformer. CEC 450.14
22. Provide details and specifications for the transformer that illustrate compliance with Section 110.26-110.34 and 450.8-450.48 CEC.
23. Provide ground fault interrupter for personnel on all 125V-250V receptacles located in areas specified in CEC 210.8(B)(1) thru (B)(12).
24. Provide ground fault interrupter for personnel on all HVAC equipment, indoor service electrical equipment, and all other equipment requiring dedicated clearance space per 110.26(E). CEC 210.63
25. Show receptacles as required per CEC 210.65 for meeting rooms not larger than 1,000 s.f.
26. Provide light fixture schedule, show manufacture specifications, lamp wattage and total fixture wattage.
27. Clearly indicate on the electrical plans the fire rating of occupancy separation walls, and corridor walls and floor/ceilings. Clearly indicate the type of construction for the walls and the floor/ceiling assemblies within the plans. Provide and reference construction details for all membrane penetrations and through penetrations for each specific material penetrating those fire rated assemblies. Provide listing information for each type of penetration with complete construction requirements per listing of fire rated penetration construction requirements within the plans. Reference from the plan to the specific construction detail required.
28. Temporary generators are required to illustrate compliance with NBMC 5.11.050
29. When a generator is required by Section 1203.2 of the California Fire Code, provide emergency power outlets at the following location in accordance with NBMC 9.04.330 emergency power outlets:
 - a. In the main exit corridor of each floor adjacent to each exit enclosure.
 - b. On every level in every stairwell.
 - c. In each elevator lobby.
 - d. In public assembly areas larger than 1,500 square feet.
 - e. In every fire control room.
 - f. In such other areas as may be designated by the fire code official
30. Show emergency lighting as required per items below (CBC 1008.3.1 General):
 - a. Aisles.
 - b. Corridors.
 - c. Exit access stairways and ramps
31. In the event of power supply failure in buildings that require two or more means of egress, an emergency electrical system shall automatically illuminate all of the following areas (CBC 1008.3.2 Building):
 - a. Interior exit access stairways and ramps.
 - b. Interior and exterior exit stairways and ramps.
 - c. Exit passageways.
 - d. Vestibules and areas on the level of discharge used for exit discharge in accordance with CBC 1028.1
 - e. Exterior landings as required by for exit doorways that leads directly to the exit discharge. CBC 1010.1.6
32. In the event of power supply failure, an emergency electrical system shall automatically illuminate all of the following areas (CBC 1008.3.3 rooms and spaces):
 - a. Electrical equipment rooms.
 - b. Fire command centers.
 - c. Fire pump rooms.
 - d. Generator rooms.
 - e. Public restrooms with an area greater than 300 square feet (27.87 m²).
33. Provide electrical Title 24 and 2019 California Energy Efficiency Standards forms. All required compliance forms and mandatory measures are to be on the plans.

34. Unfused service entrance conductors extending horizontally into the building are not approved unless encased in minimum 2 inches of concrete.
35. Comply with Article 517: All branch circuits serving patient care areas / exam rooms shall be provided with a ground path for fault current by installation in a metal raceway system or cable assembly, which shall itself qualify as equipment grounding return path in accordance with Section 250.118. Type AC, MC and MI cable shall have an outer metal armor or sheath that is identified as an acceptable grounding return path.
36. Illustrate within plans compliance with Section 5.106.8 Lighting pollution reduction for Backlight, Uplight and Glare (BUG).

MECHANICAL

37. All plans and mechanical calculations are to be designed by a licensed professional. Provide stamp with signature and expiration date or provide signature of licensed design building mechanical contractor. This comment will remain up to and include at the time of permit issuance.
38. Provide the following note on plans:

Heating, ventilating, and air-conditioning systems shall be balanced by a licensed T&B contractor in accordance with one of the following methods (CMC 314.1):

 - AABC National Standards for Total System Balance
 - ACCA Manual B
 - ASHRAE 111
 - NEBB Procedural Standards for Testing Adjusting Balancing of Environmental Systems
 - SMACNA HVAC Systems Testing, Adjusting and Balancing
39. Provide RCL (refrigeration concentration limit) calculation for each HP-1, 2, and 3. Calculation shall be based on the smallest volume space/room for their respective VRF system. Indicate refrigerant type (R410A) and total refrigerant within each system. CMC 1104.2, Table 1102.3
40. Add note to mechanical plans, "All work to comply with 2019 California Mechanical Code."
41. Show support and anchoring design on plans for mechanical equipment. ASCE-7-16, Chapter 13. Coordinate with structural designer. Mechanical plans to reference structural details.
42. Identify fire-rated corridors, walls, ceilings and floor assemblies on the mechanical plans to verify appropriate provisions for the fire penetration protection. See architectural.
43. Show all fire dampers / fire smoke dampers and listings on plans.
44. Show auto-shutoffs in systems with excess of 2000 cfm and smoke detectors in the system. This is for systems not separated by full height walls. CMC 608.1. Supply side SD.
45. Show complete distribution system of the plans. Show all size and type of ducts and sheet metal thickness and R value of insulation materials used. Show CFM at each register. Note Min R-8 insulation for un-conditioned space.
46. Flexible air ducts are limited to no more than 5 feet in length. CMC 603.4.1.
47. Exhaust ducts and venting systems under positive pressure shall not extend into or pass through ducts or plenums.
48. Show seismic restraint for HVAC systems on plans. CMC 303.4.
49. Provide return and supply registers in all enclosed spaces for human occupancy and work. California Energy Code, Section 120.1
50. Show all location of HVAC equipment on plans.
51. Show roof access to HVAC equipment on roof.
52. Provide a min 30 by 30 level work platform for equipment on roofs with a slope 4 and 12 or more 304.2.

53. Show location of fan coil and condensers on plans.
54. Provide combustion air requirements and sizes for equipment located in confined spaces. Provide calculations on plans per Chapter 7.
55. Provide mechanical equipment schedule identifying the equipment manufacturer and model numbers with specifications.
56. Provide mechanical Title 24, 2019 California Energy Efficiency Standards forms. All required compliance forms and mandatory measures are to be on the plans.
57. Specify classification of product conveying ducts per 2019 California Mechanical Code.
58. Specify make-up air source for exhaust system(s).
59. All exhausts including dryer, cooking hood and toilet exhausts must be shown on plans. Clothes dryer vents exceeding 14 feet are to be engineered.
60. Provide ventilation system capable of exhausting the following quantities for each type of space (CMC 403.7, BEES 120.1-B):
 - a. Toilet rooms – 50 cfm per water closet / urinal
 - b. Shower rooms – 20 cfm per shower head
 - c. Locker rooms – 0.25 cfm per square foot
 - d. Janitor closets – 1.0 cfm per square foot
 - e. Kitchenettes (break rooms) - 0.7 cfm per square foot
61. Type of cooking equipment should be clearly identified with clearance to combustibles details and compliance with manufactures requirements.
62. Provide calculations on Type I hood(s) and duct(s) rate of air flow including, velocities and correct CFM.
63. Provided a design air balance schedule for commercial kitchen ventilation on the plans. CMC 511.3.1.
64. Provide note on plans Type I, “Hood requires air balance report for final inspection.”
65. Provide manufacturers listing on approved Type I hood fire-resistive duct wrap / minimum 2-layer system required.
66. Roof details will be required for exhaust system / show location and dimensions of all terminations.
67. Show type II hood exhaust termination per CMC 510.10.
68. Boilers over 400,000 Btu will require a one-hour fire-rated room.
69. Hot water boilers must have required expansion tanks.
70. Boilers require temp press discharge piping to terminate at exterior grade, floor sink, or dedicated roof top receptor.
71. Show gas piping / pipe sizes and equipment; CFH requirements and total developed length of gas piping including branches per Table 1216.2(1).

PLUMBING

72. All plans and plumbing calculations are to be designed by a licensed professional. Provide stamp with signature and expiration date or provide signature of licensed design build plumbing contractor. This comment will remain up to and include at the time of permit issuance.
73. Add note to plumbing plans, “All work to comply with 2019 California Plumbing Code.”
74. Provide complete drain and vent system drawings / riser diagrams.
75. Show intended size of all sewer / waste lines / vents.

76. Show size of all water supply lines / provide calculations, CPC 610. Or Appendix A as applicable.
77. Insulate all hot water lines. Specify on plans per CPC 609.11. Also See California Energy Code, Table 120.3-A
78. Illustrate within plans compliance with Section 5.303.3 CalGreen Code for Water conserving plumbing fixtures and fittings. Show all required flow rates and metering faucets requirements.
79. Provide calculations on plans to justify required plumbing fixture quantities required per Section 422 CPC.
80. ABS and PVC is limited to not more than 2 floors of residential accommodation. See CPC 701.2. Revise pipe specification as applicable, and coordinate with architect for fire and sound listed details.
81. Show type and location of all backflow protection. CPC 603.0
82. Provide identification of potable and non-potable label details on plans per CPC 601.3
83. Show size and type of material for proposed roof drain system. Rainwater systems are to be sized per Table 1103.1 and 1103.2 at 2" rainfall per hour.
84. Show gas piping / pipe sizes and equipment, CFH requirements and total developed length of gas piping including branches per Table 1215.2. (1).
85. Medium pressure systems over 14 inches W.C. (1/2 P.S.I.) Must have a pre-approval from the gas supplier. Gas regulators must be provided with a factory installed overpressure protection device. Provide regulator listed to ANSI Z21.80/CSA 6.22. Show detail on plans.
86. Gas regulators are required to be vented to outdoors. Show vent details on plans, or provide specific listing information for gas regulator listed without vent.
87. Show location and type of water heater / boiler.
88. Provide water heater venting detail and temperature pressure piping discharge location to exterior grade or floor sink with trap primer. Safety pan to discharge to exterior observable location.
89. Provide expansion tank for hot water / water heater system.
90. Provide seismic restraint detail for water heater / boiler.
91. Provide approved permanent access to water heater / boiler.
92. Note combustion air requirements for gas fired water heater / boiler.
93. Show location and size of all sanitary waste cleanouts.
94. Note on plans that all waste lines to be minimum 2% slope.
95. Provide a note on the plans "FOG permit through the City's Utility Department is required to be shown to the Building Inspector at the time of final inspection."
96. Show detail of hydro-mechanical interceptor, clarifier or grease interceptor on the plans.
97. Show location of required flow control and venting for hydro-mechanical interceptor.
98. Size gravity grease interceptor per Table 1014.3.6.
99. Size hydro-mechanical interceptor per Table 1014.2.1.
100. Show all pre-rinse sinks, floor drains, and mop sinks, two or three compartment sinks in food preparation area to be connected to grease interceptor / hydro-mechanical interceptor.
101. No food waste disposal unit or dishwashers are allowed to discharge through a grease interceptor.
102. Provide specific listed through penetration fire stop system details on plans for the specific penetrations of fire resistive wall/floor/ceiling assemblies. See architectural plans and coordinate with architect.
103. Fire Department approval will be required for any fuel storage tank and piping, L.P.G., L.N.G. systems and medical gas piping.

104. Primary condensate piping to terminate at tailpiece of lavatory/sink or floor sink (w/ air gap) in the unit it serves.
105. Secondary condensate piping to terminate at exterior observable location, interior over lavatory/sink or use listed wet/float switch.
106. Provide cleanout for condensate drains. CMC 310.3.1.
107. Add note to plans. Medical gas piping installation requires continuous third-party inspection and certification by an approved inspection agency, certification documentation is to be submitted to building and safety prior to final inspection.
108. Provide a risk assessment and specify category (1-4) on plans. See NFPA 99 2015 4.2 and 4.1
109. Provide required ventilation calculations for medical gas storage area per NFPA 99 and see CFC 5306 and subsections.