City of Huntington Beach

Community Development Department

Commercial Plan Review Comments (Based on the 2019 Codes)

2000 Main Street, Huntington Beach, CA 92648
Office: (714) 536-5241 Fax: (714) 374-1647

Permit #: _____ Address: _____

Project Description: _____

Review Date: _____ Applicant: _____

Plan Reviewer: _____ Contact Person: _____

Reviewer Phone: _____ Contact Phone: _____

Review: ☐ 1st ☐ 2nd ☐ 3rd

INFORMATION: A plan review has been performed on the referenced project for verification of conformance with construction codes adopted by the State of California and the City of Huntington Beach. As a result of that review, the items listed below require additional information, inclusion within the plans or calculations or revision to the plans or calculations.

Please provide the requested information to allow completion of the plan review process and issuance of the building permits. Please provide a written response to the items listed below with an indication as to the method of resolution and the location within the plans or calculations.

INSTRUCTIONS: Please return *ALL* checked sets and include three (3) completed and corrected sets of plans, two (2) sets of all other required documents along and *ALL* plan review comments with their respective responses. Incomplete resubmittal may result in delayed review time and additional plans check fee.

GENERAL

See the plans for additional comments and clarifications. ***Please return the marked-up plans with your submittal*.** The comments on the checked set are part of this correction list.

APPROVALS

- ❑ Planning Department: Obtain Planning approval on the final plans prior to issuance of building permit. Call 714 536-5271 for status.
- ❑ Public Works Department: Obtain Public Works approval prior to issuance of building permit. Call 714-536-5431 for status.
- ❑ Fire Department: Obtain Fire Department approval prior to issuance of building permit. Call 714-536-5411 for status.
- ❑ County Health Department: A food service type of occupancy requires a letter of approval from the County Health Department, which must be submitted before building permit may be issued. Call (714) 433-6000 for their plan check processing requirements.
- ❑ Cal/OSHA: Note on the plans that a Cal/OSHA permit is required for elevators or wheelchair lifts. This may be obtained from the State Division of Occupational Safety & Health – Cal/OSHA Elevator Unit. Call (714) 562-7212.

GENERAL

1. Approved Plans and Documents Requirements:
   a) Final drawings and calculations shall be stamped and signed by the Registered Design Professional and shall include the date of signing below the stamp. (California Business & Professions Code 5537, 5538, 6737.1, and 6745)
   b) Designer wet signature required on all sheets. (Business & Professions Code 5802).

c) If a soils report is provided, the geotechnical engineer shall review and approve the foundation plans for general conformance with their recommendations. Verification of review may be by a "review stamp" on the foundation plan or by a letter on their letterhead.
d) On the final sets, remove **NOT-FOR-CONSTRUCTION** from the drawings.

2. The valuation will be rechecked once revised/complete plans are resubmitted for review; additional fees may be required if the valuation is increased, which is payable prior to getting the permit.

3. For electronic plan review requirements please see *Preparing Plans for a Successful Submittal & Electronic Plan Review* handout: https://huntingtonbeachca.gov/files/users/building_and_safety/Preparing-Plans-for-Plan-Review-Electronic.pdf

4. Submitted plans and related documents are not complete. Additional reviewing time may be necessary upon re-submittal. Please submit complete plans for review.

5. **Geotechnical Investigation** (1803): Submit a foundation and soils investigation report by a Registered Design Professional and conducted in conformance with CBC Section 1803.3 through 1803.5. The report shall comply with CBC Section 1803.6. In addition, the soil report must include corrosivity analysis with recommendations for buried pipe protection and must include liquefaction potential. Place copy of all recommendations onto the plans.

6. **Approved Grading Plan**: When a grading plan is required by Public Works, a copy of the approved grading plan shall be required prior to permit issuance and shall be made a part of the plans. The building site/plot shall be consistent with the approved grading plan regarding location of structure, setbacks, pad elevations and drainage. Two copies required prior to permit issuance. Attach grading plans to building sets for microfilming. (HBMC 17.05)

SPECIAL CITY REQUIREMENTS

7. **Summary of Accessible Upgrades:** All tenant improvement (TI) projects will require architect/designer to obtain and complete the Summary of Accessible Upgrades.
   - **Form A** is required for all projects and for project with the adjusted construction cost valuation equal or less than $170,466.00 (2020);
   - **Form B** is for project with the adjusted construction cost valuation greater than $170,466.00 (2020) and/or Non Compliance in Form A is indicated.

   Completed form shall be imprinted/reproduced onto the plan. Forms can be found at the link below: https://huntingtonbeachca.gov/files/users/building/2018UnreasonableHardshipFormsPackage.pdf

8. **Construction & Demolition Debris Re-use & Recycling Program Form**: Complete and incorporate onto the plans: https://huntingtonbeachca.gov/files/users/building/2017ConstructionDemolitionDebrisApplicationandWorksheet.pdf

9. **Huntington Beach Security Ordinance**: Provide a copy of the Security Ordinance on the plans. In addition, add a note: "*All doors & windows shall meet Huntington Beach Security ordinance*."

10. **Water Meter Upgrade Checklist**: Obtain & complete the Water Meter Upgrade Checklist and reproduce onto the plan. https://www.huntingtonbeachca.gov/files/users/building_and_safety/WaterMeterUpgradeChecklistPDF.pdf

TITLE SHEET

11. **Project Info**:
    a. Job address
    b. Property Owner's name
    c. Tenant contact information

12. **Building Code Analysis**: Provide complete code analysis meeting CBC Chapters 3 through 7.
    a. Occupancy type
    b. Construction type (s)
    c. Total area, aggregate areas, and allowable area (show justification)
    d. Number of stories
    e. Occupant Load (s)
    f. Fire Sprinkler – type
    g. Whether separated or un-separated occupancies

13. **Scope-of-Work**: Show the complete Scope-of-Work on the plans per the permit application. Plan review is subject to the Scope-of-Work on the permit application and any work not part of the Scope-of-Work (Project Description) shall be deleted or marked as "Existing".

14. **Table of Contents**: Provide a Table of Contents (Sheet/Drawing Index) in accordance with the sheet numbers.

15. **Occupant Load Analysis**: Provide an occupant load analysis using factors in CBC Table 1004.1.1.1. Include summary by each Occupancy Type with respective floor areas and Occupancy Loads.

16. **Mixed Use**: The building as shown is a mixed-occupancy building. Please comply with Section 508.2 for accessory occupancies, section 508.3 for non-separated occupancies, or section 508.4 for separated occupancies. Please make building analysis part of the construction documents.

17. **Applicable Codes**: Add a note that the applicable Codes are: *2019 CBC, 2019 CPC, 2019 CMC, 2019 CEC, 2019 Energy Code, and City of Huntington Beach Municipal Code*

PLOT PLAN

18. Submit fully dimensioned plot plan including:
    a. Dimension distances from building(s) to all property lines, street centerlines, and adjacent existing or proposed structures on the site.
    b. Show the size, use, occupancy, and type of construction of all existing buildings on the site.
    c. Show all interior assumed lot lines, any designated flood plains, open space easements or development-restricted areas.
    d. Frontage Increase (CBC 506.3): Clearly delineate any frontage used to justify allowable area increases.
    e. Width of front, rear, and side yards. Clear width is measured from property line to building face or edge of floor overhang or edge of overhang of usable space below roof, canopy, porch, or covered walks.
    f. Location of the tenant space within the building.

19. Please Show:
    a. Accessible parking stalls (CBC 11B-208, 11B-502)
    b. Accessible routes within the boundary of the site from public transportation stops, accessible parking and accessible passenger loading zones, and public streets or sidewalks. (CBC 11B-206)

20. Note on plans: "*Frontage used for allowable area increases per CBC Section 506.3 shall be permanently maintained*".

21. Provide grades around the building or structure and proper site drainage, or else refer to approved grading plan for drainage info.

22. Finish grade around the structure/addition shall slope away from the foundation a minimum of 5% for a minimum distance of 10 feet. Include a note on the site plan or show on a foundation detail. (CBC 1804.4)

BUILDING OCCUPANCY & AREA ALLOWED

23. Provide a **Building Code Analysis** on the Title Sheet. Include the following code information for each building proposed: Description of use, Occupancy, whether separated or un-separated, number of stories, type of construction, sprinklers, floor area, height, and allowable floor area.

24. When **two or more buildings are on the same property** and they are not analyzed to comply as one building, the building shall have an assumed property line between them for determining wall and opening protection, and roof cover requirements or treated as a single building. (CBC 705.3)

25. When a new building is constructed adjacent to an existing building, show the required wall and opening protection requirements for the existing building will be maintained. (CBC 503.1.2, 705.5, Table 601, Table 602, and 705.8, Table 705.8)

26. For buildings with **mixed occupancies**, the allowable area per story shall be based on the most restrictive provisions for each occupancy when the mixed occupancies are treated according to CBC 508.3 (un-separated). If treated per CBC 508.4 (separated) the maximum total building area shall be such that the sum of the ratios for each of the actual to allowable are does not exceed 1. (CBC 508.4.2)

FLOOR PLAN

27. Provide a fully dimensioned floor plan, drawn to scale, showing the size and use of all rooms or areas within the space being improved, modified, altered or converted to a different use/occupancy class.

28. Indicate use of all adjacent suites or spaces. Show any existing area separation walls, occupancy separation walls, shafts or rated corridors. Identify and provide construction details for all new fire rated walls. (CBC 508)

29. Provide notes and details for the following items:
    a. Identify all occupancies and mixed uses per CBC Section 508
        i) Mixed Occupancies (508): Accessory Occupancies (508.2), Non-separated Occupancies (508.3), Separated occupancies (508.4)
        ii) Incidental Uses (509)
        iii) Required Occupancy separation (Table 508.4)
    b. Exterior walls and allowable openings. (705.8.1). Exceptions: Table 705.8
    c. Identify all fire walls (706), fire barriers (707), fire partitions (708), shaft enclosures (713)
    d. Horizontal Assemblies (711), Penetrations (714), Fire-resistive Joints (715), Fire-resistive rating of structural members (704)
    e. Mezzanines (505)
    f. Interior wall & ceiling finish requirements by Occupancy (Table 803.13)
    g. Special use and occupancy (Chapter 4)

30. **Mezzanine** (CBC 505): Indicate how mezzanine complies with area, enclosure and exit requirements.

31. **Atriums** (CBC 404): Unenclosed openings connecting 3 or more levels qualify as atriums and shall comply with provisions of CBC Section 404.

32. Clearly label and identify on the plans the fire-resistive corridors, firewalls, shaft enclosures, fire barriers, fire partitions, smoke barriers and smoke partitions along with their hourly ratings.

33. **Safety Glazing** (CBC 2406): Tempered glass in all glass doors and windows in hazardous locations.

34. **Occupant Loads** (CBC Table 1004.5): Calculate the number of occupants for each conference room, dining room, waiting area and similar assembly uses. For each area on the floor plan, include the floor area of the space, the occupant load factor and total number of occupants.

35. **Posting of Occupant Loads** (CBC 1004.9): Any room used that is used for an assembly purpose shall have the capacity of the room posted in a conspicuous place on an approved sign near the main exit or exit-access doorway.

36. Provide a note on the plans indicating if any **hazardous materials** (414) will be stored and/or used within the building, which will exceed the quantities listed in CBC Tables 307.1(1) and 307.1(2).

37. Provide separate Floor Plans identifying **hazardous material quantities**, types and locations prepared by a qualified person in accordance with CBC Section 414.1.3.

38. **Ceilings**: Detail suspended ceiling with seismic bracing and vertical compression strut, light fixtures independently supported, etc.

FIRE RESISTIVE CONSTRUCTION & OCCUPANCY PROTECTION

39. Clarify all occupancy separation walls within the unit and with the adjacent tenants (where required). Provide rated construction details on the plans. (CBC 508)

40. **Mixed-Occupancies**: Where the building contains **mixed-use occupancy**, each portion of the building shall be individually classified and comply with the allowable area, height and number of stories. Separated occupancies shall comply with CBC 508.4 and occupancy separation shall serve to define area limits set by Chapter 9 requiring fire protection system. Detail the required fire barrier & joint system construction between the separate occupancy areas. (CBC 508.4, 707, 711 and 715)

41. **Non-separated occupancies** shall comply with CBC 508.3. The allowable building area, height and number of stories shall be based on the most restrictive allowance for the occupancy group under consideration.

42. Provide 1-hour fire-rated corridor in accordance with Table 1020.1 or justify.

43. In **existing buildings**, maintain the existing fire rated corridor or provide code analysis demonstrating that building comply with all requirements of current code in order to de- rate the existing corridor. (CEBC 301.3, 314.1, 503.1; CBC 909.6.3, 909.20, 1006, 1017, 1020; CFC 909.21)

44. **Fire walls**, **fire barriers**, **fire partitions**, **smoke barriers** and **smoke partitions** or any other wall required to have protected openings or penetrations shall be effectively and permanently identified with signs or stenciling. Such identification shall: CBC 703.7
    a. Be located in accessible concealed floor, floor-ceiling or attic spaces;
    b. Be located within 15 feet of the end of each wall and at intervals not exceeding 30 feet measured horizontally along the wall/partition; and
    c. Include lettering not less than 3 inch in height with a minimum 3/8 inch stroke, incorporating the suggested wording: "*FIRE AND/OR SMOKE BARRIER-PROTECT ALL OPENINGS*" or other wording.

45. **Exterior Walls**:
    a. The maximum area of unprotected or protected openings permitted in an exterior wall in any story shall not exceed the values in Table 705.5. Where both unprotected and protected openings are located in the exterior wall in any story, verify compliance with equation 7-2 of CBC 705.8.4. Opening protection is not required where the building is equipped throughout with an automatic sprinkler system in accordance with Section 9-3.3.1.1 and the exterior openings are protected by a water curtain using automatic sprinklers approved for that use. (CBC Section 705.8.2 Exception)
    b. Provide ¾ hour opening assembly rating for exterior walls required to be 1-hour fire rated and 1 ½ hour openings assembly rating for exterior walls greater than a 1-hour fire rating. (CBC Table 716.5)
    c. Specify that exterior walls shall have no openings where no openings are allowed due to close proximity to the property line. Openings include windows, doors, scuppers, vents, tilt-up wall joints, etc. (CBC Table 705.8)

d. Projections beyond the exterior wall shall not extend more than 12 inches into the area where openings are prohibited nor beyond a point one-third the distance to the lot line from an assumed vertical plane located where protected openings are required. (CBC Section 705.2)
e. The required fire-resistance rating of exterior walls a fire separation distance of less than or equal to 10 feet shall be rated for exposure to fire from both sides. (CBC Section 705.5)

46. **Fire Walls** (706):
    a. Fire Rating shall be per CBC Table 706.4.
    b. Fire Walls must remain structurally stable in the event of collapse of construction on either side during a fire. Provide details showing that the joists are supported by the Fire Wall are spliced and not continuous (plywood membrane may be continuous), or provide double Fire Walls, or provide justification for any other method used. (706.2)
    c. Provide a detail to show that joist supported by the Fire Walls is spliced and not continuous (plywood membrane may be continuous), or provide double Fire Walls or provide justification for any other method used. (706.2)
    d. Shall be noncombustible material, except in Type V construction per 706.3.
    e. Shall have horizontal continuity per 706.5.
    f. Shall extend vertically from the foundation to a point 30 inches above the roof per 706.6.
    g. The area of each opening in Fire Walls is limited to 156 sf. Total width of the openings is limited to 25% of the wall length in the story under consideration. (706.8)
    h. All openings in Fire Walls shall be protected with fire assemblies having a fire-resistive rating of (1-1/2) (3) hours. (Table 716.1(2))
    i. Ducts and air transfer openings through Fire Walls should be avoided. If allowed, duct and air transfer opening penetrations shall be protected as required in Section 717. Dampers are required. (717.5)
    j. Fire Walls shall extend to the outer edge of horizontal projections (balconies, roof overhangs, canopies marquees and architectural projections) that are within 4 feet of the Fire Walls. (See Section 706.5.2 for exceptions)
    k. Exits must be provided independently for each area bounded by Fire Walls except for horizontal exits per Section 1026.1.

47. **Fire Barriers** (707):
    a. Shaft enclosure (713.4)
    b. Exit enclosure (1023.1)
    c. Exit passageway (1024.3)
    d. Horizontal exit (1026.1)
    e. Atrium (404.6)
    f. Incidental use area (509)
    g. Control areas (414.2.4)
    h. Occupancy separation (508.4)
    i. Fire area separation (707.3.10)
    j. Fire Barriers shall be used for shaft enclosures, exit enclosures, exit passageways, horizontal exits, separation of mixed occupancies and incidental use areas. (707.3)
    k. Openings shall be limited to a maximum width or 25 percent of the length of the wall with a maximum area of any single opening of 156 sq ft. (707.6)
    l. Structural system supporting Fire Barriers shall have an equivalent fire-resistive construction. (707.5.1)
    m. The Fire Barrier or Horizontal Assembly, or both, separating a single occupancy into different fire areas shall have a fire resistance rating of not less than that indicated in Table 707.3.10
    n. Fire Barriers shall extend through under-floor, attic areas, and suspended ceiling areas including areas where fire- resistive ceilings are provided. (707.5)

48. **Fire Partitions** (708):
    a. Walls separating dwelling units (420.2)
    b. Walls separating sleeping units in R-1 hotels, R-2's and I-1's (420.2)

c. Walls between mall tenant spaces (402.4.2.1)
d. The corridor (1020.1)
e. The elevator lobby (3006.3)

49. **Fire-rated assemblies** shall be per CBC Chapter 7, generic assemblies of Gypsum Handbook, or have a current ICC-ESR approval.

50. **Fire Resistance Construction**: Detail how fire resistance of wall construction is maintained at built-in wall fixtures and behind mailboxes, fire extinguisher cabinets, electric panels exceeding 16 square inches in area, etc. (714)

51. In **sprinklered high rise buildings** where existing 1-hour fire rated corridors serving as the exit access between the exit stairway enclosures, removing the corridors requires all the following:
    a. Code analysis that existing building complies with all provision of current code.
    b. Installation of 2-hour fire rated vestibules at exit enclosure in accordance with (CBC-909.20).
    c. Identify on the plans the existing building smoke control system and demonstrate that it is not affected by the removal of fire rated corridor.
    d. Demonstrates by analysis or testing that the Smoke Evacuation System for the building meets the fire department requirements as well as the required force to open the exit doors into the pressurized stairway (CBC 909.6.3, 909.20 and 1010.1.3)

52. All fire dampered ducts and required access panels must be shown. Listing agency and report number with installation diagram must be shown/copy on the plans. Note on plans that "*fire damper assemblies, including sleeves, and installation procedures must be at the site for the building inspector's use*". (CBC 717)

53. For Type V-A/III-A Construction, show the following:
    a. Continuous drywall behind all tubs is required unless the walls are within the unit and non- bearing. Back to back tubs with a common plumbing wall are impractical in 1-hour buildings.
    b. All interior partitions shall be constructed of not less than 1-hour fire-resistive construction.
    c. Attic access openings in 1-hour ceiling can be 2 layers of 3/4" plywood or one layer of 1-5/8" T&G material, self-closing.
    d. All openings in floors are required to be enclosed by a shaft having wall, floor, and ceiling shall be fire resistive construction meeting CBC 712.
    e. Recessed ceiling light fixtures must be boxed around with 5/8" Type X drywall to maintain the 1-hour ceiling assembly.
    f. Continuous drywall is required behind all electrical service panels, fire hoses and medicine cabinets.
    g. Exhaust fans from the bathroom must enter through the wall. Dampers are required if the ceiling is penetrated. (717.6.1)
    h. Plumbing penetration through horizontal occupancy separations shall be boxed out and filled with an approved material. Insulation is not approved. (714.5.1)
    i. Penetration of the 1 hour ceiling by ducts from the FAU and the stove hood require dampers (use a ductless hood whenever possible). Attic units (including heat pumps) require dampers at all ceiling penetrations. (717.6.1)
    j. Steel beams and columns shall be protected as required for 1-hour protection. Where ceiling forms the protective membrane for fire-resistive assemblies (occupancy separations and rated roof/ceiling or floor/ceiling assemblies), the construction (floor joists) and their supporting horizontal structural members (beams) need not be individually fire protected except where such members support directly applied loads from more than one floor or roof. The required fire resistance shall not be less than that required for individual protection of members. (704.3)
    k. All plumbing penetrations through walls which require protected openings (Fire walls, Fire barriers, Fire partitions) are required to be galvanized or cast iron piping.

MEANS OF EGRESS

54. Provide a clear and dimensioned Means of Egress system that provides a continuous, unobstructed exit from any occupied point in a building to a public way. (CBC 1001.1)

55. **Exit Analysis & Plan** (CBC Chapter 10): Provide a complete exit analysis and exiting plan and identify all exit components, number of required exits, travel distances, fire-rated construction, hardware, lighting, signage, etc.

56. **Single Exits** (CBC 1006.3.3): **Two exits** or exit access doorways from any space shall be provided where the occupant load, number of dwelling units and common path of egress travel distance exceed the values listed in CBC Table 1006.3.3(1) & (2).

57. All occupants shall have access to **two exits** from the floor. (CBC Tables 1006.3.3):
    a. Single story building with maximum occupant load of 49 (A, B, E, F, M, U) or 10 (R) occupants and less than 75 ft maximum common path of egress travel distance to exit (see exceptions for B, F, and S).
    b. Two story building with maximum occupant load of 29 (B, F, M, S) occupants per floor and maximum common path of egress travel distance of 75 ft to exit.

58. **Distribution of Minimum Width and Required Capacity** (CBC 1005.5): Where more than one exit is required, no one exit can exceed 50% of the required egress width/capacity.

59. **Intervening Rooms** (CBC 1016.2): Egress from a room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms or areas and that area served are accessory to one or the other and provide a discernible path of egress travel to an exit. Doors located in path of egress shall not be able to be locked to prevent egress.

60. Egress from a room or space shall not pass through kitchen, storage room, closet or spaces used for similar purposes. (CBC 1016.2(5))

61. **Exit Access Travel Distance** (CBC 1017): Travel distance to reach an exit shall not exceed that allowed in CBC Table 1017.2. Measure shall be from the most remote point within a story along the natural and unobstructed path of horizontal and vertical egress travel to an exit.

62. **Dead Ends** (CBC 1020.4): When more than one exit or exit access doorway is required, exit access shall be arranged such that there is no dead end in a corridor exceeding 20 ft. (50 ft. in sprinklered building).

63. **Direction of Door Swing** (CBC 1010.1.2.1)**:** Exit doors must swing in the direction of egress when serving an occupant load of 50 or more.

64. **Panic and Fire Exit Hardware** (CBC 1010.1.10): Exit access doors shall have panic hardware in A Occupancy with occupant loads greater than 50.

65. **Electrical Rooms** (CBC 1010.1.10): Electrical rooms with equipment rated *800*-ampers or more and over 6 ft. wide, and that contain overcurrent devices, switching devices or control devices with exit or exit access doors, shall be equipped with panic hardware and doors shall swing in the direction of travel.

66. **Thresholds** (CBC 1010.1.7): Plans must indicate the floor or landing on each side of doors is not more than ½ inch lower than the threshold of the doorway.

67. **Two Exits or Exit Access Doorways** (CBC 1007.1.1): Exit and exit access doorways shall be separated by a distance not less than 1/2 the length (1/3 in sprinklered building) of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between them.

68. Except when only one exit is required provide exit signs complying with Sections 1013 for the exit sign graphics, illumination, power source, and tactile exit sign requirements.

69. **Mechanical Equipment** (CBC 1015.6): Guards shall be provided where various components that require service are located within 10 ft. of a roof edge or open side of a walking surface located more than 30 inches above the floor, roof, or grade.

70. **Roof Access**: Guards shall be provided where the roof hatch opening is located within 10 ft. of a roof hatch. (CBC 1015.7)

71. Exterior balconies, stairways and ramps shall be located at least 10 feet from adjacent lot lines and from other buildings on the same lot unless the adjacent building exterior walls and openings are protected in accordance with Section 705 based on fire separation distance. (1027.5 & 1021.3)

PARTITIONS

72. Identify and differentiate existing walls to be removed, existing walls to remain, new walls, bearing walls, non-bearing partitions and rated walls. Provide a wall legend and reference typical construction details.

73. Provide complete interior partition wall details. Include the gauge, ICC approval numbers (for metal frame partitions), and all top and bottom attachment details.

74. Provide a hard nonabsorbent floor and wall surface such as, concrete, ceramic tile, etc., in all bathrooms. (1210) The intersections of restroom floors with walls shall have a smooth, hard, nonabsorbent vertical base that extends upward onto the walls at least 4 inches (102 mm).

SKYLIGHTS & SMOKE/HEAT VENTING

75. Provide detail of skylights to show compliance with CBC Chapter 2405 or show on plans ICC-ESR or other approval number.

76. **Plastic skylights** (2610):
    a. Provide detail of skylights to show compliance with CBC Chapter 2606 and Section 2610.1, or show on plans ICC-ESR or other approval number.
    b. Each skylight shall have a maximum area within the curb of 100 sq. ft. (26104, see exception)
    c. Shall be separated from each other by not less than 4 feet measures in a horizontal line. (2610.6)
    d. Where exterior wall openings are required to be protected in accordance with Section 705, a skylight shall not be installed within 6 feet of such exterior wall. (2610.7)

77. Provide **smoke, heat venting, or smoke removal system** in F-1 or S-1 Occupancies with undivided floor areas greater than 50,000 sq. ft. Skylights do not meet vent standards unless specifically tested and labeled. (910.2.1)

CAL-GREEN

78. Projects with valuation of $200,000 or above shall meet all of the requirements of 2019 CalGreen, Divisions 5.1 through 5.5.

DOCUMENTATION OF UNREASONABLE HARDSHIP

1. When adjusted construction cost is less than or equal to the current valuation threshold of $170,466.00 (2020) as defined in Chapter 2, Section 202, the cost of compliance with Section 11B-202.4 shall be limited to 20% of the adjusted construction cost and compliance shall be provided without exceeding the 20%.

2. When construction cost exceeds current valuation threshold of $170,466.00 (2020), as defined in Chapter 2, Section 202, and cost of construction is found to be an unreasonable hardship, full compliance with Section 11B-202.4 shall not be required and compliance shall be provided by equivalent facilitation with a construction cost of not less than 20% as defined above. The details of the findings of unreasonable hardship shall be recorded and shall be subject to Chapter 1, Section 1.9.1.5, Special Conditions for Persons with Disabilities Requiring Appeals Actions Ratifications.

ACCESSIBLE ROUTE OF TRAVEL (EXTERIOR & INTERIOR)

3. Show on the site plan accessible routes that comply with the following: At least one accessible route shall be provided within the site from accessible parking spaces and accessible passenger loading zones; public streets and sidewalks; and public transportation stops to the accessible building or facility entrance they serve. Where more than one route is provided, all routes must be accessible. (CBC 11B-206.2.1)

4. Show on the site plan at least one accessible route that complies with the following: At least one accessible route shall connect accessible buildings, accessible facilities, accessible elements, and accessible spaces that are on the same site. (CBC 11B-206.2.2)

5. On the site plan, show and define the required accessible path of travel: 48 in minimum width walkway, 1:20 (5%) maximum slope in the direction of travel, 1:48 (2%) maximum cross-slope. (CBC 11B-403.3 & 11B-403.5)

6. **Detectable Warning** (11B-247): Provide detectable warnings where a walk crosses or adjoins a vehicular way and the walking surfaces are not separated by curbs, railing or other elements between the pedestrian areas and vehicular areas. (CBC 11B-247.1.2.5)

7. Show on the floor plans at least one accessible route that complies with the following: At least one accessible route shall connect each story and mezzanine in multi-story buildings and facilities. (CBC 11B-206.2.3 (See exceptions))

DETECTABLE WARNING SIGNS

8. Show and detail all required detectable warnings on the plans to demonstrate compliance CBC 11B-247 & CBC 11B-705
    1. Curb ramps shall have detectable warnings that extend 36 inches in the direction of travel for the full width of the ramp run less than 2 inches maximum on each side, excluding any flared sides. (CBC 11B-247.1.2.2, CBC 11B-705.1.2.2)
    2. On perpendicular curb ramps, detectable warnings shall be located so the edge nearest the curb is 6 to 8 inches from the line at the face of the curb marking the transition between the curb and the gutter, street or highway. (CBC 11B- 247.1.2.2, CBC 11B-705.1.2.2)
    3. On parallel curb ramps, detectable warnings shall be placed on the turning space at the flush transition between the street and sidewalk. Detectable warnings shall extend the full width of the turning space at the flush transition between the street and the sidewalk less than 2 inches maximum on each side. (CBC 11B-247.1.2.2, 11B-705.1.2.2, and Figure 11B-406.3.2)
    4. Walks that cross or adjoin a route provided for vehicular traffic, such as in a street, driveway, or parking facility, shall be separated by detectable warnings, curbs, railings or other elements between the pedestrian areas and vehicular areas. (CBC 202, 11B-247.1.2.5, 11B-705.1.2.5)
    5. Detectable warnings provided to separate walks that cross or adjoin a route provided for vehicular traffic, such as in a street, driveway, or parking facility, shall be 36 inches in width and continuous at the boundary between the pedestrian areas and vehicular areas. (CBC 202, 11B-247.1.2.5, 11B-705.1.2.5)
    6. Detectable warning surfaces shall be yellow and approximate FS 33538 of Federal Standard 595C. (CBC 11B-705.1.1.3.1)

RAMPS (EXTERIOR OR INTERIOR)

9. Provide enlarged ramp details, including finish floor elevation at each landing, clear width, slope, cross-slope, top and bottom landing dimensions, handrails, handrail extensions, etc. complying with the following: (CBC 11B-405)
    1. Ramp runs shall not exceed a running slope of 1:12 (8.33%) and cross slopes shall not be steeper than 1:48 (2.083%). (CBC 11B-405.2 & 11B-405.3)
    2. The clear width of a ramp run shall be 48 inches minimum. (CBC 11B-405.5)
    3. The rise for any ramp run shall be 30 inches maximum. (CBC 11B-405.6)

4. Floor or ground surfaces of ramp runs shall comply with 11B-302 Floor or Ground Surfaces. Changes in level other than the running slope and cross slope are not permitted on ramp runs. (CBC 11B-405.4)
5. Intermediate landings shall be provided at intervals not exceeding 30” of vertical rise and at each change of direction in excess of 30 degrees. (CBC 11B-405.6 & 11B-405.7.4)
6. Ramps shall have landings at the top and the bottom of each ramp run. (CBC 11B-405.7)
7. Landings shall comply with 11B-302 Floor or Ground Surfaces. Changes in level are not permitted. (CBC 11B-405.7.1)
8. The landing clear width shall be at least as wide as the widest ramp run leading to the landing. (CBC 11B-405.7.2)
9. Top landings shall be 60 inches wide and 60 inches long, minimum. (CBC 11B-405.7.2.1 & 11B-405.7.3)
10. Bottom landings shall extend 72 inches minimum in the direction of ramp run. (CBC 11B-405.7.3.1)
11. Ramps that change direction between runs at landings shall have a clear landing 60 inches minimum by 72 inches minimum in the direction of downward travel from the upper ramp run. (CBC 11B-405.7.4)
12. Where doorways are located adjacent to a ramp landing, maneuvering clearances required by 11B-404.2.4 and 11B-404.3.2 shall be permitted to overlap the required landing area. Doors, when fully open, shall not reduce the required ramp landing width by more than 3 inches. Doors, in any position, shall not reduce the minimum dimension of the ramp landing to less than 42 inches. (CBC 11B-405.7.5)
13. Ramp runs shall have compliant handrails per 11B-505 Handrails. (CBC 11B-405.8)
14. Edge protection complying with 11B-405.9.2 Curb or Barrier shall be provided on each side of ramp runs and at each side of ramp landings. (CBC 11B-405.9 (See exceptions))
15. A curb or barrier shall be provided that prevents the passage of a 4 inch diameter sphere, where any portion of the sphere is within 4 inches of the finish floor or ground surface. To prevent wheel entrapment, the curb or barrier shall provide a continuous and uninterrupted barrier along the length of the ramp. (CBC 11B-405.9.2)

10. **Handrail**: Ramp runs shall have handrails complying with Section 11B-505. Handrails are required on ramps that provide access if the ramp slope exceeds 1” rise in 20” of horizontal run, except that at exterior door landings, handrails are not required on ramps less than 6” rise or 72” in length. (11B-402.2 & 11B-405.8)
    1. Handrails shall be placed on each side of each ramp and shall be continuous the full length of the ramp, shall be 34” to 38” above the ramp surface, shall extend horizontally above the landing for 12” min beyond the top and the bottom of ramp run. Extensions shall return to a wall, guard or the landing surface or shall be continuous to the handrail of an adjacent ramp run (11B-505.10.1 & figure11B-505.10.1).
    2. Handrail gripping surfaces with a circular cross section shall have an outside diameter of 1¼” minimum and 2” maximum. Non-circular cross sections shall have a perimeter dimension of 4” minimum and 6¼” maximum, and a cross section of 2¼” maximum. (11B-505.7 & Figure 11B- 505.7.2).
    3. Gripping surfaces (top and sides) shall be continuous along their length and shall be uninterrupted by newel posts, other construction elements, or obstructions. Bottom of gripping surfaces shall not be obstructed for more than 20% of their length. Any wall or other surface adjacent to the handrail shall be free of sharp or abrasive elements and shall have rounded edges (11B-505.6, 11B-505.8).
    4. Handrail projecting from a wall shall have a space of 1 ½” between the wall and the handrail. (11B - 505.5).
    5. Handrail extension return bottom shall be 27 inches maximum above finished floor. (11B-307.2)
    6. Edge protection shall be provided on each side of the ramp run and at each side of the ramp landing. Where the ramp surface is not bounded by a wall, the ramp shall have a curb at minimum of 2” in height or a barrier that prevents the passage of a 4” diameter sphere within 4” of the finish floor (11B-405.9.2).

ENTRANCES & EXITS

11. **Primary Entry Door**: Show and specify primary entry door and door(s) along path of travel, including door size(s), hardware, landings, thresholds, kickplates, pressure, etc. (CBC 11B-206.5)

12. All entrances and exterior ground floor exit(s) to buildings and facilities shall comply with CBC Section 11B-404. (CBC 11B-206.4.1)

13. Where direct access is provided for pedestrians from a parking structure to a building or facility entrances, each direct access to the building or facility entrance shall comply with CBC Section 11B-404. (CBC 11B-206.4.2)

14. **Weather protection** by a canopy or roof overhang shall be provided at a minimum of one accessible entrance to licensed medical care and licensed long-term care facilities where the period of stay may exceed twenty-four hours. (CBC 11B-206.4.10)

15. The area of **weather protection** shall include the passenger drop-off and loading zone comply with CBC Section 11B-209.3 and the accessible route from the passenger loading zone to the accessible entrance it serves. (CBC 11B-206.4.10)

DOORS, DOORWAYS, & GATES

16. Revolving doors, revolving gates, and turnstiles shall not be part of an accessible route. (CBC 11B- 404.2.1).

17. At least one of the active leaves of doorways with two leaves shall provide a clear width of 32" minimum with the leaf positioned at an angle of 90 degrees from its closed position. Swinging doors & gates' maneuvering clearances, complying with table 11B-404.2.4.1, shall extent the full width of the doorway and the required latch side or hinge side clearance. (CBC 11B-404.2.2).

18. Handles, pulls, latches, locks, and other operable parts on doors and gates that are in a path of travel shall be operable with one hand and shall not require tight grasping, pinching or twisting of the wrist. (CBC 11B-309.4, 11B-404.2.7)

19. **Operable parts of door hardware** shall be 34" minimum and 44" maximum above the finish floor or ground. (CBC 11B-404.2.7)

20. When **sliding doors** are in the fully open position, operating hardware shall be exposed and usable from both sides. (CBC 11B-404.2.7)

21. **Door openings** shall provide a clear width of 32" minimum. Swinging doors clear opening shall be measured between the face of the door and the stop, with the door open 90 degrees. Openings more than 24" deep shall be 36" minimum. (CBC 11B-404.2.3)

22. Floor or ground surfaces within **required door maneuvering clearances** shall be stable, firm, and slip resistant. Surfaces shall be level with a slope not steeper than 1:48. Changes in level are not permitted except at thresholds. Opening in floor shall not allow passage of sphere more than ½" diameter. (CBC 11B-302.2, 11B-404.2.4.4)

23. The **front approach level area** shall have a length in the direction of door swing of at least 60" and the length opposite the direction of door swing of 48" as measured at right angles to the plane of the door in the closed position. (CBC 11B-404.2.4.1 & Table 11B-404.2.4.1)

24. **Recessed doors maneuvering clearances** for forward approach shall be provided when any obstruction within 18" of the latch side at an interior doorway, or within 24" of the latch side of an exterior doorway, projects more than 8" beyond the face of the door, measured perpendicular to the face of the door or gate. (CBC 11B-404.2.4.3 & Figure 11B-404.2.4.3 (a))

25. Provide **clear space** of 12" past strike edge of the door on the opposite side to which the door swings if the door is equipped with both a latch and a closer. (CBC Figure 11B-404.2.4.1(c))

26. **Thresholds** shall be ½" high maximum. Raised thresholds and changes in level at doorways shall comply with CBC Section 11B-302 and 11B-303. (CBC 11B-404.2.5)

27. The **distance between two hinged or pivoted doors in series** and gates in series shall be a minimum of 48” plus the width of doors or gates swinging into the space. (CBC 11B-206.5, 11B- 404.2.6)

28. **Swinging door and gate surfaces** within 10” of the finish floor shall have a smooth surface on the push side extending the full width of the door or gate. Parts creating horizontal or vertical joints in these surfaces shall be within 1/16” of the same plane as the other. (CBC 11B-404.2.10)

29. **Maximum force** for pushing or pulling open, exterior or interior hinged doors with closers and sliding or folding doors, shall not exceed five pounds. Minimum allowable opening force, for fire doors, not to exceed 15 pounds. (CBC 11B-404.2.9)

30. Proposed **drape system at doorway** is not permitted in an accessible path of travel unless drape system can be operated in the same manner as doors. (CBC 11B-206.4, 11B-206.5)

STAIRWAYS (INTERIOR & EXTERIOR)

31. **Handrails** shall extend a minimum of 12” beyond the top nosing and 12” plus the tread width beyond the bottom nosing, exclusive of bends, and ends shall be returned or terminate in newel posts or safety terminals. (CBC 11B-505.10.2, 11B-505.10.3 & Figures 11B-505.10.2, 11B-505.10.3)

32. **Handrail extension** return bottom shall be 27 inches maximum above finished floor. (11B-307.2)

33. **Handrail gripping surfaces** with a circular cross section shall have an outside diameter of 1¼” minimum and 2” maximum. Non-circular cross sections shall have a perimeter dimension of 4” minimum and 6¼” maximum, and a cross section of 2¼” maximum. (11B-505.7 & figure 11B- 505.7.2).

34. **Handrail gripping surfaces** (top and sides) shall be continuous along their length and shall be uninterrupted by newel posts, other construction elements, or obstructions. Bottom of gripping surfaces shall not be obstructed for more than 20% of their length. Any wall or other surface adjacent to the handrail shall be free of sharp or abrasive elements and shall have rounded edges (CBC 11B-505.6, 11B-505.8)

35. **Interior Stairs** (CBC 11B-504.4.1): Interior stairs shall have the upper approach and the lower tread marked by a strip providing clear visual contrast. The strip shall be at least 2” wide and not more than 4” wide placed parallel to and not more than 1” from the nose of the step or landing to alert the visually impaired. The strip shall be of material that is at least as slip resistant as the other treads of the stair. (CBC 11B-504.4.1)

36. **Exterior Stairs** (CBC 11B-504.4.1): Where stairways occur outside a building, the upper approach and all treads shall be marked by a strip of clearly contrasting color at least 2” wide and not more than 4” wide placed parallel to and not more than 1” from the nose of the step or landing to alert the visually impaired. The strip shall be of a material that is at least as slip-resistant as the other treads of the stair. A painted strip shall be acceptable. (CBC 11B-504.4.1)

37. **Open risers** are not permitted. (CBC 11B-504.3).

38. The radius of curvature at the leading edge of the tread shall be ½ inch maximum. Nosings that project beyond risers shall have the underside of the leading edge curved or beveled. (CBC 11B- 504.5)

ACCESSIBLE PARKING SPACES

39. Specify the total **number of parking spaces and disabled parking spaces** as required by CBC Table 11B-208.2 on site plan. (CBC 11B-208.1)

40. **Van Accessible** (CBC 11B-208.2.4): One in every six accessible spaces, but not less than one, shall be designated “van accessible”. (CBC 11B-208.2.4)

41. Parking spaces complying with CBC Section 11B-502 that serve a particular building or facility shall be located on the **shortest accessible route** from parking to an entrance complying with Section 11B- 206.4. (CBC 11B-208.3)

42. Parking serving more than one accessible entrance shall comply with Section 11B-502 and shall be dispersed & located on the **shortest accessible route** to the accessible entrances. (CBC 11B-208.3)

43. Accessible parking spaces shall be so located that persons with disabilities are not required to **travel behind parking spaces** other than to pass behind the parking space in which they parked. (CBC 11B-502.7.1)

44. **Accessible car parking space** shall be 216" long and 108" wide minimum. Access aisle shall be 60" wide minimum and shall be permitted to be placed on either side of the parking space. (CBC 11B- 502.2 & 11B-502.3.4)

45. **Accessible van parking space** shall be 216" long and 144" wide minimum. Access aisle shall be 60" wide minimum and shall be located on the passenger side. All such spaces may be grouped on one level of a parking structure. (CBC 11B-502 & Figures 11B-502.2, 502.3 & 502.3.3)

46. **Access aisles** shall extend the full required length of the parking stall they serve. (CBC 11B-502.3.2)

47. **Access aisles** shall not overlap the vehicular way. (CBC 11B-502.3.4)

48. **Vertical Clearance**: Parking spaces, access aisles and vehicular routes serving them shall provide a vertical clearance of 98 inches minimum. (CBC 11B-502.5)

49. The surface of **each accessible parking space** shall be marked with an International Symbol of Accessibility, complying with CBC Section 11B-703.7.2.1, in white on blue (Color No. 15090 in Federal Standard 595B) background a minimum 36" wide by 36" high. The profile view shall be located so that it's lower corner at, or lower side aligned with, the end of the parking space length. (CBC 11B- 502.6.4.1)

50. **Access aisles** shall be marked with blue painted borderlines around their perimeter. The words, "No parking" shall be painted in white within each access isle with 12" high letters located where it is visible from adjacent vehicular way. (CBC 11B-502.3.3)

51. **Each parking space** reserved for persons with disabilities shall be identified by a reflectorized sign complying with section 11B-703.5 that is permanently posted immediately adjacent to and visible from passenger loading zone consisting of the International Symbol of Accessibility in accordance with CBC Section 11B-703.7.2.1. Signs may also be centered on the wall at the interior end of the parking space. The sign shall not be smaller than 70 square inches in area. An additional sign or additional language below the symbol of accessibility shall state, "Minimum Fine $250." (CBC 11B- 502.6)

52. **Van accessible parking spaces** shall have an additional sign or additional language stating "Van Accessible" mounted below the symbol of accessibility. (11B-502.6)

53. An **additional sign** shall also be posted either, in a conspicuous place, at each entrance to off-street parking facility, or immediately adjacent to on-site accessible parking and visible from each stall or space.
    1. The sign shall be not less than 17" by 22" in size, and
    2. With lettering not less than 1" in height, which clearly and conspicuously states the following (CBC 11B-502.8):

       "Unauthorized vehicles parked in designated accessible spaces not displaying distinguishing placards or special license plates issued for persons with disabilities will be towed away at owner's expense. Towed vehicles may be reclaimed at:_____or by telephoning_____."

<u>Note:</u> Blank spaces shall be filled in with appropriate information as a permanent part of the sign.

54. **Accessible signage** shall be located 60 inches minimum above the finished floor or ground surface measured to the bottom of the sign. Signage shall be posted at a minimum height of 80” from the bottom of the sign to the parking space finished grade when located in a path of travel. (CBC 11B-502.6)

55. **Valet parking** area shall comply with Section 11B-503. Provide details and signage on the plans. (CBC 11B-209.4)

ELECTRIC VEHICLE CHARGING STATIONS

56. Provide tabulation to show total number of EVCS (electric vehicle charging station) on the parking lot. Specify how many van accessible, standard accessible and ambulatory stalls are provided in accordance with Table 11B-228.3.2.1. (CBC 11B-228.3.2)

57. New 4 or less EVCS stalls require at least 1 van accessible EVCS stall. (CBC 11B-228.3, Table 11B-228.3.2.1)

58. Accessible EVCS stalls and access aisle surface shall slope 1:48 max in any directions. (CBC 11B- 228.3, 11B-812.3)

59. Detectable warnings shall not be permitted in vehicle spaces and access aisles. (CBC 11B-228.3, 11B-812.3)

60. Accessible EVCS and access aisle, and vehicular routes serving them shall be provided a vertical clearance of 98 inches minimum. (CBC 11B-228.3, 11B-812.4)

61. Delineate accessible path of travel from the access aisle to building entrance. (CBC 11B-228.3, 11B-812.5.1)

62. Accessible route is required between EVCS stall and EV charger. (CBC 11B-228.3, 1B-812.5.2)

63. Other than ambulatory stall, arrangement shall be made in such a way that the person using them is not required to travel behind parked car other than their own car. (CBC 11B-228.3, 11B-812.5.4)

64. Van accessible EVCS stall be 144 inches wide minimum by 216 inches long minimum and shall have an access aisle placed on the passenger side. (CBC 11B-228.3, 11B-812.6.1, 11B-812.7.1)

65. Standard accessible EVCS stall be 108 inches wide minimum by 216 inches long minimum and shall have an access aisle placed on either side. (CBC 11B-228.3, 11B-812.6.2, 11B-812.7.1)

66. Ambulatory accessible EVCS stall be 120 inches wide minimum by 216 inches long minimum and shall not be required to have an adjacent access aisle. (CBC 11B-228.3, 11B-812.6.3)

67. Access aisle shall be 60 inches wide minimum and shall extend the full required length of the accessible stall. (CBC 11B-228.3, 11B-812.7.2, 11B-812.7.3)
    1. The access aisle shall be marked with painted borderlines with hatched lines at 36” maximum.
    2. Blue color cannot be used in the EVCS marking.
    3. Access aisle shall not overlap vehicular way.
    4. Provide minimum 12 inches high “NO PARKING” lettering on the surface is required on the access aisle.

68. Every EVCS stalls shall have “EV CHARGING ONLY” letters painted on the surface. 12” high minimum. The lower corner of the letter shall be aligned with the end of the parking space length. (CBC 11B-228.3, 11B-812.9)

69. EV Chargers shall be adjacent to, and within the projected width of the vehicle space being served. (CBC 11B228.3, 11B-812.10.4)

PLUMBING FIXTURES AND TOILET COMPARTMENTS

70. Centerline of water closet shall be 17”-18” from sidewall. Ambulatory accessible toilet compartment specified in Section 11B-604.8.2 shall have water closet centerline 17”-19” from side wall. (CBC 11B-604.2).

71. Clearance around water closet shall be 60” measured perpendicular from side wall and 56” from rear wall. A 60” wide by 48” deep maneuvering space shall be provided in front of the water closet. (CBC 11B-604.3.1 & Figure 11B-604.3.1)

72. Flush controls shall be located on the open side of the water closet, 44 inches maximum above the floor. (CBC 11B-604.6)

73. The height of the accessible water closet shall be a minimum of 17 inches and maximum of 19 inches measured to the top of a maximum 2-inch high toilet seat. (CBC 11B-604.4)

74. Toilet tissue dispenser shall be located 7 inches minimum to 9 inches maximum of the front edge of the water closet to the center of the dispenser. The outlet of the dispenser shall be below the grab bar, 19 inches minimum above the finish floor. (CBC 11B-604.7 & Figure 11B-504.7)

75. Specify wall recessed combination toilet paper and set cover dispenser to maintain minimum 1.5 inches clear from grab bar. (CBC 11B-604.7, 11B-609.3)

76. Wheelchair accessible compartment shall be 60” wide measured perpendicular to the side and 56” deep for wall hung closets and 59” deep for floor mounted closets.

77. Wheelchair accessible compartment with an end-opening door swinging in, 60” wide by 36” deep maneuvering space shall be provided in front of the clearance required in Section 11B-604.8.1.1. (See Figures 11B-604.8.1.1.2(b) and 11B-604.8.1.1.3(b))

78. Wheelchair accessible compartment with a side-opening door, either in-swinging or out-swinging, 60” wide by 60” deep maneuvering space shall be provided in front of the water closet. (Figure 11B-604.8.1.1.2)

79. Wheelchair accessible compartment with an end opening door, either in-swinging or out- swinging, 60” wide by 48” deep maneuvering space shall be provided in front of the water closet. (Figure 11B-604.8.1.1.3)

80. Toilet compartment doors, and door hardware, shall comply with Section 11B-404 except when the approach is from the push side of the compartment door, clearance between the door side of the compartment and any obstruction shall be 48 inches minimum measured perpendicular to the compartment door in its closed position. (CBC 11B-604.8.1.2)

81. Water closet compartment shall be equipped with a door that has an automatic closing device, and shall have a clear, unobstructed opening width of 32 inches when located at the end and 34 inches when located at the side with the door positioned at an angle of 90 degrees from its closed position. (CBC 11B-604.8.1.2)

82. Provide minimum 48 inches clear distance between compartment’s door and the nearest obstruction measured perpendicular to the compartment door in its closed position. (CBC 11B- 604.8.1.2)

83. **Accessible Compartment**:
    1. Doors located in the front partition shall be 4 inches maximum from the sidewall or partition farthest from the water closet. (CBC 11B-604.8.1.2)
    2. Doors located in the sidewall or partition shall be 4 inches maximum from the front partition. (CBC 11B-604.8.1.2)

84. **Grab Bars** (CBC 11B-609):
    1. Water Closet: The side grab bar shall be 42 inches long minimum, located 12 inches max. from the rear wall and extend 54 inches min. from the rear wall with the front-end position 24 inches min. in front of the water closet. (CBC 11B-604.5.1)
    2. Water Closet: The rear grab bar shall be 36 inches long minimum and extend from the centerline of the water closet 12 inches minimum on one side and 24 inches minimum on the other side. (CBC 11B-604.4.5.2)
    3. Grab bars shall be installed 33 – 36 inches above and parallel to the floor. (CBC 11B-604.5, 11B-609.4)
    4. The space between the grab bar and walls/projecting objects shall be 1-1/2 inches minimum. (CBC 11B-604.5, 11B-609.3)

85. Show on floor plan the required toe clearance in accordance with CBC Section 11B-604.8.1.4 & Figure 11B-604.8.1.4 or provide additional 6 inches to the stall width. (CBC 11B-604.8.1.4)

86. Laminated apron not permitted to project in the require knee clearance under the sink. (CBC 11B-213.3.4, 11B-606.2, 11B-306)

87. **Urinals**:
    1. Urinal alcoves shall be 36 inches wide minimum where the depth exceeds 24 inches. (CBC 11B-605.3)
    2. Flush controls shall be mounted at a maximum height of 44 inches above finished floor. (CBC 11B-605.4)
    3. Urinals shall have the rim 17 inches maximum above the finished floor or ground. (CBC 11B- 605.2)
    4. Urinals shall be 13.5 inches deep minimum measured from the outer face of the urinal rim to the back of the fixture. (1 CBC 1B-605.2)

TOILET ROOMS

88. Doorways leading to **men's toilet and bathing facilities**, complying with CBC Section 11B-603, shall be identified by an equilateral triangle ¼" thick with edges 12" long and a vertex pointing upward. The triangle symbol shall contrast with the door, either light on a dark background or dark on a light background. (CBC 11B-216.8.1, 11B-703.7.2.6.1)

89. Doorways leading to **women's toilet and bathing facilities**, complying with Section 11B-603, shall be identified by a circle ¼" thick and12" in diameter. The circle symbol shall contrast with the door, either light on a dark background or dark on a light background. (CBC 11B-216.8.1, 11B-703.7.2.6.2).

90. **Unisex toilet and bathing facilities** shall be identified by a circle ¼" thick, 12" in diameter, with a ¼" thick triangle with a vertex pointing upward superimposed on the circle and within the 12" diameter. The triangle symbol shall contrast with the circle symbol, either light on a dark background or dark on a light background. The circle symbol shall contrast with the door, either light on a dark background or dark on a light background (CBC 11B-216.8.1,11B-703.7.2.6.3)

91. Accessible restroom **geometric symbol shall be mounted** at 58-60 inches above the finished floor measured from the centerline of the symbol. (CBC 11B-703.7.2.6)

92. The **clear width** for accessible routes to accessible toilet compartments shall be 44 inches except for door opening widths and door swings. (CBC 11B-403.5.1, Exception #5)

93. **Turning space** of 60" min shall be provided within the room (CBC 11B-603.2.1).

94. Turning space shall be permitted to include knee & toe clearance complying with CBC Section 11B-306. (CBC 11B-304.3.1)

95. Doors shall not **swing** into the clear floor **space or clearance required for any fixture**. (CBC 11B-603.2.3) (Exception for individual use restroom)

96. **Doors may encroach** 12 inches into the turning space. (CBC 11B-603.2.3)

97. **Single-user toilet rooms** shall not contain more than one lavatory, and not more than two water closets without urinals or one water closet and one urinal. (CBC 11B-213.2.1).

98. **Single-user toilet rooms** shall have privacy latches. (CBC 11B-213.2.1).

99. **Baby changing tables** shall not be located in accessible toilet compartment within a multiple accommodations' toilet facility. (CBC 11B-226.4)

BATHING ROOMS

100. Where bathing rooms are provided, they shall comply with CBC Section 11B-603. (CBC 11B-213.1)

101. Where bathtubs or showers are provided, at least one bathtub shall comply with CBC 11B-607. (CBC 11B-213.3.6)

102. Where showers are provided, at least one shower shall comply with CBC 11B-608. (CBC 11B-213.3.6)

DRINKING FOUNTAINS, SINKS, ETC

103. No fewer than two drinking fountains shall be provided, one shall comply with CBC Sections 11B-602.1 through 11B-602.6 and the other one shall comply with Section 11B-602.7. When a single drinking fountain complies with all of the above listed sections, it shall be permitted to be substituted for two separate drinking fountains. (CBC 11B-211.1)

104. **Drinking Fountains**:
    1. Accessible drinking fountain shall be minimum 18 inches and maximum 19 inches in depth. (CBC 11B-211.1, 11B-602.8)
    2. Provide minimum 60 inches clear width (accommodate 60 inches diameter circle) in front of drinking fountain to accommodate front approach; side approach is not permitted. (CBC 11B-211.1, 11B-602.2)
    3. Drinking fountains shall be located completely within alcoves, positioned between winged walls, or located not to encroach into pedestrian ways. The protected area shall be 32 inches wide minimum and 18 inches deep minimum, and shall comply with CBC Section 11B- 305.7. (CBC 11B-602.9)

105. **Sinks** (CBC 11B-212.3):
    1. Provide minimum 5'0" depth in front of the sink for maneuvering to allow for forward approach to sink. (CBC 11B-304.3, 11B-606.2)
    2. The front of the higher of the rim or counter surface shall be 34 inches maximum above the finished floor. (CBC 11B-606.3)
    3. Provide knee clearance 27 inches high minimum above the finished floor at a depth of 8 inches minimum increasing to 29 inches high minimum above the finish floor at the front edge. See CBC Figure 11B-306.3(c). (CBC 11B-306.3.3, Example #1, 11B-606.2)
    4. Knee clearance shall be 11 inches deep minimum at 9 inches above the finish floor and 8 inches deep minimum at 27 inches above the finish floor. (CBC 11B-306.3.3, 11B-606.2)
    5. Sink shall be located 18 inches minimum from side wall measured to center line of fixture. (CBC 11B-606.6)
    6. Sinks shall be 6-1/2 inches deep maximum. (CBC 11B-606.7)
    7. Space extending greater than 6 inches beyond the available knee clearance at 9 inches above the finished floor shall not be considered toe clearance. (CBC 11B-606.2, 11B-360.2.4)

EMPLOYEE WORK AREAS

106. Detail accessible route to employee workstation and specify compliance with Division 4. Spaces and elements within employee workstations shall only be required to comply with CBC Sections 11B-207.1, 11B-215.3, 11B-302, 11B-303, 11B-308.1.1, 11B-308.1.2 and 11B-404.2.3. Common use circulation paths within employee workstations shall comply with Section 11B-206.2.8. (CBC 11B-203.9)

107. Spaces and elements within employee work areas shall be designed so that individuals with disabilities can approach, enter, and exit the work area. Common use circulation paths within employee work areas shall comply with Section 11B-402.2. (CBC 11B-203.9)

108. **Access to Employee Areas**: Aisle width serving specific employee workstation shall be minimum 44 inches clear if serving two sides or 36 inches clear if only serving side. Entryways shall be 32 inches clear width. (CBC 11B-203.9 & 11B-403.5.1)

109. Provide accessible details to comply with the following. The area indicated is a common area and is not considered an employee workstation, therefore disabled access compliance details are required. (CBC 11B-203.9)

SEATING, TABLES & COUNTERS

110. Accessible seating at **tables or counters** shall provide knee clearance of at least 27" high, 30" wide, and 19" deep. (CBC 11B-902.2, 11B-306.3.3 & 11B-306.3.5)

111. The tops of dining surfaces and work surfaces shall be 28" to 34" above the finish floor. (CBC 11B- 902.3)

112. Where provided, at least one of each type of **sales counter and service counter** shall provide parallel or forward approach to comply with Section CBC 11B-904.4. The accessible portion of the counter top shall extend the same depth as the sales or service counter top. (CBC 11B-227.3)

113. Where **counters** are dispersed throughout the building or facility, counters complying with CBC Section 11B-904.4 also shall be dispersed. (CBC 11B-227.3, 11B-904.3.3)

SIGNS & IDENTIFICATION

114. The **International Symbol of Accessibility** (ISA) shall comply with CBC Figure 11B-703.7.2.1. The symbol shall consist of a white figure on a blue background. The color blue shall approximate FS 15090 in Federal Standard 595C. (CBC 11B-216.5, .6, .7, .8; 11B-703.7.2.1)

115. In existing Building and facilities, all building entrances that are accessible to and usable by persons with disabilities and at every major junction along or leading to an accessible route of travel shall be identified with a sign displaying the International Symbol of Accessibility complying with Section 11B-703.7.2.1, and with additional directional signs complying with Section CBC 11B-703.5, as required, at junction when the accessible route diverges from the regular circulation path. (CBC 11B-216.6)

116. **Directional sign** visual character shall be 40 inches minimum above the finish floor or ground. (CBC 11B-216.3, 11B-216.6, 11B-703.5.6)

117. Where both visual and tactile characters are required, either one sign with both visual and tactile characters, or two separate signs, one with visual, and one with tactile characters, shall be provided. (CBC 11B-703.1)

118. Where a tactile sign is provided at a door, the sign shall be located along the door at the latch side. Where a tactile sign is provided at double doors with one active leaf, the sign shall be located on the inactive leaf. Where a tactile sign is provided at double doors with two active leafs, the sign shall be located to the right of the right and doors. Signs shall be located so that a clear floor space of 18 x 18 inches minimum, centered on the tactile characters, is provided beyond the arc of any door swing. (CBC 11B-703.4.2 & Figure 11B-703.4.1)

119. Tactile characters on signs shall be located 48” minimum above finish floor, measured from the baseline of the lowest Braille cells and 60” maximum above finish floor, measured from the base line of the highest line of the raised characters. (CBC 11B-703.4.1 & Figure 11B-703.4.1)

120. Corresponding Braille shall be located below characters, 3/8”-1/2”, centered or flush left. (CBC 11B-216, 11B-703.3.2)

121. When signs identify permanent rooms and spaces of a building or site, they shall comply with CBC 11B-703.1; 11B-703.2; 11B-703.3 and 11B-703.5. Where pictograms are provided, it shall comply with section 11B-703.6 and shall have text descriptions complying with CBC Sections 11B-703.2 & 11B-703.5. (CBC 11B-216.2)

122. Provide **tactile exit signage** and identify locations on floor plan. Include sign elevation and typical signage text per CBC Section 1013.1 at doors to exit passageways, exit discharge and exit stairways shall comply with CBC Sections 11B-703.1, 11B-703.2,11B-703.3, and 11B-703.5. (CBC 11B- 216.4.1)

123. Signs required by CBC Section 1009.9 to provide directions to accessible means of egress shall comply with CBC Section 11B-703.5. (CBC 11B-216.4.3)

NOTIFICATION APPLIANCES FOR THE HEARING IMPAIRED

124. Where **fire alarm systems** provide audible alarm coverage, alarms shall comply with CBC Section 11B-215. Visual warning devices for the hearing impaired are required to be installed (added) within the suite under one of the following conditions: (CBC 11B-215.1)
    1. Building is equipped with visual warning devices.
    2. Existing fire alarm panel can support visual warning devices for the entire building.
    3. The fire alarm panel is being upgraded to support visual warning devices for the entire building.
    4. The occupancy group is changing.

125. Approved notification appliances for the hearing impaired shall be installed in accordance with the provisions of NFPA 72 in the following areas: (CBC 11B-215.12 & 907.5.2.3.1)
    1. Public and common use areas such as sanitary facilities, corridors and lobbies per CBC Section 907.5.2.3.1.
    2. Where employee work areas have audible alarm coverage, the wiring system shall be designed so that visible alarms complying with CBC Section 907.5.2.3.2 can be integrated into the alarm system. (CBC 11B-215.3)

ASSEMBLY AREAS

126. An **assistive listening system** complying with CBC 11B-706 shall be provided in assembly areas, including conference and meeting rooms (CBC 11B-219.2):
    1. Provide assistive listening receivers (4% of the total number of seats, but not less than two) located within 50-foot viewing distance of the stage or playing area with complete view of those areas. 25% but not less than 2 receivers shall be hearing aid compatible. (CBC 11B-219.3)
    2. Provide enlarge plan/detail/specifications for assistive listening system showing compliance with CBC Section 11-B706. (CBC 11B-219.1)

127. Provide the following number of **accessible seats/spaces** (CBC 11B-221):
    1. Wheelchair spaces (CBC 11B-221.2, Table 11B-221.2.1.1)
    2. 1 companion seat per wheelchair space. (CBC 11B-221.3)
    3. Designated aisle seats (5% of total number of aisle seats, CBC 11B-221.4)
    4. Semi-ambulant seats (1% of total number of seats, 2 minimum, CBC 11B-221.6)

128. Provide enlarge plan/detail for companion seats showing compliance with CBC Section 11B-802.3.

129. Provide enlarge plan/detail for designated aisle seats showing compliance with Section CBC 11B- 802.4.

130. Provide enlarge plan/detail for semi-ambulant seats showing compliance with Section CBC 11B-802.5.

131. A single wheelchair space shall be 36” wide and two adjacent wheel spaces shall be 33” wide for each wheelchair. (CBC 11B-802.1.2)

132. Depth of wheelchair shall be 48” min. and 60” deep minimum when access from the sides. (CBC 11B-802.1.3)

RESTAURANTS, CAFETERIAS, BANQUET FACILITIES AND BARS

133. An accessible route shall be provided to **all functional areas**, including raised or sunken areas, and outdoor areas. (CBC 11B-206.2.5).

134. Access to disabled seating shall be provided with **main aisles** not less than 36” in clear width. (CBC 11B-403.5.1)

135. Where **dining surfaces** are provided for consumption of food or drink, at least 5% of the seating spaces and standing spaces at the dining surfaces shall comply with built-in element requirements listed under CBC Section 11B-902. (CBC 11B-226.1).

136. Where **work surfaces** are provided for use by other than employees, at least 5% shall comply with CBC Section 11B-902. (CBC 11B-226.1)

137. Dining surfaces required to comply with CBC Section11B-902, that is to provide a clear floor space per Section 11B-305 positioned for forward approach, shall be dispersed throughout the space or facility containing dining surfaces for each type of seating in a functional area. (CBC 11B-226.2)

138. Where **food or drink is served for consumption at a counter** exceeding 34” in height, a portion of the main counter 60” minimum in length shall be provided in compliance with Section 11B-902.3. (CBC 11B-226.3).

139. Where **self-service** shelves and dispensing devises for tableware, dishware, food and beverages are provided, at least 50% but not fewer than one, of each type provided shall comply with reach ranges per CBC Section 11B-308. (CBC 11B-904.5.1, 11B-227.4)

140. The **tops of tray slides** shall be 28” to 34” maximum above the finish floor. (CBC 11B-904.5.2, 11B- 227.4)

SALES FACILITIES

141. Spaces and elements within employee work areas shall only be required to comply with CBC Sections 11B-206.2.8, 11B-403.5, 11B-207.1 and 11B-215.3. (CBC 11B-203.9)

142. The customer side of **checkout aisles, sales counters, food service lines, queues and waiting lines** shall comply with CBC Sections 11B-227 and 11B-904. (CBC 11B-227.1)

143. **Fitting or Dressing Rooms**: Where fitting or dressing rooms are provided for male or female customers, patients, employees, or the general public, 5 percent, but never less than one, of dressing rooms for each type of use in each cluster of dressing rooms shall be accessible by providing the following: (CBC 11B-222.1)
    1. Turning space complying with Section 11B-304 shall be provided within the room. (CBC 11B- 803.2)
    2. Doors shall not swing into the room unless a turning space complying CBC Section 11B-304.3 is provided beyond the arc of the door swing.
    3. Full-length mirrors at least 18” wide by 54” high, the bottom of which is no higher than 20” from the floor and mounted in a position affording a view to a person on the bench as well as to a person in a standing position. (CBC 11B-803.6)

4. Coat hooks provided within the room shall be located no higher than 48” from the floor and in accordance with one of the reach ranges in CBC Section 11B-308. Coat hooks shall not be located above the bench. (CBC 11B-803.5)
5. A 48” long bench, 20” to 24” deep, with a back support or shall be mounted to the wall along the longer dimension of the room 17” to 19” above the floor with a clear space alongside the bench to allow a person using a wheelchair to make a parallel transfer onto the bench. The structural strength of the bench and attachments shall comply with CBC Section 11B-903.6. (CBC 11B-903.4).
6. Clear floor or ground space complying with CBC Section 11B-305 shall be provided and shall be positioned at the end of the bench seat and parallel to the short axis of the bench. (CBC 11B-903.2)

EXAMINATION, DIAGNOSTIC AND TREATMENT ROOMS

144. Provide turning space complying with CBC Section 11B-304 inside the treatment room. (CBC 11B-223, 11B-805.4.3)

KITCHENS, KITCHENETTES AND WET BARS

145. Provide a section and detail showing that sinks comply with CBC 11B-606 Lavatories and Sinks, including clear floor space, height, faucets, and at exposed pipes and surfaces. (CBC 11B-804.4)

146. Show that at least 50 percent of the shelf space is within required reach ranges. (CBC 11B-804.5)

147. Where a range/cooktop is provided, detail the required forward reach approach at the sink. (CBC 11B-804.6.4)

MISC ITEMS

148. **Reach Ranges**:
    1. **Electrical Reach** (CBC 11B-308.1.1, 11B-308.1.2):
        i) Controls, switches, & receptacle outlets low reach shall be measured to the bottom of the outlet box and the high reach shall be measured to the top of the outlet box.
    2. **Forward Reach** (CBC 11B-308.2):
        i) Unobstructed high reach shall be 48 inches maximum and low shall be 15 inches minimum above the finished floor.
        ii) Obstructed high reach shall be 48 inches maximum when reach depth is 20 inches maximum.
        iii) Obstructed high reach shall be 44 inches maximum when reach depth is greater than 20 inches but less than 25 inches.
    3. **Side Reach** (CBC 11B-308.3):
        i) Unobstructed high reach shall be 48 inches maximum and low shall be 15 inches minimum above the finished floor.
        ii) Obstructed high reach shall be 48 inches maximum when reach depth is 10 inches maximum.
        iii) Obstructed high reach shall be 46 inches maximum when reach depth is greater than 10 inches but less than 24 inches.

ELEVATOR

149. Elevators shall comply with Section 11B-407. (CBC 11B-206.6).

150. In new construction or alteration (with more than 10,000 sq. ft. in any floor), when vertical access is required or provided, such elevator shall be located within 200 ft. from stairway. (CBC 11B- 206.2.3.2).

151. Where existing elevators do not comply with CBC Section 11B-407, elevators complying with Section 11B-407 shall be identified with the international Symbol of Accessibility complying with Section 11B-703.7.2.1.

MISCELLANEOUS

1. Add the following notes:
    - ❑ *Modified fire sprinkler plans and fire-life-safety plans shall be submitted for review, approval and permit issuance.*

- *No framing or T-bar approvals will be granted without the Fire Department approval for the fire sprinklers.*
- *Exit doors and grilles shall be openable from within without the use of a key or any special knowledge or effort when the space is occupied.*
- *Lighting and mechanical fixtures must be supported by additional independent No. 12 gage wires attached to each corner of fixture.*
- *Existing site, accessible parking stalls, restrooms, etc. shall fully comply with T-24; and subject to field verification & approval.*
- *Deputy Inspectors are required to be listed by the Building Department.*
- *Structural observation per section 1704.5 of the CBC shall be provided when so designated by the registered Design Professional responsible for the structural design or, when such observation is specifically required by the Building Official*.

STRUCTURAL

1. Provide complete structural calculations to verify the adequacy of the structural system in resisting seismic, wind and gravity loads. (CBC 1604)

2. See Structural Review Comments under separate cover.

ADDITIONAL CORRECTIONS

1. Mark ups are a part of this review and will need to be addressed.

2. This review does not preclude additional corrections that may follow upon resubmittal.