

Frequently Asked Questions

Health Facility Construction

ADMINISTRATIVE

All code sections cited are based on the 2007 California Administrative Code (CAC), unless otherwise noted.

- 1. Does OSHPD provide a list of governing codes that pertain to health facilities?**

Yes. Current and previous governing codes are listed in Code Application Notice (CAN) 1-0 at: <http://www.oshpd.ca.gov/FDD/Regulations/CANs/2007/1-0.pdf>

- 2. If a project is submitted under the applicable governing codes but a newer edition of a code is available, can we pick and choose portions of a code?**

No. The project must comply with all governing codes in effect when a Preliminary or Final Application for Plan Review is submitted to the Office. Please refer to CAN 1-0 at: <http://www.oshpd.ca.gov/FDD/Regulations/CANs/2007/1-0.pdf>

- 3. What OSHPD procedure should be used when an architect or engineer disagrees with an OSHPD plan review staff member or an OSHPD field staff member on a code interpretation?**

OSHPD's clients should use the Comment and Process Review (CPR) procedure to resolve disagreements involving code interpretation issues or OSHPD processes and procedures. For additional information please refer to: http://www.oshpd.ca.gov/FDD/Plan_Review/CPR.html#CPR

- 4. What is required of a Skilled Nursing Facility (SNF) for the temporary voluntary conversion of all or a portion of its licensed bed capacity for the purpose of using the facility as a licensed Mental Health Rehabilitation Center (MHRC)?**

In 2004, legislation was passed that explains the requirements. Please refer to Section 1271.15 of the Health and Safety Code which can be found at: <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=hsc&group=01001-02000&file=1265-1271.15>

5. Are any construction projects for hospitals and skilled nursing facilities exempt from the OSHPD plan review process?

Legislation has been passed which provides that, under specific circumstances, a hospital or skilled nursing facility project may be exempt from the OSHPD plan review process. The enactment of Assembly Bill 2632 (Chapter 453, Statutes of 2004) added Health and Safety Code Section 129875.1 which allows certain maintenance and repair work projects for hospitals and skilled nursing facilities to be exempt from plan review, if specific criteria is met. AB 2632 provisions apply to such projects in “single-story” buildings. For additional information please refer to: http://www.oshpd.ca.gov/FDD/Plan_Review/AB2632.html#AB2632

The enactment of Senate Bill 1838 (Chapter 693, Statutes of 2006) added Health and Safety Code 129880 which allows hospital, skilled nursing facility and intermediate care facility construction or alteration projects costing less than \$50,000 to be exempt from the OSHPD plan review process, if specific criteria are met. OSHPD’s Policy Intent Notice (PIN) 36 outlines the process and procedures for submittal of such projects. Please refer to PIN 36 at: <http://www.oshpd.ca.gov/FDD/Regulations/PINs/36.pdf>

Although projects that meet the criteria for Health and Safety Code Section 129875.1 or 129880 are exempt from the OSHPD plan review process, they are not exempt from issuance of a building permit and construction observation by OSHPD.

OSHPD’s *Field Reviewed Projects, Exempt Projects & Expedited Review Projects Manual* (FREER Manual) provides a guide to help identify other types of projects that may be considered “exempt”. Projects that are identified as “exempt” will not require submittal of a building permit application, project plans or a fee. The project is not exempt from OSHPD field observation necessary to assure code compliance. Please refer to the FREER Manual at: http://www.oshpd.ca.gov/FDD/Plan_Review/Documents/FREER.PDF

6. Why does the application form for OSHPD plan review request the name of a “Facility Representative”?

Upon the recommendation of the hospital industry, OSHPD requests that hospitals and skilled nursing facilities identify a “facility representative” who will receive copies of all project correspondence from OSHPD and who will be the contact person when discussion of plan review or construction issues is necessary. This provides facilities easier access to information about the review of their projects and reduces confusion regarding the status of the reviews. When projects are received by OSHPD, the name of the facility representative, if identified, is entered into the project logbook database and this information is used for sending all correspondence to that individual. If this information is not provided, the “facility administrator” will receive copies of all correspondence.

7. Can a licensed specialty contractor prepare plans and specifications for a project consisting only of a fire sprinkler system?

[Relocated to Fire and Life Safety, General, Question 3]

8. What are the stamping and signature requirements for a deferred submittal?

Stamping and signature requirements must comply with CAC Section 7-126.

Please refer to: <http://www.oshpd.ca.gov/FDD/Regulations/Title-24%20part%201/2007%20Title%2024,%20Part%201%20with%20S&E%20thru%20Er010110.pdf>

9. Who is responsible for updating the Testing, Inspection, and Observation (TIO) Program for a specific project?

The architect or engineer in responsible charge of the work must maintain the TIO Program, pursuant to CAC Section 7-141 (d). Please refer to:

<http://www.oshpd.ca.gov/FDD/Regulations/Title-24%20part%201/2007%20Title%2024,%20Part%201%20with%20S&E%20thru%20Er010110.pdf>

10. Does OSHPD have a special form or letter for submitting an Alternate Method of Compliance (AMC) request?

OSHPD prefers that AMC requests are submitted on form OSH-FD-126 available through the following link:

<http://oshpd.ca.gov/FDD/Processes/index.html#compliance>

11. My plans have been stamped “approved” by OSHPD. However, during construction the OSHPD field staff has stated that the plans are not code compliant and has given verbal direction to make changes that deviate from the approved plans. What recourse, if any, do I have when this occurs?

OSHPD has an internal process for resolving issues pertaining to the approved plans. Clients may contact the Regional Compliance Officer to verify that the issue is being reviewed and resolved internally. Insofar as practical, the plans will stand as approved. However, issues involving life safety must be corrected or changed as necessary to the extent required to make the building and its occupants safe regardless of what is shown on the approved plans.

If the client does not believe the issue has been resolved satisfactorily, they may use the Comment and Process Review (CPR) procedure to resolve disagreements involving code interpretation issues or OSHPD processes and procedures. For additional information please refer to:

http://oshpd.ca.gov/FDD/Plan_Review/CPR.html#CPR

12. Does OSHPD have any concern over the process of Owner approval of Owner Vendor installations so long as they meet the Approved Contract Documents?

Yes, the installation by vendors must be under the general responsibility of the General Contractor of Record or the Owner/Builder for the specific project under which it is being installed, or must be submitted as a separate project. Otherwise, the work is being performed without benefit of a building permit, verification of appropriately licensed contractor, and verification of the necessary Worker's Compensation coverage.

13. Would OSHPD allow the contractor to hire the special inspector?

No. Section 1701A.4 of the California Building Code (CBC) requires the owner to employ the special inspector(s).

14. Does OSHPD have requirements regarding the size of paper on which plans are submitted?

Yes. CAC Section 7-113 states, "Plans/drawings size shall not exceed 36 x 48 inches, and bundled sets of plans/drawings shall not exceed 40 lbs. in weight." In addition, CBC Appendix Chapter 1, Section 106.1.1 states, "Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules and regulations, as determined by the building official."

15. Are changes to plans required to be incorporated into the original plans?

No. OSHPD does not have a policy that changes be incorporated into the original plans.

16. Does a design professional have to stamp/approve a small project if all work done is using pre-approved details?

Yes. The CAC requires plans for hospitals to be prepared by an appropriately California licensed professional. The pre-approved details have been prepared and stamped by a licensed professional. Therefore, these should not require restamping. However, someone must determine the applicability of the details to the project and prepare plans showing where the details apply, etc.

17. Can the Inspector of Record (IOR) daily report be electronic or does it have to be a hard copy?

The regulations do not specify whether the IOR report has to be a hard copy. The report is required to be retained on the job site and made available to the OSHPD field staff, the architect or engineer in responsible charge, or the owner upon request. The original field records must be turned over to the hospital governing authority upon completion of the project. Therefore, the owner may have a preference regarding the manner in which reports are made and maintained.

Regardless of the media or method of reporting used, the IOR must demonstrate, upon request by OSHPD field staff that their field records comply with the applicable regulations. If an electronic method is used, the IOR must have a manner in which the data is backed-up in the event of a hard disk crash, loss of computing equipment, etc.

18. There appears to be confusion regarding OSHPD's jurisdiction as it relates to the hospital building site. If the local jurisdiction is responsible for parking, landscaping, drainage, site utilities, etc., how far does OSHPD's jurisdiction extend beyond the building line? It was my understanding that OSHPD didn't look at anything more than 5 feet outside of the building perimeter.

It may be appropriate and necessary for OSHPD to review certain work extending beyond 5 feet from the building, such as the underground fire main, private utilities, slopes and grade pertaining to accessibility, proximity of adjacent structures for wall and opening protection requirements, fire department access, etc.

Other work shown on drawings beyond the arbitrary 5 ft. dimension are clearly within the responsibility of the local jurisdiction, such as size and number of parking spaces, landscaping and other site development features, etc. The determining factor is whether the work in question affects the compliance of the hospital building with the California Building Standards Code requirements that are enforced by OSHPD.

19. Is it permissible to plot the OSHPD approval stamp for office reviews or field reviews on our drawings?

Yes.

20. What is the proper procedure for adding additional sheets to an approved set of construction documents?

CAC Section 7-153 (a) states "Work shall be executed in substantial conformance with the construction documents approved by the Office. Changes in the work shall be made by addenda, change orders, or instruction bulletins approved by the Office." Changes or alterations of the approved construction documents prior to awarding a construction contract shall be made by means of addendum.

Changes or alterations of the approved construction documents after a contract or similar instrument of agreement has been awarded shall be made by means of change orders.

NOTE: Added scope to a project may constitute a new project. If there is any question, contact the Plan Review Supervisor for clarification prior to submitting the work to OSHPD.

21. When is it appropriate to submit changes in the form of an Instruction Bulletin (IB) rather than a Change Order (CO)?

In accordance with CAC Section 7-153 (a) 3, Instruction Bulletins are only permitted to be used to prevent undue delay in construction as determined by the OSHPD Field Staff. If it is determined that the change does not adequately demonstrate an impact to the construction schedule or it does not materially alter the work to be performed, OSHPD may reject the IB. Change that does not constitute an undue delay in construction must be submitted to OSHPD in the form of a change order. All IB's must be converted to a change order within 30 days of approval. For additional information please refer to CAN 1-7-153(a) at: [http://www.oshpd.ca.gov/FDD/Regulations/CANs/2007/1-7-153\(a\).pdf](http://www.oshpd.ca.gov/FDD/Regulations/CANs/2007/1-7-153(a).pdf)

22. If Post-Approval Documents are submitted simultaneously or closely following each other, should the information from IB #1 (now at OSHPD but not approved yet) be clouded on IB #2 (if on the same sheet) or should only the OSHPD approved changes be shown?

The clouded changes from IB #1 should be shown on IB #2. Clearly note on IB #2 that those IB #1 changes have not yet been approved.

23. Are wet signatures always required on documents submitted to OSHPD?

In CAC Section 7-111, the definition of "SIGN, SIGNED, SIGNATURE, and SIGNATURES" means to affix an individual's signature by manual, electronic, or mechanical methods. Manual method includes, but is not limited to, a pen and ink signature. Electronic method includes, but is not limited to, scanned signature images embedded in construction documents, faxes, or other electronic document files. Mechanical method includes, but is not limited to, rubber stamp signature.

24. Does the OSHPD Anchorage Pre-approval Program approve and list building materials, for example; fire-resistive systems and components?

No. The OSHPD Anchorage Pre-approval Program is not a building materials listing program. The program is limited to approvals of anchorage and bracing systems **only**. OSHPD's acceptance of fire-resistive systems and components is based on Chapter 7 of the CBC. Tested and listed systems are acceptable. CAN 2-703.3 establishes guidelines for the preparation, submittal, and review of Engineering Judgments. For additional information, please refer to CAN 2-703.3 at: <http://www.oshpd.ca.gov/FDD/Regulations/CANs/2007/2-703.3.pdf>

OSHPD does not provide endorsements regarding the acceptance or suitability of any manufacturer's product.

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ARCHITECTURAL

All code sections cited are based on the 2007 California Building Code (CBC), unless otherwise noted.

1. Does OSHPD allow the use of modular toilet/sink combination units in health facilities?

Yes, but only in Intensive Care Units. Section 1224.29.1.4 allows the use of modular toilet/sink combinations units in Intensive Care Units. The 2007 CBC states that the toilet fixture must be completely contained within cabinetry when not in use and exhaust ventilation requirements must comply with the 2007 California Mechanical Code (CMC).

2. What are the requirements for Electronic Medical Records (EMR) in health care facilities?

Section 1224.21.2 requires that hospitals provide a health record service that contains a work area for sorting and recording either paper or electronic media records and a storage area for either paper or electronic media records. Both the work area and the storage area must be indicated on the construction plans for OSHPD review.

Active and inactive medical records may be located off-site if approved by the California Department of Public Health. Medical record availability requirements are found in Section 70751 (f) of Title 22, California Code of Regulations which states: *“Medical records shall be filed in an easily accessible manner in the hospital or in an approved medical record storage facility off the hospital premises.”* The California Department of Public Health, Licensing and Certification (L&C) is authorized to approve the “off-site” storage of medical records, whether the records are active or inactive. For new construction or a relevant remodeling project, OSHPD must receive a copy of the L&C approval letter if the electronic medical records system is “off the hospital premises”. If the EMR computer server is located in the hospital, OSHPD must review the server location, anchorage, fire and life safety requirements, mechanical requirements, and electrical requirements.

Frequently Asked Questions

Health Facility Construction

ELECTRICAL

All code sections cited are based on the 2007 California Electrical Code (CEC), unless otherwise noted.

1. When is fire-resistant construction required for an electrical room or a transformer room?

Article 450.21(B), states that individual dry-type transformers of more than 112½ kVA installed indoors must be installed in a transformer room of fire-resistant construction. Unless otherwise specified in this article, the term fire-resistant means construction having a minimum fire rating of one hour. Refer to Article 450.21(B) for exceptions.

2. Are electrical rooms considered storage rooms in Table 508.2 of the 2007 California Building Code (CBC)?

Electrical rooms are not storage rooms; therefore, they are not required to meet the “storage rooms” requirements of Table 508.2 of the CBC.

3. Is fire alarm wiring required to be installed in conduit?

In general, the fire alarm wiring must be installed in conduit; however exceptions are described in Articles 760.30 and 760.52.

4. Are wireless nurse call systems allowed in health facilities?

Articles 517.42 and 517.44 allow wireless nurse call systems in skilled nursing facilities and intermediate care facilities. Wireless nurse call systems are not allowed in general acute-care hospitals. The system must comply with ANSI/UL 1069, Standard for Hospital Signaling and Nurse Call Equipment. In addition, all wireless nurse call systems must comply with Article 517.123.

Frequently Asked Questions

Health Facility Construction

FIRE AND LIFE SAFETY

All code sections cited are based on the 2007 California Fire Code (CFC), unless otherwise noted.

GENERAL

- 1. Who decides what fire alarm and fire sprinkler deferred submittal plans can be reviewed in the field?**

The decision to review these plans is based on OSHPD staff workload. The field Fire and Life Safety Officer decides what fire alarm and fire sprinkler deferred submittal plans are reviewed in the field. The OSHPD FREER Manual is used as a guide for these projects. Please refer to the FREER Manual at:
http://www.oshpd.ca.gov/FDD/Plan_Review/Documents/FREER.PDF

- 2. What are the code requirements for temporary construction barriers?**

Please refer to OSHPD's Code Application Notice (CAN) 9-1401 (formerly 9-8705.4) at:
<http://www.oshpd.ca.gov/FDD/Regulations/CANs/2007/9-1401.pdf>

- 3. Can a licensed specialty contractor prepare plans and specifications for a project consisting only of a fire sprinkler system?**

Yes, if the sprinkler piping does not exceed 2.5 inches in diameter. Upon submittal to the Office, the contractor shall include a signed statement stating that he or she is licensed, the number of the license, and that the license is in full force and effect, in accordance with CAC Section 7-115 (c).

4. As used in CAN 2-703.3, what does the term "manufacturer's qualified technical personnel" mean?

The "manufacturer's qualified technical personnel" means someone who is involved in the research, development, design, testing, listing, etc. of the product that is being proposed as a substitute or to be used in an alternative configuration. For example, this individual may be a member of the engineering staff for a firestop company who is involved in the development of a product, its in-house testing, its characteristics and behaviors under fire conditions, its performance and suitability for the various conditions and circumstances it has been tested under, how it performs during full-scale testing at the testing laboratory, what its limitations are, etc. This person is typically not a sales person but he or she is part of the technical group responsible for R&D. He or she may or may not be a registered professional engineer, but may be more qualified to render an engineering opinion regarding their product than a third party fire protection consultant who is paid to review test data, usually provided by this same individual.

Systems that are unusually complex or involve multiple disciplines may require a licensed professional to take responsibility for the proposed substitution or it may require full-scale testing by an approved testing agency. The architect or engineer in responsible charge has complete responsibility for any design alternatives proposed and acceptable to them for their project.

5. Which sheets of the construction documents should contain the details for temporary construction barriers; demolition sheets, architectural sheets, both?

Demolition sheets.

6. Temporary construction barrier partitions are often built in the existing corridors (parallel with the corridor walls). What are OSHPD's recommendations for permissible corridor width for this interim condition?

6 feet minimum where serving bed patients; 44 inches elsewhere. For additional information please refer to CAN 9-1401 at:
<http://www.oshpd.ca.gov/FDD/Regulations/CANs/2007/9-1401.pdf>

7. Who can submit (stamp) deferred approval fire sprinkler or fire alarm plans for projects in health care facilities?

Fire sprinkler submittals must be designed, stamped and signed by a mechanical engineer or an architect. Fire alarm submittals must be designed, stamped and signed by an electrical engineer or an architect. Bracing and hangers for sprinkler piping 2 ½" or larger must be designed, stamped and signed by an architect or an engineer (mechanical, civil or structural). A Fire Protection Engineer is currently not approved for design of construction in healthcare facilities.

CAC Section 7-126 (c) states “Stamping and signing of deferred submittals shall comply with Section 7-115 (a) and (b).”

CAC Section 7-115 (a) and (b) states “All construction documents or reports shall be prepared under an architect or engineer in responsible charge. A mechanical or electrical engineer may prepare construction documents or reports for projects where the work is predominately of the kind normally prepared by mechanical or electrical engineers, and a civil engineer may prepare construction documents or reports for the anchorage and bracing of nonstructural equipment.”

CAC Section 7-115 (c) allows a licensed specialty contractor to prepare construction documents and administer the work of construction for health facility construction projects of a limited scope. This includes stand-alone sprinkler system projects where none of the piping exceeds 2 ½” as well as stand-alone power-limited fire alarm projects (replacement, upgrades, etc.) but does not allow a contractor to design (stamp) fire sprinkler or fire alarm work that is a part of a project prepared by an architect or engineer.

8. For a remodel of a limited area of a healthcare facility, how should hazardous materials inventories be categorized?

- **List of hazardous materials by room?**
- **Total of quantities by room?**
- **Total of quantities by floor?**
- **Include areas not in the area of remodel?**

To expedite the plan review process and evaluate compliance with the requirements for the storage and use of hazardous materials, a Hazardous Materials Inventory Statement prepared in accordance with OSHPD Policy Intent Notice (PIN) 8, must be included on or with project plans submitted to OSHPD. For additional information please refer to PIN 8 at:
<http://www.oshpd.ca.gov/FDD/Regulations/PINs/8.pdf>

For projects that involve an inordinate amount of hazardous materials, a clear identification of the boundaries of the hazardous materials control areas may be necessary, and a complete inventory of the entire control area may be warranted to determine if the change of quantities in the new room/area will impact the occupancy classification. It is recommended the project be reviewed early with the OSHPD field Fire and Life Safety Officer to ensure all aspects of this complex issue are being adequately addressed.

SMOKE BARRIERS

- 1. Are smoke compartment walls required to be provided in ground level lobbies?**

Smoke barriers for occupancies in Groups I-2 and I-2.1 shall be provided to subdivide every story used by patients for sleeping or treatment and to divide other stories with an occupant load of 50 or more persons, into at least two smoke compartments. CBC Section 407.4 contains additional requirements and exceptions.

- 2. Smoke zones are required to be 150 feet maximum in length or width but OSHPD is interpreting that to mean both length and width. As long as compartment size is less than 22,500 sq. feet, does the length or width need to be limited?**

For projects governed by the 2001 CBC, in accordance with Section 308.2.2.1, the area within a smoke-control zone shall not exceed 22,500 sq. feet and its width or length shall not exceed 150 feet. However, for projects governed by the 2007 CBC, in accordance with Section 407.4, smoke compartments shall have an area of not more than 22,500 sq. feet and the travel distance from any point in a smoke compartment to a smoke barrier door shall not exceed 200 feet. There are presently no length or width restrictions in the 2007 CBC.

- 3. Is each door in a smoke barrier partition, other than cross-corridor doors, required to be provided with an electronic hold-open device in addition to the “self-closing” door closer (such as a janitor closet door or bathroom door)?**

Yes, for projects governed by the 2001 CBC, Section 308.2.2 states “Doors installed across corridors shall comply with Section 713.6.1, Item 3, and doors on the floor or in the affected zone shall automatically close if the fire alarm or sprinkler system is activated.”

No, for projects governed by the 2007 CBC, Section 709.5 only requires those doors that are installed across corridors to be automatic closing by smoke detection in accordance with Section 715.4.7.3.

FIRE-RESISTANT MATERIALS AND CONSTRUCTION

- 1. In buildings of Type I or II construction, is a fire block required at the corridor ceiling?**

No. Fire blocking is only required in combustible construction in accordance with CBC Section 717.

2. When is a T-Rating required for penetrations?

CBC Section 712.4.1.1.2 requires through penetrations of fire-resistance rated floors, floor/ceiling assemblies or the ceiling membrane of a roof/ceiling assembly to be protected by a through-penetration firestop system having an F-rating and a T-rating of not less than 1 hour, but not less than the required rating of the floor penetrated. Floor penetrations contained and located within the cavity of a wall do not require a T-rating.

There are a few limited exceptions to this requirement in Section 712.4.1.1. These include penetrating items with a maximum 6-inch nominal diameter penetrating a single fire-resistance-rated floor assembly, provided the aggregate area of the openings through the assembly does not exceed 144 square inches in any 100 square feet of floor area.

3. Is the dimension for the edge-of-slab to the face of the exterior “curtain wall” required to comply with UL exterior wall perimeter fire containment systems?

Yes. CBC Appendix Chapter 1, Section 106.1.3 states “Construction documents for all buildings shall describe the exterior wall envelope in sufficient detail to determine compliance with this code”. These dimensions need to be clearly detailed on the plans, but not necessarily on the construction documents.

4. Are there listed fire assemblies for tube steel beams?

At this time there are no tested/approved fire-resistive assemblies for tubular steel members used in the beam configuration. CBC Section 703.3 includes alternative methods for determining fire resistance that can be used to establish fire-resistance. The procedures listed are:

- a) Fire-resistance designs documented in approved sources.
- b) Prescriptive designs of fire-resistance-rated building elements as prescribed in Section 720.
- c) Calculations in accordance with Section 721.
- d) Engineering analysis based on a comparison of building element designs having fire-resistance ratings as determined by the test procedures set forth in ASTM E-119.
- e) Alternative protection methods as allowed by Section 104.11.

5. For walls of one-hour fire resistive construction where opening protection is not required, is it permissible for the wallboard to terminate just above the ceiling?

Yes.

FIRE ALARM**1. Are conduits and boxes allowed to be installed prior to OSHPD's approval of a fire alarm deferred submittal?**

No, unless shown on the approved Electrical plans. If the conduits and boxes are not shown on the approved Electrical plans, CAC Section 7-153 (d) 2, requires that submittal documents must be approved by OSHPD prior to the installation of deferred submittal items.

2. Where should the pull station be located in relationship to an exit?

NFPA 72, 2002 edition, Section 5.12.6 states that manual fire alarm boxes must be located within five feet of the exit doorway opening at each exit on each floor.

3. Does OSHPD accept the use of driven pins or shot pins for the support of fire alarm conduits?

Yes. Power-Actuated Fasteners are permitted to be used for support of gravity loads not to exceed 50% of the rated capacity of the fastener (approximately 100 pounds maximum). Power-Actuated Fasteners are also permitted to resist seismic horizontal forces in shear but are not permitted for seismic tensile loads. For additional information, please refer to CAN 2-1916A.8 at:

<http://www.oshpd.ca.gov/FDD/Regulations/CANs/2007/2-1916A.8.pdf>

4. In Group I Occupancies, are fire alarm notification devices required to be designed and installed in accordance with the NFPA 72 provisions for Public Mode or for Private Mode?

NFPA 72 Section 3.3.122 defines Private Operating Mode as “audible or visible signaling only to those persons directly concerned with the implementation and direction of emergency action initiation and procedure in the area protected by the fire alarm system” or “staff-alerting”. Public Operating Mode is defined as “audible or visible signaling to occupants or inhabitants of the area protected by the fire alarm system” or “occupant alerting”.

Most healthcare facilities have areas within the building that are considered “Private Mode” (such as patient sleeping areas, critical care areas, operating rooms, etc.) where alerting of the facility staff is necessary to affect the relocation of patients who are incapable of unassisted self-preservation; they also contain areas that are considered “Public Mode” (such as lobbies, waiting areas, dining facilities, etc.) where occupants are capable of unassisted self-preservation. There are also areas that are considered mixed (such as patient rooms during visitation, labor/delivery rooms with family visiting, outpatient facilities used for in-patient diagnostic & treatment, etc.).

The only distinction between areas requiring public mode notification and areas requiring private mode notification is the minimum sound pressure levels of the audible notification appliances. To ensure that audible public mode signals are clearly heard, NFPA 72, Section 7.4.2.1 requires audible notification appliances (such as horns, bells, chimes, etc.) have a sound level at least **15 dB** above the average ambient sound level or 5 dB above the maximum sound level, whichever is greater, measured 5 ft. above the floor in the occupiable area. To ensure that audible private mode signals are clearly heard, NFPA 72, Section 7.4.2.1 requires audible notification appliances (such as horns, bells, chimes, etc.) have a sound level at least **10 dB** above the average ambient sound level or 5 dB above the maximum sound level, whichever is greater, measured 5 ft. above the floor in the occupiable area.

CFC Section 907.2.6.2 requires audible appliances be used in non-patient areas; however visible appliances may be used in lieu of audible appliances in patient-occupied areas – clearly a ‘private mode’ consideration. When the designer elects to use this provision of the code, strobes must be located in every room to notify staff of the event of a fire. When audible appliances are placed in patient areas, they may be only chimes or similar sounding appliances for alerting staff – also a “private mode” requirement. To avoid confusion during an emergency, mixing of alarm sounds (such as chimes and horns) within the same building is prohibited. Therefore, audible notification devices in healthcare facilities must be the staff alerting chimes or similar sounding appliances throughout the building, including those portions of the building that are clearly public mode notification areas. However, the designer need only meet the audible sound pressure level requirements of 10dB above ambient throughout the facility.

CFC Section 907.10.1.1 contains the requirements for visual notification appliances in all public and common use areas. These requirements override the provisions in NFPA 72, Section 7.5 for Public or Private Mode and require visible alarm notification appliances in public use areas and common use areas including but not limited to:

1. Sanitary facilities including restrooms, bathrooms and shower rooms
2. Corridors
3. Music practice rooms
4. Band rooms
5. Gymnasiums
6. Multipurpose rooms
7. Occupational shops
8. Occupied rooms where ambient noise impairs hearing of the fire alarm
9. Lobbies
10. Meeting rooms
11. Classrooms

OSHPD CAN 9-907.10.1.1 contains additional clarifications where strobes are required to be installed in healthcare facilities which can be viewed at: <http://www.oshpd.ca.gov/FDD/Regulations/CANs/2007/9-907.10.1.1.pdf>

FIRE/SMOKE DAMPERS (FSD)

- 1. Can a horizontal FSD be used at the top of a shaft or does a rated enclosure “dog house” need to be constructed so the installation of a vertical FSD can be used?**

If the damper is listed for the application, as required by Section 716.5.3, additional framing or a “dog house” is not required.

- 2. Does each smoke fire damper require individual service power disconnecting means?**

Yes. California Electrical Code (CEC) Section 430.102(B) states “A disconnecting means shall be located in sight from the motor location and the driven machinery location....”

Section 430.109 regulates the types of disconnecting means that may be used; subsection ‘B’ states “For stationary motors of 1/8 hp or less, the branch-circuit overcurrent device shall be permitted to serve as the disconnecting means.”

MEANS OF EGRESS

- 1. What is OSHPD’s position regarding access control devices (magnetic locks) on path of egress doors?**

CBC Section 1008.1.3.4 addresses access-controlled egress doors. This section states “The entrance doors in a means of egress in buildings with an occupancy in Group A, B, M, R-1 or R-2 and entrance doors to tenant spaces in occupancies in Groups A, B, M, R-1 and R-2 that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 and approved automatic smoke detection system installed in accordance with Section 907, are permitted to be equipped with an approved entrance and egress access control system.....” Since Group I occupancies are not included in this list, access-control devices such as card readers or keypads are not permitted on means of egress doors in hospitals. This causes compliance difficulties where DPH Licensing & Certification has requirements for infant security, security in emergency departments, and security in other parts of the hospital.

This issue will be corrected in the 2010 CBC, but until that time, OSHPD is interpreting this limitation to apply to exterior doors only; interior doors may be provided with electronic access-control devices that comply with all of the provisions of section 1008.1.3.4.

2. Does OSHPD allow the installation of alcohol-based hand sanitizer dispensers in corridors?

Yes. Alcohol-based hand-rub dispensers are permitted in corridors in Group I-2 occupancies in accordance with Section 1003.3.3.1.

3. Can an information/registration desk be open to a corridor?

Yes. CBC Section 1017.5 permits foyers, lobbies or reception rooms constructed as required for corridors to be open to the corridor. The information/registration desk would be limited to the types of equipment and supplies normally associated with a reception desk. This is generally limited to a telephone and a computer terminal with a very limited amount of combustibles.

4. When remodeling a hospital where the exit passageways contain waiting areas and security desks, do we need to bring all exit passageways into compliance with CBC Section 1005.3.4.1?

Code Application Notice (CAN) 2-3403A (formerly CAN 2-34) provides owners, designers and authorized plan review and enforcement agencies with a consistent method for planning, reviewing and implementing projects on existing hospital buildings and systems. Generally the scope of the project defines the extent of upgrades, however other factors, such as a remodel that increases the occupant load, may drive upgrades in the means of egress beyond the scope of the project.

MISCELLANEOUS

1. May an underground tank occur within a side yard?

Yes. CFC Section 3404.2.11.2 regulates the location flammable and combustible liquid storage tanks located underground, either outside or under buildings.

Frequently Asked Questions

Health Facility Construction

MECHANICAL

*All code sections cited are based on the
2007 California Mechanical Code (CMC), unless otherwise noted.*

[Reserved]

Frequently Asked Questions

Health Facility Construction

PLUMBING

All code sections cited are based on the 2007 California Plumbing Code (CPC), unless otherwise noted.

- 1. Does Section 612.5 require the flow of hot water to be stopped when the hot water temperature exceeds 125°F and the high temperature alarm is activated?**

No. Due to the possibility of patients receiving thermal shock from cold water, OSHPD discourages the use of any device, such as solenoid valve, to stop the flow of hot water when the high temperature alarm is activated. If the design professional or facility wishes to stop the flow of hot water, the flow of cold water must also be stopped to prevent the patient from receiving thermal shock from the cold water.

- 2. Are “roof drains” allowed over operating rooms?**

No. Section 311.9 states that drainage piping over operating rooms shall be kept to a minimum. Drainage piping includes roof drains. For additional information please refer to CAN 5-311.9 at:

<http://www.oshpd.ca.gov/FDD/Regulations/CANs/2007/5-311.9.pdf>

- 3. Assembly Bill 1953, Statutes of 2006, Chapter 853, which amends Section 116875 of the Health and Safety Code, redefines “lead free” regarding the use, installation or repair of pipes, pipe or plumbing fittings, or fixtures. The law became effective as of January 1, 2010. Will OSHPD be enforcing these requirements for projects approved under the 2001 CPC?**

No. The agency responsible for implementation of these requirements is the California Department of Public Health. OSHPD enforces the provisions of Title 24, Part 5, CPC. The 2001 edition of the CPC was not amended to implement these revised standards for the definition of “lead free”. The 2007 CPC includes reference to the revised standards (see 2007 CPC Section 604.10), and as required by Health and Safety Code Section 116880, OSHPD will enforce the revised standards for projects approved under the 2007 CPC.

Frequently Asked Questions

Health Facility Construction

STRUCTURAL

All code sections cited are based on the 2007 California Building Code (CBC), unless otherwise noted.

STRUCTURAL DESIGN

- 1. Can OSHPD Pre-Approvals (OPA) based on the 2001 CBC be used on projects governed by the 2007 CBC?**

Yes. Existing OSHPD Pre-Approvals (OPA) based on the 2001 CBC may be used without modification on projects subject to the 2007 CBC. All aspects of the design and installation of the pre-approval component or system, including computation of the lateral forces, shall be in accordance with the approved OPA.

- 2. Section 1614A.1.9 requires scaling of modal base shear (base shear calculated by the response spectra method) upward to the equivalent static base shear. Can the modal base shear be scaled down?**

No. If the calculated modal base shear is higher than the equivalent static base shear, the design must be based on the modal base shear without reduction.

ASCE 7-05, Section 12.9.2 permits modal base shear to be calculated by using response spectra defined in either Section 11.4.5 or 21.2 in ASCE 7-05 divided by the quantity R/I .

- 3. Section 11.2 of ASCE 7-05 defines a bearing wall as any metal or wood wall that supports more than 100 lb./linear ft. of vertical load in addition to its own weight and any concrete or masonry wall that supports more than 200 lb./linear ft. of vertical load in addition to its own weight. Does this definition apply to Table 12.2-1, Design Coefficients and Factors for Seismic Force-Resisting Systems in ASCE 7-05?**

Yes. Definitions in Section 11.2 of ASCE 7-05 apply to all seismic requirements in the 2007 CBC and ASCE 7-05, unless modified in the 2007 CBC.

4. **Section 12.8.7 of ASCE 7-05 permits β (the ratio of shear demand to shear capacity for the story) to be conservatively taken as 1.0. For steel special moment resisting frames (SMRF), with $C_d = 5.5$ and $\beta = 1$, $\theta_{max} = 0.09$, which is less than 0.10. Does that mean that no P- Δ effects need to be considered for steel SMRF design?**

No. P- Δ effects shall be considered for all steel frame design as required by Section C1 of AISC 360-05 and for all concrete frame design as required by Sections 10.10 through 10.13 of ACI 318-05. See Section 101.7.2 of the 2007 CBC.

5. **Are the site-specific spectra required for all modal response spectrum analysis under the 2007 CBC?**

No. Site-specific spectra are only required when specified in CBC Section 1614A.1.2. However, site-specific spectra may be used for any structure.

6. **Does OSHPD permit an increase in drift limit to 125% of the drift limit specified in Section 12.12.1 of ASCE 7-05, as allowed in Section 16.2.4.3 of ASCE 7-05?**

Yes, provided an analysis is performed as required by ASCE 7-05, Chapter 16 and the 2007 CBC, Section 1614A.

7. **How does one go about calculating the building separation in accordance with Section 12.12.3 of ASCE 7-05?**

The building separation between two buildings may be calculated as the algebraic sum of the total deflection (δ_x) of the two buildings as determined in Section 12.8.6 (Equation 12.8-15) of ASCE 7-05.

8. **Can the strength reduction factor or resistance factor, ϕ , be taken as 1.0 when using load combinations with overstrength factor or when seismic forces are amplified by the system overstrength factor, Ω_0 ?**

No. However, for Allowable Stress Design (ASD) load combinations with the overstrength factor, an increase in allowable stress is permitted by Section 12.4.3.3 of ASCE 7-05.

9. Does OSHPD permit wind load calculations based on the Division of the State Architect (DSA), Interpretation of Regulations (IR) #16-7, Wind Load Determination – Alternate Method?

No. However, OSHPD has amended the 2007 CBC to adopt simplified wind load provisions. See CBC, Sections 1609.1.1 and 1609A.1.1.

10. Can we use the Seismic Load Effect including Overstrength Factors as shown in Section 12.4.3 of ASCE 7-05 instead of the Special Seismic Load Combinations shown in Section 1605A.4 of the 2007 CBC?

Yes. Special Seismic Load Combinations in Section 1605A.4 of the 2007 CBC were revised in the 2007 Supplements to the 2006 International Building Code (IBC) for consistency with ASCE 7-05. There are additional proposals to further modify the IBC prior to publication of the 2009 edition.

11. Does seismic bracing of overhead utilities require a deferred submittal or will these submittals consistently be triaged and field approved by the Office?

An item is never required to be submitted as a deferred submittal, however, for systems that are often designed by the vendors or specialty contractors, such as seismic bracing, deferred submittals are common. Pre-approved systems may be used for the anchorage and bracing of pipes, conduits and ducts. A California Licensed Structural Engineer has designed the pre-approved systems, along with supporting calculations. Therefore, the pre-approved details and calculations are not to be re-reviewed by regional staff. However, each pre-approved system requires submittals that must be reviewed and approved by OSHPD.

As with all pre-approved details, systems, etc., plans are still required showing how and where the pre-approved anchorage and bracing systems will be applied to each applicable system on a project specific basis. This process is needed to verify that the appropriate detail has been selected and applied for each condition and for the actual substrate that it will be connected/attached to. Depending on the system to be anchored and/or braced, these plans may be prepared by an architect or engineer. See CAC Section 7-115.

The pre-approved systems typically rely on a prescriptive cookbook approach. The pre-approved details have tables and charts associated with them that must be used to select the appropriate detail for each location that an anchor or brace is to be installed. The application of these criteria should never become the responsibility of the IOR, whose responsibility is to inspect only, not design.

The structural engineer of record must review and forward the anchorage and bracing plans for plan check with a notation indicating that the plans have been reviewed and they have been found to be in general conformance with the design of the project; see CAC Section 7-153 (d). A “shop drawing stamp” is usually acceptable for compliance with this requirement.

The regional staff, on a project specific basis, must review anchorage and bracing details and supporting calculations that are not part of a pre-approved system. Review of anchorage and bracing details of this nature do not constitute a pre-approval that may be used on other projects without the benefit of plan review.