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CODE APPLICATION NOTICE (CAN)
H&S Code §129851

SUBJECT

Remodel (Renovations, Alterations, Repairs)

(2019 CBSC Edition)

CAN: **2-102.6**

Effective: **11/08/2019**
Revised: **08/03/2021**

CODE SECTIONS

Section 102.6
California Building Code (CBC)

Sections 102.4 and 102.6
California Mechanical Code (CMC)

Sections 102.4 and 102.6
California Plumbing Code (CPC)

California Building Code

DIVISION II SCOPE AND ADMINISTRATION
SECTION 102 APPLICABILITY

102.6 Existing structures. The legal occupancy of any structure existing on the date of adoption of this code shall be permitted to continue without change, except as otherwise specifically provided in this code, the *California Existing Building Code,* the *International Property Maintenance Code,* the *California Fire Code,* or as is deemed necessary by the building official for the general safety and welfare of the occupants and the public.

California Mechanical Code

DIVISION II ADMINISTRATION
102.0 Application to Existing Mechanical Systems.

102.4 Additions, Alterations, Renovations or Repairs. Additions, alterations, renovations, or repairs shall conform to that required for a new mechanical system without requiring the existing mechanical system to be in accordance with the requirements of this code. Additions, alterations, renovations, or repairs shall not cause an existing system to become unsafe, insanitary or overloaded.

Additions, alterations, renovations, or repairs to existing mechanical systems installations shall comply with the provisions for new construction, unless such deviations are found to be necessary and are first approved by the Authority Having Jurisdiction.

102.6 Changes in Building Occupancy. Mechanical systems that are a part of a building or structure undergoing a change in use or occupancy, as defined in the building code, shall be in accordance with the requirements of this code that are applicable to the new use or occupancy.

California Plumbing Code

DIVISION II ADMINISTRATION
102.4 Additions, Alterations, Renovations or Repairs. Additions, alterations, renovations, or repairs shall conform to that required for a new system without requiring the existing plumbing system to be in accordance with the requirements of this code. Additions, alterations, renovations, or repairs shall not cause an existing system to become unsafe, insanitary or overloaded.

Additions, alterations, renovations, or repairs to existing plumbing systems shall comply with the provisions for new construction unless such deviations are found to be necessary and are first approved by the Authority Having Jurisdiction.

102.6 Changes in Building Occupancy. Plumbing systems that are a part of a building or structure undergoing a change in use or occupancy, as defined in the building code, shall be in accordance with the requirements of this code that are applicable to the new use or occupancy.

PURPOSE

The purpose of this Code Application Notice (CAN) is to provide owners, designers and authorized plan review and enforcement agencies with a consistent method for planning, reviewing and implementing projects on existing buildings and systems. Historically, these types of projects have proven difficult because of the structure of the code, nonspecific requirements for applicability to existing structures, and Title 22 requirements to conform to the current code for any alteration affecting the function of a licensed health facility.

INTERPRETATION

Alternate Materials and Methods of Construction
These guidelines are not intended to prevent the use of an alternate material or method of construction provided OSHPD approves the alternate. The requirements for alternate materials and methods of construction are shown in CBC Section 104.11, CMC Section 302.2, and CPC Section 301.3.

How to use the Guidelines
The guideline information is presented as a series of flowcharts which describe the process and a narrative which explains each item on the flowchart. These flowcharts are mutually supporting and are meant to be used concurrently to provide an accurate guide for project accomplishment.

For the purpose of implementing this CAN, the following guidelines (attached) shall be used:

1. Health Facility Remodel Flow Chart / Narrative
2. Architectural Remodel Flow Chart / Narrative
3. Electrical Remodel Flow Chart / Narrative
4. Fire and Life Safety Remodel Flow Chart / Narrative
5. Mechanical, Plumbing, and Medical Gas and Vacuum Systems Remodel Flow Chart / Narrative

The main document, titled “Health Facility Remodel Flowchart”, describes the entire process from project inception through construction. Please note that this flowchart addresses the two following common areas of concern regarding remodel projects:

1. The need for a pre-design consultation with the office.
2. How to handle conditions discovered during construction.

Examples will be provided following the flowcharts.

Structural Issues
Historically, OSHPD has not observed a problem with designers identifying the structural scope of remodels, which is why this document does not include structural considerations in the flow charts. However, this CAN may be helpful in determining the scope of work required for non-structural elements, components and systems affected by seismic repairs to existing buildings or structures. For OSHPD 1, the structural additions, alterations or repairs shall meet the requirements of CEBC Chapter 5A. OSHPD 1R, 2, 4 and 5 projects should be evaluated to ensure that they meet the requirements of CEBC Chapter 5. If a designer has questions regarding the structural considerations on a project, they are encouraged to contact the appropriate OSHPD structural plan review staff.

Temporary Construction
OSHPD recognizes that temporary construction is sometimes required to accommodate phasing of construction or to provide a transitional solution to a problem. Because each temporary installation is unique, OSHPD will review each installation on an individual basis. Refer to CAN 2-108 for more information on temporary conditions.

All required temporary construction must be shown on the plans or reviewed by OSHPD field staff. Required means of egress shall be maintained during demolition, construction, remodeling, renovations, or alterations in compliance with CFC Chapter 33, Fire Safety During Construction and Demolition. Temporary construction barriers must comply with OSHPD CAN 9-3301, Fire Resistive Assemblies and Construction. Temporary services or equipment must be provided and shown on the plans for projects that involve the replacement of an air handling unit, a medical air compressor, a medical vacuum pump, or similar types of equipment unless it serves unoccupied space. The plans must show work or construction needed to maintain operations in the areas affected by the temporary installation or condition. Methods of procedures that are for clinical or patient care services are under the jurisdiction of the California Department of Public Health (CDPH) and not OSHPD, such as the use of bottled gases instead of piped gases, infection control procedures, general patient care and safety, etc. Therefore, OSHPD does not review Methods of Procedures. Temporary installations must not have a negative impact on existing systems nor cause unsafe conditions. Also see CAN 2-108, Temporary Systems, Utilities and Equipment.

Assessing Existing Conditions
Additions, Alterations, Renovations or Repairs are prone to previously unknown conditions being discovered once construction commences. Correction of these conditions, once construction starts, can be costly and create undesired delays. Several resources and processes can help assess existing conditions.

1. Review as-built/record drawings.
2. Review facility's historic documentation/archives.
3. Perform Condition Assessment/Material Testing/Surveys/Feasibility Study.
4. Identify and overcome constraints for progress.
5. Facility representative should assist in identifying known deficiencies and consider a mitigation path.
6. Design Team, General Contractor (GC) and Owner survey existing conditions together for familiarity and awareness.
7. Site Investigation by design team – there may be costly consequences of restricting access.
8. Allow access to infrastructure to the design team and/or GC for predesign assessment.
9. Photography and scanners are useful tools for documenting existing conditions.
10. Destructive (soft) demolition may be considered to access hidden conditions.
11. Consider an early demolition project to identify and/or investigate inaccessible areas.
12. Develop and apply for facility or building specific Pre-Approved Details.
13. Identify and address previously unauthorized work.
14. Identify possible abatement issues (asbestos, lead, mold).

Pre-Design Conference
The flow charts and corresponding narratives are intended as a guide in establishing the level of compliance that OSHPD will require for projects that involve existing buildings and their systems. We encourage our clients to call or meet with OSHPD staff when the flow charts and narratives do not address a specific project or issue, or when it is unclear as to how to proceed with the proposed project.

Accessibility
The issues relating to accessibility requirements when applied to remodel, renovation, repair, or alteration projects is extensive and is therefore addressed in CAN 2-11B, Accessibility in Health Facilities. Also, refer to CBC Section 11B-202.

It is important to anticipate and research deficiencies in existing accessibility as well as probable Path of Travel accessibility deficiencies so that they are accounted for in the project budget, schedule and scope.

OSHPD Requirements
This CAN has been developed to clarify the remodel requirements pursuant to CEBC Sections 302 and 302A. The adoption matrix in the CEBC shows that Chapter 3A has been adopted for OSHPD 1 only.

CEBC Chapter 3 has been adopted for specific sections for OSHPD 1R, 2, 3, 4 and 5. Because there are no material differences between Chapter 3 and 3A regarding the issues discussed in this CAN, the attached flow charts shall be used on OSHPD 1, 1R, 2, 3, 4 and 5 projects.

Terms and Definitions
The following terms are utilized in this guideline. Definitions found in the California Building Standards Code apply.

Alteration. Any construction or renovation to an existing structure other than repair or addition.
[DSA-AC] A change, addition or modification in construction, change in occupancy or use, or structural repair to an existing building or facility. Alterations include, but are not limited to, remodeling, renovation, rehabilitation, reconstruction, historic restoration, resurfacing of circulation paths or vehicular ways, changes or rearrangement of the structural parts or elements, and changes or rearrangement in the plan configuration of walls and full-height partitions. Normal maintenance, reroofing, painting or wallpapering, or changes to mechanical and electrical systems are not alterations unless they affect the usability of the building or facility. See CBC Section 202. Interpretation in CAN 2-11B.

Change in Function. A change in activity, service or licensed service provided, within the project limits, that does not change the use, specific use, or occupancy.
Conversion of a space that results in a change in activity such that the space will be required to satisfy the functional space requirements under a different code sub-section than that of the prior use is considered a change in function. See CBC 1224.3.

Change of Occupancy/Use. Change of an occupancy or use as defined in Chapter 3 of the CBC. Also see CEBC Section 506.1 and 506A.1.

Change of Occupant Load. A change in the number of persons for which the means of egress of a building or portion thereof is designed. Also see CBC Section 1004.

Current Code. California Building Standards Codes and referenced standards in effect at the time of application for plan review (see OSHPD CAN 1, Enforceable Codes and OSHPD Policy Intent Notice (PIN) 54, Application of Enforceable Codes).

Discovered Condition. A pre-existing condition not in the scope of work found during construction.

Emergency Repair. Repair to or replacement of an element of a building, structure, utility system or equipment that is essential to the continued safe occupation and operation of a facility. May include repairs needed after a disaster. Emergency repair does not include the ongoing replacement or upgrading of equipment that should be scheduled as corrective or preventive maintenance.

Equipment Replacement in Kind. Equipment replacement that meets the general functional specifications and operational use of the item it is replacing, does not change the use or architecture of the space, room, or building, and does not require alterations to the space, room, or building other than related changes to plumbing, mechanical, or electrical services and/or connections to adapt to the new equipment, and equipment anchorage. Replacement of equipment shall not decrease the accessibility of the space, room, or building that was provided by the equipment it is replacing.

Essential Electrical System (EES). This is the system described in California Electrical Code (CEC) Sections 517.25 through 517.45.

Health Facility. Any health facility licensed pursuant to Section 1250 of the Health and Safety Code under the jurisdiction of the Office.

Load Capacity. This term refers to the rated ability of electrical equipment to carry loads calculated in accordance with the requirements of the CEC.

Load Capacity Verification. How one determines and documents load capacity. Refer to the CEC Article 220 and OSHPD PIN 38, Electrical Load Capacity Verification Guideline.

Maintenance. The routinely recurring work required to keep a facility (plant, building, structure, utility system, etc.) in such condition that it may be continuously utilized, at its original or designed capacity and efficiency, for its intended purpose. Actions necessary for retaining or restoring an existing element or component of a building, piece of equipment, machine, or system to the specified operable condition to achieve its maximum useful life, including corrective maintenance and preventative maintenance.

Non-Essential Electrical System (Non-EES). This is normal source system described in CEC Sections 517.30, 517.31, 517.41 and 517.42.

Panel. Any panelboard, switchboard, motor control center, distribution panelboard, etc. Transfer switches and transformers are not defined as panels. Refer to CEC Articles 100 and 408.

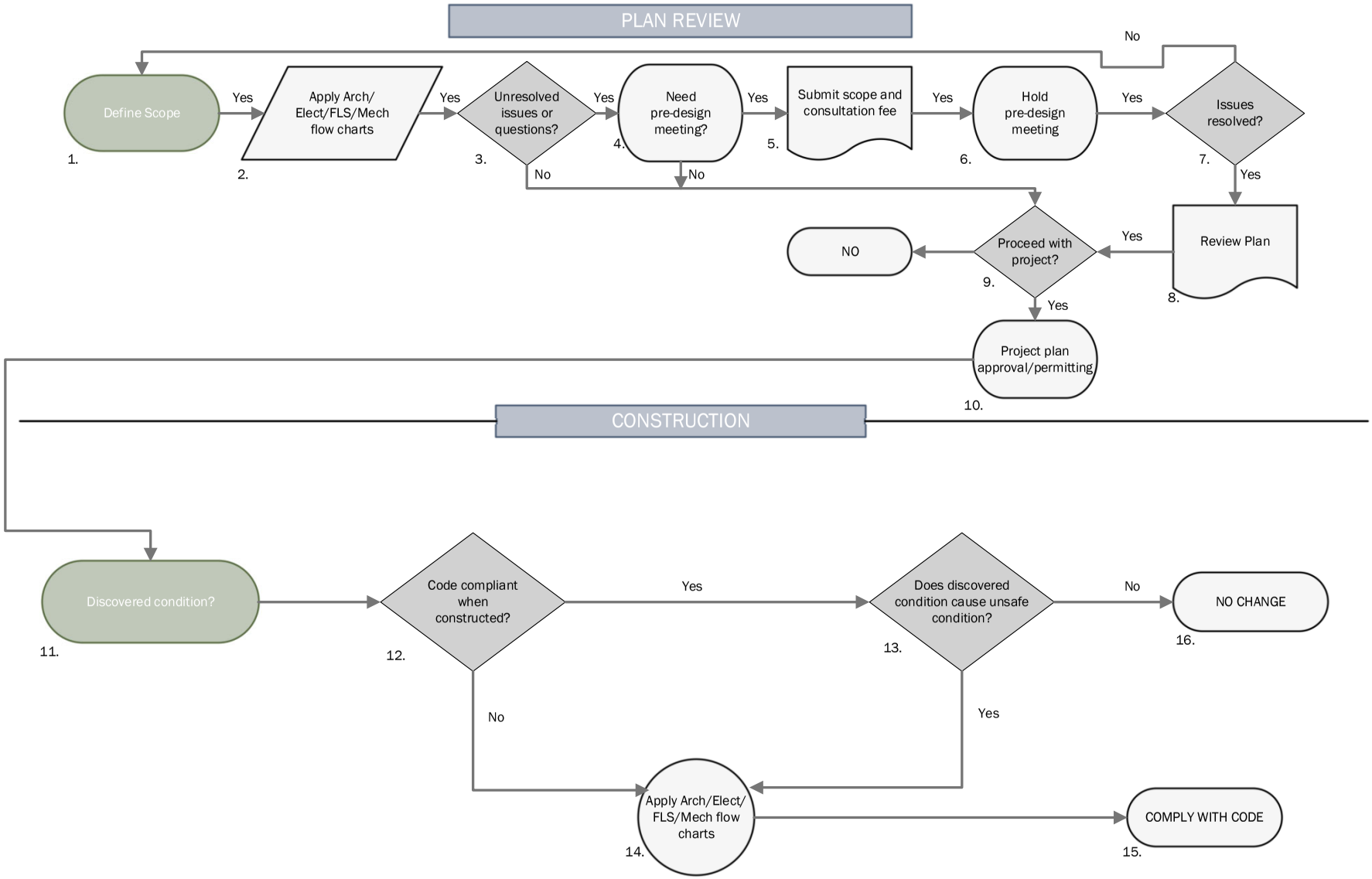
Previous Code. An applicable code under which an existing condition was constructed or installed. It may be a previous edition of the California Building Standards Codes, the Uniform Building Codes, the Life Safety Code or other nationally recognized standards.

Replace in Kind. Repairs which use the same or similar materials in the same or a similar location which comply with the currently adopted code.

Original signed 08/03/2021

Chris Tokas (Acting Deputy Director) Date

HEALTH FACILITY REMODEL FLOW CHART



11/08/2019

NARRATIVE FOR HEALTH FACILITY REMODEL FLOW CHART

The following comments apply to the Health Facility Remodel Flow Chart. The chart addresses the design and office plan review process on the upper portion and construction issues on the lower portion. The narrative comments are numbered and correspond with the numbered items on the flow chart.

1. Process Box: **Define Scope**
   a. It is the responsibility of the project team with their client to initially assess the needs of the facility in determining the project scope.
   b. In developing project scope, consideration should be given to:
      1. The project objectives
      2. Analysis and assumptions of existing conditions
      3. Key code assumptions (Title 24 and Title 22)
      4. Applicable OSHPD CANs and PINs
      5. Identify change of function or service.
      6. Draft Functional Program if applicable.

   Go to item 2.

2. Process Box: **Apply Architectural, Electrical, Fire & Life Safety, Mechanical/Plumbing and Medical and Vacuum Systems Remodel Flow Charts**
   Once the project scope is determined, apply Architectural, Electrical, Fire & Life Safety, Mechanical/Plumbing and Medical Gas and Vacuum Systems remodel flow charts to the design alternatives to consider how applicable code requirements may impact the project.
   Go to item 3.

3. Decision Box: **Unresolved Issues or Questions**
   If the flow charts lead to a clear understanding of the level of compliance and resolutions of project concerns, the project may proceed.
   Go to item 9. If not, go to item 4.

4. Process Box: **Need Pre-design Meeting**
   If the flow charts do not lead to resolutions of project concerns or if questions regarding particular project issues are not addressed, it may be advisable to conduct a pre-design meeting with OSHPD.
   If a meeting is needed, go to item 5. If not, go to item 9.

5. Process Box: **Submit Scope & Consultation Fee**
   a. To take advantage of this service, it is necessary to request, in writing, a consultation pursuant to Section 129835 of the Health and Safety Code.
   b. Prior to scheduling a pre-design meeting, OSHPD will require the applicant to submit the following:
      1. Meeting Agenda (prepared by the project team) listing major points of discussion
      2. Proposed floor plan with any new function or service complying with current CBC provisions, including Sections 1224, 1225, and/or 1226 and Chapter 11B.
      3. Existing floor plan with impacts on adjacent areas and services
      4. Description / Scope of the remodel (design)
         (1) Define applicable code sections

(2) Define applicable PINs & CANs
(3) Possible Program Flexibility, alternate material and methods of construction, and alternate means of protection issues should be listed

5. Type of construction
6. Occupancy - existing and proposed with justification
7. Accessibility considerations, including path of travel
8. Architectural, Electrical/Fire and Life Safety/Mechanical/Plumbing considerations
9. Preliminary exiting plan
10. Local Zoning / Land use agreements – Determine conditional use for outpatient versus hospital.

c. Fees - OSHPD consultation associated with a pre-design conference shall be billed at an hourly rate to recover actual cost.

Go to item 6.

6. Process Box: **Hold Pre-design Meeting**

a. After OSHPD has had the opportunity to review the submitted information, the project team will be contacted to set up the pre-design meeting. It is incumbent on the project team to coordinate required meeting attendees and scheduling, i.e. Project Consultants, OSHPD (plan review and compliance, when necessary), Department of Public Health, Licensing and Certification, when necessary, and Facility Representatives. The OSHPD project manager must be contacted by the Design Professional of Record with the meeting information. When applicable, the project manager will then invite the appropriate Department of Public Health, Licensing and Certification staff to the meeting.
b. During the meeting, the OSHPD staff will respond to the issues and concerns of the project team so they have a better understanding of how the project will proceed through the OSHPD process.
Go to item 7.

7. Decision Box: **Issues Resolved**

a. If the meeting results in resolution of the substantive issues regarding the project, it will be recorded in a Review Plan.
b. If the meeting does not result in resolution of substantive issues or creates additional questions regarding the project, the project team should reassess the scope in response to the issues and, if necessary, reconvene another meeting with OSHPD.
c. Issues that are not satisfactorily resolved in this process may be addressed through the OSHPD appeals process. Also see the OSHPD website for information regarding the Comment, Process Review (CPR) process to resolve issues directly with OSHPD staff and/ or supervisors. See California Administrative Code Section 7-159 for appeals to the Hospital Building Safety Board.

If the issue is resolved, go to item 8. If not, go to item 1.

8. Process Box: **Review Plan**

a. Resolutions will be recorded in a Review Plan. The Review Plan will be made available to the project team and the Facility Representative and will be maintained in the OSHPD project file. The intent of the plan is to document a common understanding for the Basis for Design, Basis for Plan Review and Basis for Field Compliance. The plan will be prepared by the design team and signed by the owner, design professional of record, OSHPD Regional Supervisor, and OSHPD Regional Compliance Officer.

b. It should be noted that the Review Plan is only as good as the assumptions presented at the pre-design meeting. Changes in design, program requirements, project delivery or other unforeseen issues may necessitate modifications to the Review Plan.

Go to item 9.

9. Decision Box: **Proceed with Project**
The Review Plan will be utilized by the Office in its application of this CAN to your project.
If ready to proceed with the project, go to item 10. If not, ends flow chart.

10. Process Box: **Project Plan Approval and Permitting Process**

a. The project should be submitted to OSHPD for review identifying any of the special conditions (program flexibilities, alternate designs, etc.) as resolved and recorded in the Review Plan.
b. At completion of the plan review / approval process, any conditions recorded in the Review Plan should be brought to the attention of the OSHPD Regional Compliance Officer at time of permitting.

Go to item 11.

11. Process Box: **Discovered Condition**
Existing non-complying conditions may be encountered during construction. It must be determined whether non-complying conditions may be allowed to remain or must be corrected in accordance with current building code.
Go to item 12.

12. Decision Box: **Code Compliant when Constructed?**
If the discovered condition is in compliance with the code at the time it was installed or constructed it may remain as is if it is not part of the scope of the work. Unauthorized work must be brought in to compliance with the current code. See CEBC 3, 3A, 5 and 5A.
If the condition was code compliant when constructed, go to item 13. If not, go to item 14.

13. Decision Box: **Does discovered condition cause unsafe condition?**
When new construction, elements or systems are provided, it must be determined if they cause an unsafe, unsanitary or hazardous condition or a life safety or fire risk. See Section CEBC Chapters 4, 4A, 5 and 5A, Additions, Alterations, Repairs and/or Change of Occupancy.
If discovered condition causes an unsafe condition, go to item 14. If not, go to item 16.

14. Process Box: **Apply Architectural, Electrical, Fire & Life Safety, Mechanical / Plumbing Remodel Flow Charts**
Go to item 15.

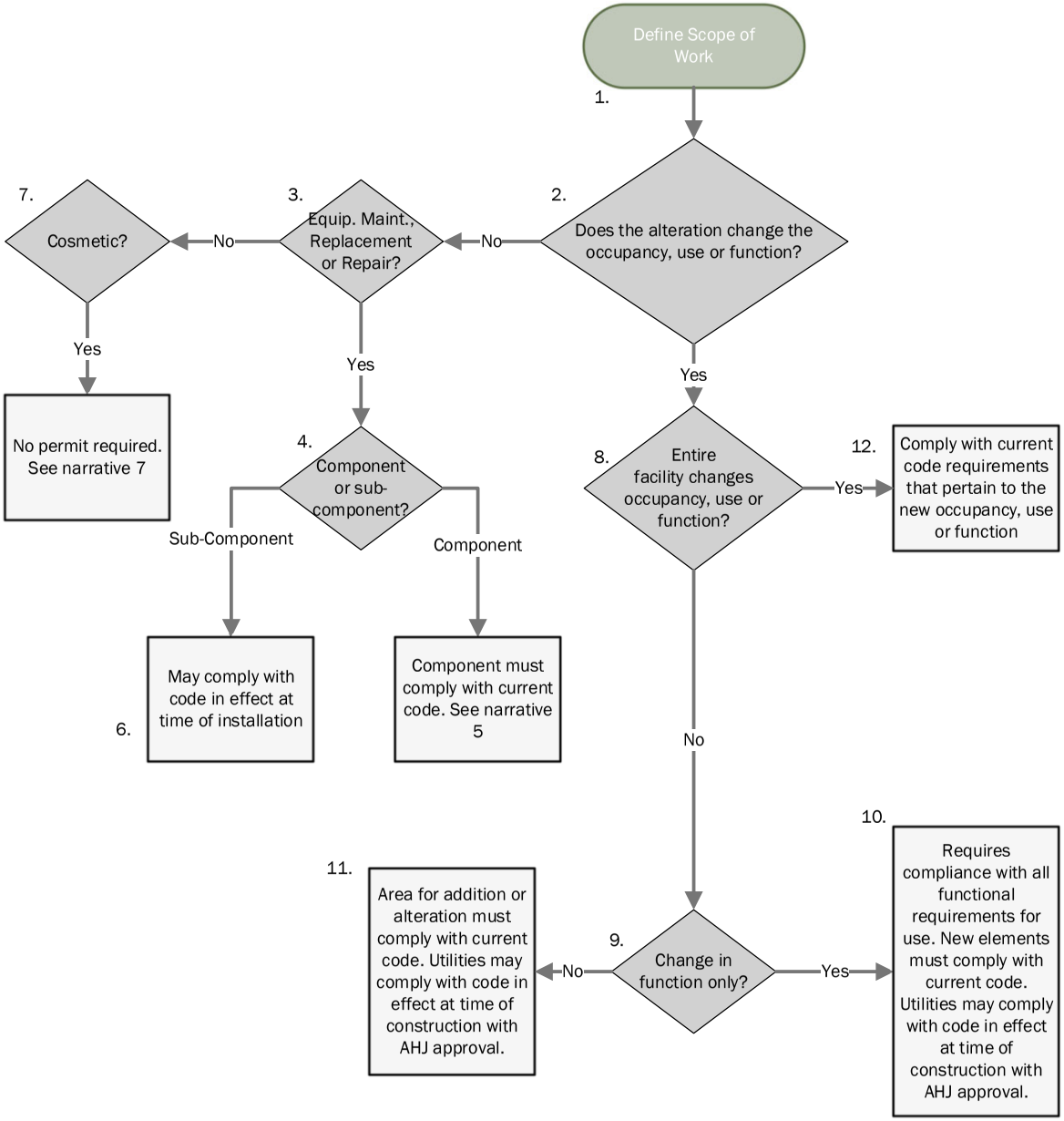
15. Comply with Code
Submit a post-approval document in accordance with California Administrative Code Section 7-153.
End flow chart.

16. No Change

No change or correction is required if the discovered condition was code compliant when constructed.

End flow chart.

ARCHITECTURAL REMODEL FLOW CHART



NARRATIVE FOR ARCHITECTURAL REMODEL FLOW CHART

This narrative must be used with the Health Facility Remodel Flow Chart for Architectural. The numbers shown on the Flow Chart correspond to the numbers shown below. The purpose of this narrative is to elaborate on the terminology used in the Flow Chart and to show the code requirements that OSHPD will enforce.

1. Process Box: **Define Scope of Work**
   a. It is the responsibility of the project team with their client to initially assess the needs of the facility in determining the project scope.
   b. In developing project scope, consideration should be given to:
      1. The project objectives
      2. Verification and analysis of existing conditions
      3. Key code assumptions (Title 24 and Title 22)
      4. Applicable OSHPD CANs and PINs
      5. Identifying change of function or service. Specific functions are identified in CBC Chapter 3 and Sections 1224, 1225, 1226 and 1228. Identify rooms with the CBC nomenclature.
      6. Work to create temporary barriers, ingress and/or egress, equipment, systems and/or services, utilities, etc.

   Go to item 2.

2. Decision Box: **Does the alteration change occupancy, use or function?**
   If yes, go to item 8. If not, go to item 3.

3. Decision Box: **Equipment maintenance, replacement or repair.** Determine if the project is solely for the reconstruction or renewal of any part of an existing building for the purpose of its maintenance or to correct damage.
   If equipment maintenance, replacement or repair, go to item 4. If not, go to item 7.

4. Decision Box: **Component or Sub-Component.** Determine if only a sub-component of a component is being replaced in kind or if the complete component or system is being replaced. An example of this is replacing an HVAC unit fan is a sub-component versus the replacement of the whole HVAC component.
   If this is for a component, go to item 5. If for a sub-component, go to item 6.

5. Process Box: **Component must comply with current code.** Verify capacities meet current code requirements of the area(s) it serves. If Imaging Equipment, submit a Functional Program with a list of proposed procedures.
   End flow chart.

6. Process Box: **May comply with code in effect at time of installation.** Verify capacities meet design code requirements of the area(s) it serves.

7. Decision Box: **Cosmetic Change.** A cosmetic change is a superficial or decorative change to a space, room or building. A cosmetic change must not change the function, area, or volume of the room. Examples of cosmetic changes are: painting, new wall coverings, new floor finishes, casework and similar aesthetic work.

The OSHPD (FREER) Manual ("Field Reviewed", "Exempt" from OSHPD plan review, OSHPD permit “Excluded” and "Expedited” review projects) contains requirements for most projects considered as cosmetic changes. For cosmetic changes that are not in the FREER Manual contact OSHPD staff.
End flow chart.

8. Decision Box: **The following are examples of an entire facility changing occupancy, use or function:**
a. Acute care hospital changes to a licensed clinic
b. Acute care hospital changes to administrative office space
c. Acute care hospital changes to a skilled nursing facility
If entire facility is changing occupancy, use or function, go to item 12. If not, go to item 9.

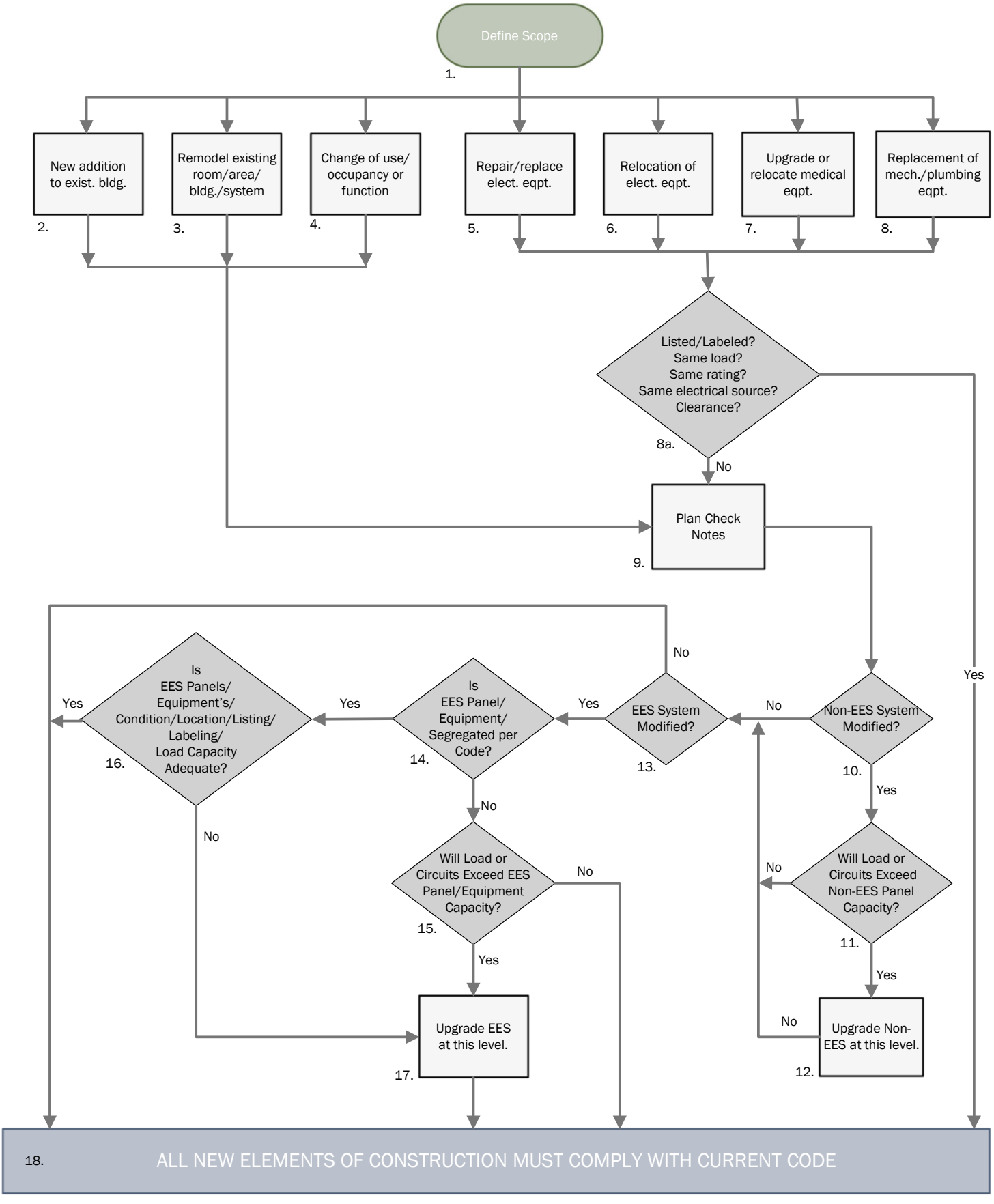
9. Decision Box: **Change in Function Only.** A change in activity or service provided that does **not** change the use, specific use, or occupancy.
a. Med/Surg Unit to Pediatric Unit
b. Inpatient Surgery to Outpatient Surgery
If a change in function only, go to item 10. If not, go to item 11.

10. Process Box: Requires compliance with all **functional** requirements for new construction. An example of this is changing a Med/Surg Nursing Unit into a Pediatric Nursing Unit. The patient rooms may not require revisions but there are other required functions that will need to be added (exam/treatment room, play area, etc.) to the unit. Areas not impacted by construction can remain as is if they were code compliant at the time of construction.
End flow chart.

11. Process Box: Requires compliance with current code for new construction. Existing utilities may comply with the code in effect at the time of construction if they meet the original design loads and the required capacities for the new spaces.
End flow chart.

12. Process Box: **Comply with current code requirements that pertain to the new occupancy, use or function.**
End flow chart.

ELECTRICAL REMODEL FLOW CHART



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NARRATIVE FOR THE ELECTRICAL REMODEL FLOW CHART

This narrative must be used with the Health Facility Remodel Flow Chart for Electrical Systems. The numbers shown on the Flow Chart correspond to the numbers shown below. The purpose of this narrative is to elaborate on the terminology used in the Flow Chart and to show the code requirements that OSHPD will enforce.

1. Process Box: **Define Scope**
   a. It is the responsibility of the project team with their client to initially assess the needs of the facility in determining the project scope.
   b. In developing project scope, consideration should be given to:
      1. The project objectives
      2. Analysis and assumptions of existing conditions
      3. Key code assumptions (Title 24 and Title 22)
      4. Applicable OSHPD CANs and PINs
      5. Identify change of function or service.

   Go to items 2, 3, 4, 5, 6, 7 and 8 in parallel.

2. Process Box: **New Addition to Existing Building**
   As the title states, this type of project adds floor space to an existing building. The systems affected by the scope of the project must meet current minimum code requirements. Existing electrical systems not part of the remodel project scope but utilized for connection to the systems of the remodel project scope, must be upgraded only if load capacity limits are exceeded as shown in the lower portion of the electrical flow chart.
   Go to item 9.

3. Process Box: **Remodel of Existing Room/Area/Building/System**
   The electrical systems directly involved in the scope of the project must meet current minimum code requirements. Existing electrical systems, not part of the remodel project scope but utilized for connection to the systems of the remodel project scope, must be upgraded only if load capacity limits are exceeded as shown in the lower portion of the electrical flow chart.
   Go to item 9.

4. Process Box: **Change of Use/Occupancy or Function**
   An example of this type of situation would be a change of use from a general acute patient care area to skilled nursing beds or an administration area. Another example would be a change of use from a general acute patient care area to a critical care area, or an administration area to a patient care area. As indicated in the lower portion of the electrical flow chart; systems, wiring, panels, devices, etc., within the scope of construction would be required to comply with current code requirements. Existing electrical systems not within the scope of construction but connected to supplying systems, wiring, panels, devices, etc. within the scope of construction, would only need to be upgraded if load capacity limits are exceeded.
   Go to item 9.

5. Process Box: **Repair/Replace Electrical Equipment**
This type of project involves repair of existing electrical equipment or replacement of electrical equipment. The repair or replacement of electrical equipment must be accomplished in compliance with the CEC. That is, equipment must be listed, labeled, or certified by a Nationally Recognized Testing Laboratory (NRTL). The replacement of a specific piece of electrical equipment must be replaced with equipment of the same type, electrical rating and physical size.

The installation of the equipment must also comply with current code requirements.
Go to item 8a.

6. Process Box: **Relocation of Electrical Equipment**
This type of project involves the simple relocation of electrical equipment. In this type of project, there is no change in the electrical source or load. The reinstalled equipment must meet current code requirements for the installation. The electrical system upstream and/or downstream would not need to be upgraded unless the existing load capacity limits have been exceeded.
Go to item 8a.

7. Process Box: **Upgrade/Relocate Medical Equipment**
Equipment must be listed, labeled or certified by a Nationally Recognized Testing Laboratory (NRTL) and installed per current code requirements. As indicated in the lower portion of the electrical flow chart, existing electrical systems not within the scope of construction but connected to supplying the medical equipment, would only need to be upgraded if load capacity limits are exceeded.
Go to item 8a.

8. Process Box: **Replacement of Mechanical/Plumbing Equipment**
Existing electrical systems serving or monitoring the mechanical/plumbing equipment must be reconnected to meet the requirements of current code. Electrical circuit providing power to the equipment must meet the power source requirements of Mechanical Narrative 9 of this CAN. That is, the power source must be normal, life safety branch, critical branch, or equipment branch as required by Mechanical Narrative 9 on this CAN. If the EES is a non-segregated EES, the existing electrical system to be reconnected must meet current code requirements for either normal source or emergency source connection. Existing electrical systems serving the replaced mechanical equipment do not require segregation unless load capacity limits are exceeded as shown in the lower portion of the electrical flow chart. Code at the time of initial installation may be met if a single element or component is being replaced, and no other operational/functional changes were made to the facility being served by the new element or component.
Go to item 8a.

8a. Decision Box: **Listed/Labeled? Same load? Same rating? Same electrical source? Clearance?** If yes, go to item 18. If not, go to item 9.

9. Process Box: **Plan Check Notes**
Load capacity verification shall be provided for panels, panel feeders, and panel feeder overcurrent protective devices at points in the electrical distribution system where modifications occur. A load summary shall be provided per the requirements of OSHPD Policy Intent Notice (PIN) 38. For a net load reduction on an affected panel where load is to be added, the requirement for load capacity verification is satisfied. For a net load addition on an affected panel, follow OSHPD PIN 38 for the acceptable means of providing load capacity verification. Also, as used herein, the word "panel" is defined as any panelboard, switchgear, switchboard, motor control center, distribution panelboard, etc. Refer to the "Terms" section of this CAN and to PIN 38. Submission of verification of compliance with OSHPD PIN 38 for affected electrical panels does not relieve the Electrical Engineer from fully complying with Article 220 of the current edition of the CEC relating to load capacity verification for the electrical system.

All new electrical systems, wiring, panels, devices, etc. within the scope of construction shall be code conforming. Existing electrical systems, wiring, panels, devices, etc. within the scope of construction shall comply with the code at the time of initial installation/construction.
Go to item 10.

10. Decision Box: **Non-EES System Modified**
This system is typically the normal source system described in CEC Sections 517.30 and 517.41. The non-EES/branch circuit will not be considered as modified if the scope of construction involves only a simple removal of a load or device. Relocation of an existing load or device, or the addition of a load or device, constitutes a modification of the non-EES/branch circuit.

A "yes" answer leads to item 11: "Will loads or circuits exceed non-EES equipment capacity?"
A "no" answer leads to item 13, "EES system modified?"

11. Decision Box: **Load or Circuits Exceed Non-EES Panel Capacity**
This is the non-EES panel to which load is being added. If load capacity verification per OSHPD PIN 38 indicates that this panel will be overloaded by the load addition, the panel, its feeder and feeder overcurrent protective device must be brought into conformance with current code requirements. The next panel electrically upstream towards the source must also undergo load capacity verification per the requirements of OSHPD PIN 38. If it is also overloaded, it must also be brought into conformance with current code requirements along with its feeder and feeder overcurrent protective device. It is not the intent of this paragraph to relieve the Electrical Engineer from the responsibility of performing load capacity verification calculations on affected feeders all the way back to the main service entrance or to the terminals of a separately derived system as required by CEC Article 220.

A "yes" answer directs one to item 12. A "no" answer directs one to item 13.

12. Process Box: **Upgrade Non-EES at this Level**
Replace panel, panel feeder, and panel feeder overcurrent protective device per current code requirements. Transformers, transfer switches and other electrical devices which are not panels, but which occur at a level in the distribution system where upgrade is required, shall also be upgraded accordingly to meet current code requirements.
Go to item 13.

13. Decision Box: **EES System Modified**
This system is the Essential Electrical System described in CEC Sections 517.25 through 517.45. The EES/branch circuit will not be considered as modified if the scope of construction involves only a simple removal of a load or device. Relocation of an existing load or device to a different panel, or the addition of a load, device or panel, constitutes a modification of the EES/branch circuit.

A “no” answer leads to item 18 which delivers the reminder that all new elements of construction must comply with the current code.

A “yes” answer leads one to item 14.

14. Decision Box: **EES Panel/Equipment Segregated per Code**
Is the panel to which load is being added segregated per the requirements of CEC Sections 517.25 through 517.45?

A “yes” answer leads to item 16. A “no” answer leads to item 15.

15. Decision Box: **Load or Circuits Exceed Non-Segregated EES Panel/Equipment Capacity**
The non-segregated EES panel to which load is being added, its feeder, and its feeder overcurrent protection device must undergo load capacity verification per the requirements of OSHPD PIN 38. If load capacity verification per OSHPD PIN 38 indicates an overload condition, then the panel, its feeder and its feeder overcurrent protective device must be brought into conformance with current code requirements as described in Narrative 17. The next panel electrically upstream towards the source, its feeder, and its feeder overcurrent protective device must also undergo load capacity verification per the requirements of OSHPD PIN 38. If there is also an overload condition, then the panel, its feeder and its feeder overcurrent protective device must also be brought into conformance with current code requirements as described in Narrative 17. It is not the intent of this paragraph to relieve the Electrical Engineer from the responsibility of performing load capacity verification calculations on affected feeders all the way back to the main service entrance or to the terminals of a separately derived system as required by CEC Article 220.

Non-segregated EES panels which are not overloaded do not need to be upgraded but the new load(s) added to the panel must be segregated at the branch circuit level. That is, new loads must be connected to an existing or new branch circuit so that all loads on that circuit are either life safety branch loads, critical branch loads, or equipment branch loads. If the new load(s) cannot be added in the segregated fashion described above, then the load(s) cannot be added to non-segregated EES panel and the EES will be required to be upgraded as described in Narrative 17.

If loads or circuits do not exceed non-segregated EES panel/equipment capacity, go to item 18.

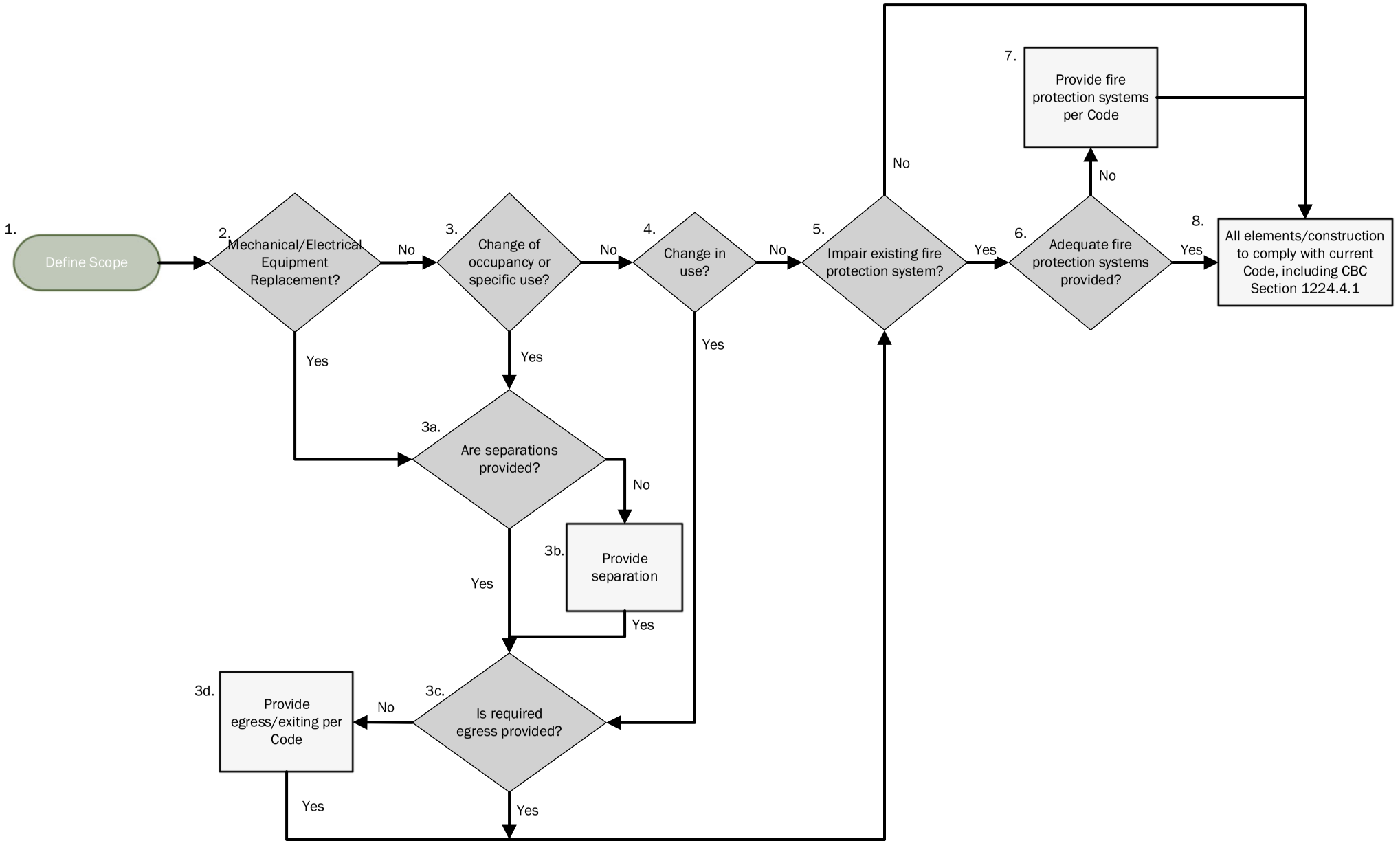
16. Decision Box: **EES Panel's/Equipment's Condition/Location/Listing/Labeling/Load Capacity Adequate**
One arrives at this item with a "yes" answer to the question, "Is existing EES panel/equipment segregated per code?" If the EES panel/equipment, which is proposed to be connected to electrical systems within the remodel project's scope of construction, is not in proper working condition, is not located properly per current code requirements, is not adequately listed, labeled or certified per the requirements of CEC Section 110.2, or does not have adequate load capacity per OSHPD PIN 38, one is directed to item 17 which requires upgrade of the EES at this level.
If adequate, go to item 18.

17. Process Box: **Upgrade EES at this Level**
Where an existing segregated EES panel becomes overloaded based on the requirements of OSHPD PIN 38, the panel must be replaced with code conforming, segregated panels and panel feeders. Where an existing non-segregated EES panel becomes overloaded based on the requirements of OSHPD PIN 38, the panel must be replaced with code conforming, segregated panels and panel feeders. Where new loads to an existing non-segregated EES panel cannot be connected to an existing or new branch circuit so that all loads on that circuit are either life safety branch loads, critical branch loads, or equipment branch loads, the panel must be replaced with code conforming, segregated panels and panel feeders. If there are life safety branch loads, a life safety branch panel shall be provided with a separate feeder back to the serving panel electrically upstream towards the source. If there are critical branch loads, a critical branch panel shall be provided with a separate feeder back to the serving panel electrically upstream towards the source. If there are equipment branch loads, an equipment branch panel shall be provided with a separate feeder back to the serving panel electrically upstream towards the source. Transformers, transfer switches and other electrical devices which are not panels, but which occur at a level in the distribution system where upgrade is required, shall also be upgraded to comply with current code requirements.

Where an existing segregated EES panel has adequate load capacity for the proposed new load, but is not in proper working condition, is not located properly per current code requirements, or is not listed, labeled, or certified, it shall be brought into conformance with current code requirements.
Go to item 18.

18. Process Box: **All New Elements of Construction Must Comply with Current Code.**
End flow chart.

FIRE & LIFE SAFETY REMODEL FLOW CHART



11/08/2019

NARRATIVE FOR FIRE AND LIFE SAFETY REMODEL FLOW CHART

This narrative must be used with the Health Facility Remodel Flow Chart for Fire and Life Safety Systems. The numbers shown on the Flow Chart correspond to the numbers shown below. The purpose of this narrative is to elaborate on the terminology used in the Flow Chart and to show the code requirements that OSHPD will enforce.

1. Process Box: **Define Scope**
   a. It is the responsibility of the project team with their client to initially assess the needs of the facility in determining the project scope.
   b. In developing project scope, consideration should be given to:
      1. The project objectives
      2. Analysis and assumptions of existing conditions
      3. The protection of existing construction and fire/life safety conditions to maintain a safe facility
      4. Key code assumptions (Title 24 and Title 22)
      5. Applicable OSHPD CANs and PINs
      6. Identify change of use, specific use, or occupancy
      7. Work to create temporary barriers, ingress and/or egress, equipment, systems and/or services, utilities, etc.

   Go to item 2.

2. Decision Box: **Mechanical/Electrical Equipment Replacement**
Examples include but are not limited to: boilers, chillers, air handlers, etc.
If mechanical or electrical equipment replacement, go to item 3a. If not, go to item 3.

3. Decision Box: **Change of Occupancy or Specific Use** (refer to flowchart items 3a-3d)
Based upon the scope, it must be determined if a change of occupancy or a change of specific use, as identified in CBC Chapter 3, will occur as a result of the project. If so, go to item 3a. If not, go to item 4.

3a. Decision Box: **Are Separations Provided in Accordance with CBC Chapters 3 and 5?** If yes, go to item 3c. If no, go to item 3b.

3b. Process Box: **Provide Separations in Accordance with CBC Chapters 3 and 5?**
Provide separations in accordance with CBC Sections 508 and 509.
Go to item 3c.

3c. Decision Box: **Required Egress Provided**
When changes of occupancy, specific use, or change in floor area occur that create a change in egress requirements, it must be determined if compliant egress is provided. The following conditions must be evaluated for this determination in accordance with CBC Chapters 10 and Part 10, Chapters 3, 4 & 5.
   a. Maximum travel distance maintained or exceeded
   b. Minimum exit width provided
   c. Number of exits provided
   d. Distance between exits provided
   e. Fire-rated separations provided

f. Means of Egress compliant with SPC and NPC requirements per CBC Section 308A.1.1

Egress cannot be considered as adequate if not in compliance with provisions of current or previous code.
If required egress is provided, go to item 5. If not, go to item 3d.

3d. Process Box: **Provide Egress/Exiting**
If determined that compliant egress is not provided, egress must be provided in accordance with CBC Chapter 10. Go to item 5.

4. Decision Box: **Change in Use**
If there is a change in use, then a determination must be made if adequate egress is provided (reference CBC Chapter 3, Section 302 and Chapter 10, Table 1004.1.2).
If change in use, go to item 3c. If not, go to item 5.

5. Decision Box: **Impair Existing Fire Protection Systems**
It must be determined if the project causes or creates a deficiency in the existing protection systems including fire dampers, fire/smoke dampers, smoke control, fire sprinkler, and fire alarm systems. If any fire protection system is impaired during the course of the project scope, these systems are to be included as part of the project. These would include fire dampers, fire/smoke dampers, smoke control, fire sprinkler, and fire alarm systems.

OSHPD Policy Intent Notice 14, Fire Watch shall be followed should these fire systems be impaired from performing during construction. All changes, modifications, or additions must comply with current code. CFC Chapter 33 and California Fire Code Chapter 80 shall be consulted for adopted codes and standards.
If existing fire protection system is impaired, go to item 6. If not, go to item 8.

6. Decision Box: **Adequate Fire Protection Systems Provided**
Projects must be evaluated for adequate fire dampers, smoke/fire dampers, and fire systems including smoke control, fire sprinkler, and fire alarm systems.

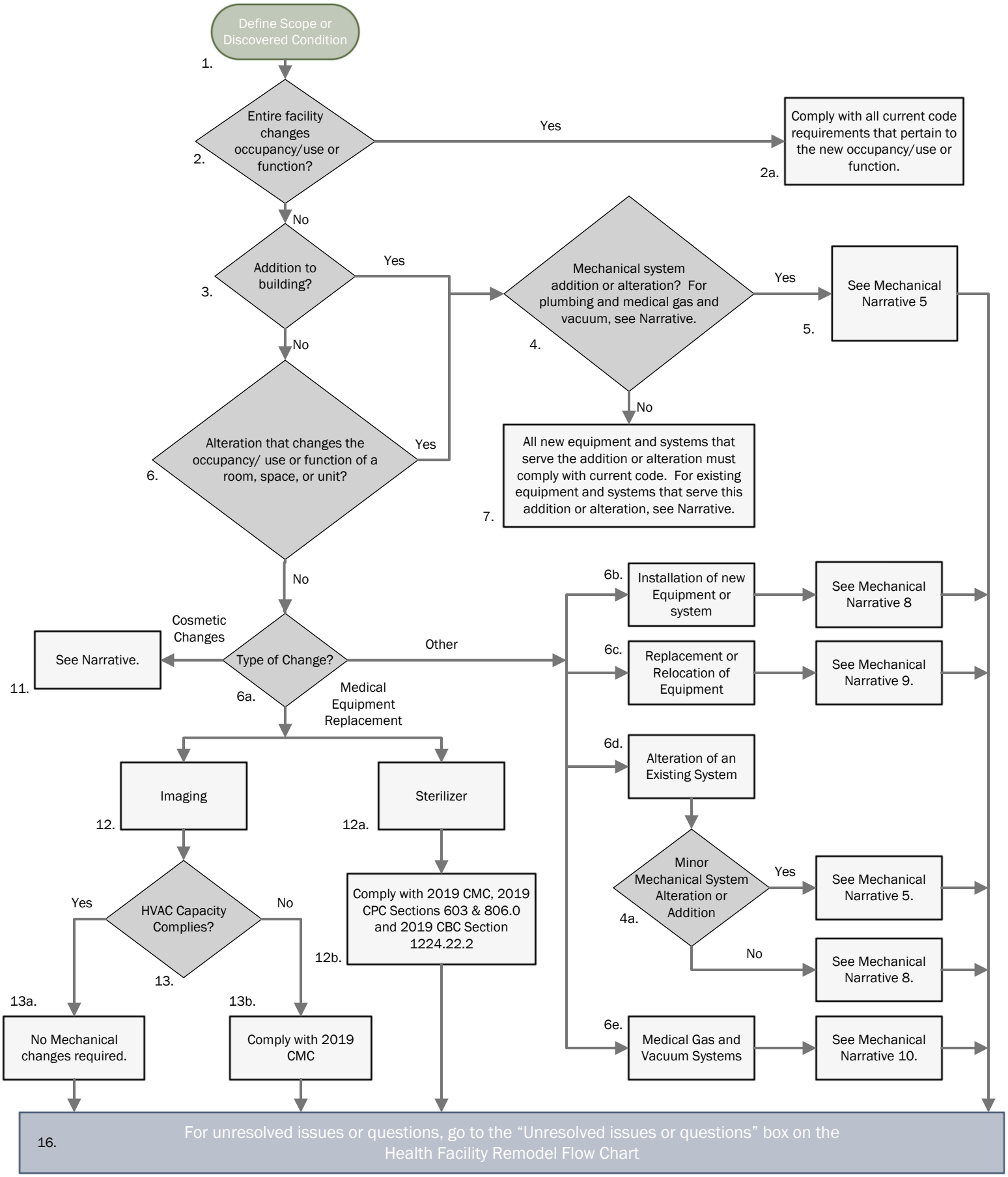
See CBC Chapters 3, 7, and 9, or an approved Alternate Means of Protection, CBC Section 104.11.

Fire protection systems are considered to be adequate when they are in compliance with the current California Building Standards Code or are in compliance with the applicable code when they were installed.
If adequate fire protection system is provided, go to item 8. If not, go to item 7.

7. Process Box: **Provide Fire Protection Systems per Code**
If determined that adequate fire protection systems are not provided, systems must be provided in accordance with the California Building Standards Code or an approved Alternate Method of Compliance, in accordance with CBC Section 104.11. Go to item 8.

8. Process Box: **All Elements/Construction to Comply with Current Code**
All new construction, elements, and systems associated with new additions and remodel projects must comply with the CBC, including Section 1224.4.1, Services/Systems and Utilities, or an approved Alternate Method of Compliance, in accordance with CBC Section 104.11.
End flow chart.

MECHANICAL, PLUMBING, AND MEDICAL GAS AND VACUUM SYSTEMS REMODEL FLOW CHART



11/08/2019

NARRATIVE FOR MECHANICAL, PLUMBING, AND MEDICAL GAS AND VACUUM SYSTEMS REMODEL FLOW CHART

This narrative must be used with the Health Facility Remodel Flow Chart for Mechanical, Plumbing, and Medical Gas and Vacuum Systems. The numbers shown on the Flow Chart correspond to the numbers shown below. The purpose of this narrative is to elaborate on the terminology used in the Flow Chart and to show the code requirements that OSHPD will enforce.

At the discretion of OSHPD, the design professional may be requested to submit design calculations or measurements to verify that the existing systems and equipment can achieve code compliance.

Note: See the Fire and Life Safety Flow Chart and Narrative for fire damper, smoke damper and fire sprinkler system requirements.

1. Process Box: **Define Scope**
   a. It is the responsibility of the project team with their client to initially assess the needs of the facility in determining the project scope.
   b. In developing project scope, consideration should be given to:
      1. The project objectives
      2. Verification and analysis of existing conditions
      3. Key code assumptions (Title 24 and Title 22)
      4. Applicable OSHPD CANs and PINs
      5. Identify change of function or service. Specific functions are identified in CBC Chapter 3 and Sections 1224, 1225 and 1226. Identify rooms with the CMC Table 4-A nomenclature.

   Go to item 2.

2. Decision Box: **The following are examples of an entire facility changing function:**
   a. Acute care hospital changes to a skilled nursing facility.
   b. Skilled nursing facility changes to an acute care hospital.
   c. Skilled nursing facility changes to an intermediate care facility.

   If entire facility is changing occupancy, use or function, go to item 2a.

2a. Process Box: **Comply with all current code requirements that pertain to the new occupancy/use or function.** End flow chart.

3. Decision Box: **For definition of building "addition" see definition in CBC Section 202.** If addition, go to item 4. If not, go to item 6.

4. Decision Box: **OSHPD will use the following criteria as guidelines for deciding if an addition or alteration to an existing mechanical system will be considered for complete compliance with the current codes versus the codes in effect at the time of construction:**
   a. The project does not involve a room or area shown in CMC Section 322.
   b. The project does not involve an Angiography Room, a Protective Environment Room, or an Airborne Infection Isolation Room.

c. The building addition or altered space does not contain more than 2000 cfm of supply, return, or exhaust air.
d. The project does not use more than 10% of the connected existing mechanical system capacity. Mechanical systems include air handling and distribution systems, hot water systems, chilled water systems, steam, etc. If existing mechanical systems are used to serve the building addition, the addition must not cause the capacity of the existing systems to be exceeded.
e. The project involves only balancing of air or water systems.

The design professional should communicate with OSHPD for determining which versions of the mechanical, plumbing and medical gas codes apply.

The CPC does not have a section for minor additions or alterations to plumbing systems. Additions, alterations or repairs shall be permitted to be made to a plumbing system, provided the addition, alteration, or repair is in accordance with that required for a new plumbing system. Additions, alterations, or repairs shall not cause an existing system to become unsafe, insanitary or overloaded. See CPC Division II, Administration, Section 101.11.

The 2018 edition of NFPA 99 does not have a section for minor additions or alterations to medical gas and vacuum systems. See Narrative 10.
If mechanical system is an addition or alteration, go to item 5. If not, go to item 7.

4a. Decision Box: **If minor addition or alteration to mechanical or plumbing system,** go to item 5. If not, go to item 8.

5. Process Box: **With prior approval by OSHPD, some additions, alterations or repairs to existing mechanical systems** may be installed in accordance with the code in effect at the time the original installation was made. The design professional is responsible for giving OSHPD sufficient information to determine if the original installation was in accordance with the code in effect at the time of the installation. If existing mechanical systems are used to serve the building addition, the addition must not cause the capacity of the existing systems to be exceeded. Measures must be taken to assure that the modifications within the project boundaries do not impact airflow to spaces outside the project boundaries, see Narrative 15 for additional information. Plans must contain specific information and procedures to define the measures required. Go to item 16.

6. Decision Box: **For definition of "alteration"** see the definition in CBC Section 202. Specific functions are identified in CBC Section 1224. Identify rooms with CMC Table 4-A nomenclature.
If alteration changes the occupancy, use or function of a room, space or unit, go to item 4. If not, go to item 6a.

6a. Decision Box: **Identify type of change.** If cosmetic, go to item 11. If medical equipment, go to item 12 and 12a in parallel. If other, go to item 6b, 6c, 6d and 6e in parallel.

6b. Process Box: **If installation of new equipment or system,** go to item 8.

6c. Process Box: **If replacement or relocation if equipment,** go to item 9.

6d. Process Box: **If an alteration of an existing system,** go to item 4a.

6e. Process Box: **If medical gas or vacuum systems,** go to item 10.

7. Process Box: **All new mechanical and plumbing equipment and systems** located within the scope of the project must comply with all current code requirements. For existing equipment or systems that serve the addition or alteration, OSHPD will enforce the following code requirements:

a. Air-handling units, fan coil units, forced-air type central furnaces and exhaust fans.
   1. Filter efficiency, filter location, and filter gages. See CMC Section 408.0.
   2. Pressure relationship and ventilation requirements for areas within the project boundaries. See CMC Section 407.3.1. Measures must be taken to assure that the modifications within the project boundaries do not impact airflow to spaces outside the project boundaries, see Narrative 15 for additional information. Plans must contain specific information and procedures to define the measures required.
   3. Essential electrical power for equipment per CMC Section 321.0.
   4. Indoor temperature and humidity requirements, see CMC Table 4-A.
   5. Automatic shutoff for smoke control. See CMC Section 608.0.
   6. Use of corridor or space above ceiling as a plenum. See CMC Sections 407.4.1.3 and 407.4.1.4.

b. All other types of existing mechanical, plumbing, and medical gas and vacuum equipment and systems.
   1. If the existing equipment or system has sufficient capacity to serve the addition or alteration, OSHPD will allow the equipment or system to remain as installed. Equipment or systems that do not have sufficient capacity must be replaced or supplemented.

c. See Narrative 10 for additional medical gas and vacuum system requirements.

d. All services/systems and utilities serving building additions shall comply with CBC Section 1224.4.1.

End flow chart.

8. Process Box: **For alterations to existing mechanical or plumbing equipment or systems, or the installation of new equipment, fixtures, or systems,** OSHPD will require the alterations or installation to comply with current code within the project boundary. Mechanical alterations must not cause an existing system to become unsafe or create unhealthy or overloaded conditions. Measures must be taken to assure that the modifications within the project boundaries do not impact airflow to spaces outside the project boundaries, see Narrative 15 for additional information. Plans must contain specific information and procedures to define the measures required. Plumbing alterations must not cause an existing system to become unsafe, insanitary or overloaded. Go to item 16.

9. Process Box: **For the replacement or relocation of mechanical or plumbing systems or equipment,** OSHPD will enforce the following code requirements:

a. Air-handling units, fan coil units, and forced-air type central furnaces.
   1a. Filter efficiency, filter location, and filter gages (see CMC Section 408.0(OSHPD 1, 3 and 4)).

1b. Filter efficiency, filter location, and filter gages. See CMC Section 408.0, except where two filter banks are required in Table 4-C, filter bank No. 1 (30% filter) shall be optional (OSHPD 2).
2. Condensate drain (see CMC Section 312.0 and CPC Chapter 8).
3. Clearances and access (see CMC Sections 303.0 and 304.0).
4. Essential electrical power (see CMC Section 326.0 (OSHPD 1 and 4 only)).
5. Outdoor air intake location (see CMC Sections 407.2, 414.0 and 305.2.2, and CPC Section 906.2.1). For relocations only.
6. Indoor temperature and humidity requirements (see CMC Table 4-A).
7. Automatic shutoff for smoke control (see CMC Section 608.0).
8. Air Balance (comply with Narrative 14).
9. Outdoor air changes and total air changes (see CMC Table 4-A (OSHPD 1, 3, and 4)). For projects that are limited to the replacement of air handlers, fan coil units, forced-air-type central and/or exhaust fans the outdoor air changes and total air changes may comply with the code requirements under which the facility was originally constructed.
10. Fan operation (see CMC Section 407.1.1).
11. Use of corridor or space above ceiling as a plenum (see CMC Sections 407.4.1.3 and 407.4.1.4).

b. Steam and Hot Water Boilers.
1. All requirements (see CMC Chapter 10).
2. Room size (see CMC Section 303.0).
3. Number of boilers (see CMC Section 324.0).
4. Essential electrical power (see CMC Section 321.0).
5. Exit access doorways (see CBC Section 1015.3).
6. Temperature requirements (see CMC Table 4-A).
7. Combustion air requirements (see CMC Chapter 7).

c. Refrigeration Systems.
1. All requirements (see CMC Chapter 11).

d. Exhaust Fans.
1. Exhaust fan location (see CMC Section 407.1.2).
2. Exhaust fan operation (see CMC Section 407.1.1).
3. All requirements (see CMC Chapter 5).
4. Essential electrical power (see CMC Section 321.0).
5. Exhaust discharge. Minimum 25’ clearance from outside air intakes (see CMC Section 407.2.1).
6. Air balance (comply with Narrative 14).

e. Evaporative Coolers.
1. All requirements (see CMC Section 405.0 and 935.0).

f. Plumbing Fixture.
1. All requirements (see CPC Table 4-2).
2. Shower and bathtub valves (see CPC Section 408.3).
3. All requirements (see CPC Chapter 4).
4. See CPC Sections 310.0 and 605.0.
5. Sterilization (see CPC Section 609.9).

g. Water Heater.
1. All requirements (see CPC Chapter 5).
2. All requirements depending on applicable code version at time of construction (see CPC Sections 613.1, 613.2, 613.4, and 613.5).

h. Fuel Storage Tanks.
   1. Comply with OSHPD PIN 2.

Go to item 16.

10. Process Box: **For the replacement, relocation or alteration to medical gas or vacuum systems or equipment,** OSHPD will enforce the code requirements shown below. The cited code sections are from the 2018 edition of NFPA 99.

a. For alterations of existing systems, OSHPD will require all new work within the project boundaries to comply with NFPA 99. The existing systems may have their use continued, if the systems do not present a distinct hazard to life (see NFPA 99 Sections 1.2, 1.3, and 5.1, and the corresponding Sections in the 2018 edition "Healthcare Facilities Handbook," published by the NFPA. Testing of systems, including existing systems breached by project work, must comply with NFPA 99 Section 5.1.2.
b. Medical Air Compressor Replacement (comply with NFPA 99, Figure A.5.1.3.6 and applicable code sections).
c. Medical Vacuum Pump Replacement (comply with NFPA 99, Figure A.5.1.3.7 and applicable code sections).
d. Medical Gas Cylinder Manifold/Controls Replacement (comply with NFPA 99, Figure A.5.1.3.5.10 and applicable code sections.
e. Bulk Medical Gas System Alteration or Replacement (comply with NFPA 99, Figure A.5.1.3.5.12(a), applicable code sections, and NFPA 55.
f. Medical Gas Cylinder Storage Alteration (comply with the California Fire Code Section 5306).

Go to item 16.

11. Process Box: **Cosmetic Change.** A cosmetic change is a superficial or decorative change to a room. A cosmetic change must not change the function, area, or volume of the room. Examples of cosmetic changes are: replacement and/or relocation of diffusers, registers, or grilles; painting; new wall coverings; new floor finishes; and similar work.

The OSHPD FREER Manual contains requirements for most projects considered cosmetic changes. For cosmetic changes that are not in the FREER Manual contact OSHPD mechanical staff. For cosmetic changes that involve the replacement of diffusers, or grilles, the room must comply with CMC Section 407.3.1 and 407.4.1.6
End flow chart.

12. Process Box: **Examples of imaging equipment include:** X-ray equipment, Gamma Camera, CT Scanner, MRI, etc.
If imaging equipment, go to item 13.

12a. Process Box: **If sterilizer,** go to item 12b.

12b. Process Box: **Comply with 2019 CMC, 2019 CPC Section 603 and 806.0 and 2019 CBC Section 1224.22.2.** Go to item 16.

13. Decision Box: **The design professional must provide** sufficient information to OSHPD to show the existing HVAC system can maintain the proper room temperature required by CMC Table 4-A. OSHPD recommends the design architect or engineer determine that the HVAC system is capable of maintaining the room environmental conditions within the parameters recommended by the imaging equipment manufacturer. The final air balance in the space must comply with CMC Section 407.3.1. Where changes in airflow are necessary, measures must be taken to assure that the modifications within the project boundaries do not impact airflow to spaces outside the project boundaries (see Narrative 15 for additional information). Plans must contain specific information and procedures to define the measures required. If HVAC capacity complies, go to item 13a. If not, go to item 13b.

13a. Process Box: **No Mechanical Change Required.** Go to item 16.

13b. Process Box: **Comply with 2019 CMC.** Go to item 16.

14. Narrative: **Air Balance (not on flow chart – provided for additional direction).** For projects involving the replacement of a supply, return or exhaust fan unit, the air distribution system shall be rebalanced in accordance with the following requirements:

a. For acute care hospitals (OSHPD 1). The supply, return and exhaust airflows in the entire area served by the replaced unit shall be rebalanced to comply with CMC Table 4-A. For projects replacing a single component of a fan or air handler unit (i.e., fan scroll, cooling coil, heating coil, etc.) with a replacement component of the same capacity, the rebalance may consist of measuring the system airflow prior to replacing the component and then re-establishing the same system airflow after the component has been replaced. Replacement of multiple components will require the entire air distribution system to be rebalanced. Rebalancing shall not be required for fans serving entirely non-patient care areas. Air balance shall not be started until the completion of work for the project or the completion of each phase of a phased project.

b. For skilled nursing facilities, licensed clinics, and correctional treatment centers (OSHPD 2, 3, 4 and 5). Rebalancing the air distribution systems is not required if:
   1. There is no change to the system design airflow.
   2. There is no change to the air distribution system, or it is being replaced in kind.
   3. The replaced fan system does not serve an operating room, cardiac cath lab, intensive care area, recovery room, nursery, airborne infection isolation room or a protective environment room.

   If any of these conditions are not met, then the entire air distribution system shall be rebalanced as described in Item 14a above.

c. General requirements: When rebalancing is required, the entire area served by the supply, return or exhaust fan(s) being replaced shall be rebalanced. Mechanical plans shall contain all necessary information to demonstrate design airflows in areas served by the equipment and shall comply with the ventilation and air balance requirements in CMC Table 4-A. Plans shall include room name and number, and room volume of each room served by the unit. If the actual room name does not match an area designation in CMC Table 4-A, then an equivalent Table 4-A room designation based upon the functional use of the space shall be provided on the plans. Adjacent rooms or spaces not served from the replaced unit that have their airflow or air balance impacted must also comply with CMC Table 4-A for both ventilation and air balance.

Return to previous item.

15. Narrative: **Airflow Measurements (not on flow chart – provided for general guidance and best practices).**

When measures must be taken to assure that modifications within the project boundaries do not impact airflow to spaces outside the project boundaries, several methods are commonly available to achieve compliance. The following methods are identified as common practices to achieve compliance. It is up to the design professional to evaluate which method or combination of methods are most appropriate for their design; however, OSHPD plan review comments may arise if the plans do not specifically address all measures necessary to demonstrate compliance.

a. Measure Outlets. The most common method is to measure and document the airflow of all outlets on the duct system to be modified prior to demolition work. At the completion of the project (and each separate phase) re-measure all outlets again and re-balance the duct system as necessary to re-establish documented measured airflows.

b. Duct Traverses. Branch ducts that are outside the project boundaries but served by the same HVAC system that serves the remodel project, duct (pitot) traverses may be taken prior to demolition work. At the completion of the project (or phase of work) re-measure these same duct traverses and re-balance duct system as necessary to re-establish the original measured airflows. Plans must show specific locations duct traverses are to be taken. New branch duct balancing dampers may have to be installed to achieve pre-demolition airflows if they do not exist at the time of the pre-demo airflow measurements.

c. Unchanged Airflow. If the remodel project re-distributes the existing airflow within the project boundaries such that ducts beyond the project boundaries do not experience a change in airflow, then measures beyond the project boundaries are not necessary. Use of this method requires recent documented airflow measurements be taken within the project boundaries prior to the design submission to OSHPD to establish the existing quantity of airflow that will be re-established.

d. Bypass Method. The bypass method is normally used only during construction to allow the contractor to construct the remodel without requiring elaborate or costly re-balancing effort outside the construction boundary during construction. Capping off ducts inherently causes airflow changes throughout the rest of the duct system unless the system has very specific volume controls built into the existing design. In lieu of capping off ducts, airflow to a remodel space can be measured and a bypass duct with a balancing damper can be installed such that the net supply and exhaust (or return) airflow remains constant throughout the rest of the system. The bypass duct shall comply with CMC Chapter 6.

e. Pressure Independent Systems. This method can be used on newer HVAC systems that have pressure independent supply air terminal units with variable frequency drive (VFD) volume control of the main supply fan. Such systems normally do not require measurements be taken on the supply system, however, the plans must describe the existing system in sufficient detail that the use of this method can be allowed. Dual-duct systems will also tend to be self-balancing and do not generally require balancing precautions. These simplifications do not generally apply to return or exhaust systems since they are not normally designed as pressure independent systems.

f. Comply with Current Code. Another method is to make affected areas outside the project boundaries to comply with current code requirements, namely CMC Table 4-A. In this case, pre-demolition airflow measurements are not required.

When fan speed changes are made to systems that are not pressure independent, the entire system must be rebalanced to maintain existing airflows to areas outside the project boundaries. For phased projects, rebalancing shall be completed at each phase to maintain existing airflows to areas outside the project boundaries. Corridors or areas that interface with the project boundaries may require rebalancing to ensure their original air balance is maintained.

A common question is: “Do I have to take measurements of the entire duct system?” Not necessarily, especially for relatively small projects. As you travel upstream in the duct system towards the fan, the percentage of project air to total air quantity decreases. When the percentage of project air is reduced to the point that air-balancing tolerances exceed the quantity of project air, further upstream duct measurements are not necessary. Also, regardless of the type of method used, the relative air balance of a room (equal, negative or positive) must be maintained. Thus, even if the project only involves supply air modifications, the return and/or exhaust outlets to a room or space may need to be measured to ensure relative air balance of the room or space remains unchanged. The standard air balancing tolerances specified by the AABC and NEBB Standards are acceptable.
Return to previous item.

16. Process Box: **For Unresolved Issues or Questions, go to the “Unresolved Issues or Questions” box on the Health Facility Remodel Flow Chart.**
End flow chart.

EXAMPLES

The following examples are not meant to limit the interpretations of the code or limit discussion on differing situations.

102.6 Existing structures. The legal occupancy of any structure existing on the date of adoption of this code shall be permitted to continue without change, except as is specifically provided in this code, the *California Existing Building Code,* the *International Property Maintenance Code,* the *California Fire Code,* or as is deemed necessary by the building official for the general safety and welfare of the occupants and the public.

Example: There is a project adding an exam light with above ceiling support in an existing Exam Room and the Acoustical Ceiling Tiles (ACT) must be removed to add the new support structure. When the ACT is removed, it is discovered that there are conditions above the ceiling that are not code compliant although they were compliant at the time they were installed. No action is required to remedy this situation although updating anchorage for NPC should be considered at this time.
Example: Same project as above but the discovered conditions were not compliant when installed or were modified since installation deeming them non-compliant. This condition would have to be corrected.

102.4 Additions, Alterations, Renovations or Repairs. Additions, alterations, renovations, or repairs shall conform to that required for a new system without requiring the existing system to be in accordance with the requirements of this code. Additions, alterations, renovations, or repairs shall not cause an existing system to become unsafe or create unhealthy or overloaded.

Additions, alterations, renovations, or repairs to existing systems shall comply with the provisions for new construction, unless such deviations are found to be necessary and are first approved by the Authority Having Jurisdiction.

Example: A Pharmacy is being expanded to include a new work area. The expansion area will include replacement of all ductwork above the ceiling, but the existing pharmacy area will only be receiving a new ceiling. When the ceiling is removed it is noticed that the ductwork is not code compliant although it was compliant at the time it was installed. All new work, including the new ductwork and the new ceiling, will have to comply with current code. The existing ductwork over the existing pharmacy area may remain unchanged since no modifications will be made to it.

Example: A Lab is being remodeled to include 15 feet of modified workbench countertop with modifications to the existing plumbing. The plumbing may be modified, or patched, to match the existing system. This project would not require replacing all the existing plumbing within the workbench with a new code compliant system.

Example: 80% of a nursing floor of a hospital is being renovated and the remaining 20% is only receiving cosmetic upgrades. It is found that some of the patient rooms within the 20% do not have handwashing fixtures in the rooms and the fixtures in the toilet rooms are not accessible. This condition was compliant at the time of initial construction. No additional work is required as this condition was compliant when installed.

Replace in Kind. Repairs which use the same or similar materials in the same or a similar location which comply with the currently adopted code.

Example: An existing water pump must be replaced in the Central Utility Plant. An exact duplicate is no longer available, but an updated model is available. The updated water pump is lighter than the original pump and has similar anchorage. The new water pump must be UL certified and anchorage detail will be required to be submitted for review.

Example: A nursing unit with licensed patient beds was renovated to be an Administration Department and the patient beds were removed from the license. These rooms were not held in suspense as the licenses were transferred to the new patient rooms or the number of licensed beds was reduced. The hospital's census has risen over the years and now they would like to convert the administrative offices back to patient rooms. This is a Change of Use/Function and the Nursing Unit proposed would have to meet the requirements of current code, including the patient room requirements as well as all support functions for a Nursing Unit.

Example: A nursing unit with licensed patient beds was vacated and the beds were placed in suspense. The facility now wishes to take the beds out of suspense. OSHPD will need to do an assessment of the area prior to reoccupying the unit to ensure that unauthorized work did not occur, that medical gases, if applicable, are tested and recertified, etc., and that the unit is in compliance with the code at the time it had been constructed and licensed.

Example: On a project submittal, a non-structural component, which requires Special Seismic Certification (SSC), is depicted on the construction drawings. The submittal specifies a component, which is listed within an OSP. After OSHPD project approval, the contractor substitutes the component for a different model, which is not listed within any OSP and does not have SSC. The component must be replaced with a component which is listed within an OSP, has SSC, or is justified for project use.

Example: Five roof-mounted exhaust fans are being replaced in-kind. They serve multiple spaces including several operating rooms. The tower was constructed 20 years ago when the fans were installed in compliance with the code at that time. All spaces served by the subject exhaust fans will need to be rebalanced. Mechanical plans shall contain all necessary information to demonstrate design airflows in areas served by the equipment, and shall comply with the ventilation and air balance requirements in CMC Table 4-A. A balance report will be required upon completion of the project. Airflows may comply with the code requirements in effect when the facility was first constructed.

Example: A roof-mounted package HVAC unit is being replaced due to wear. It serves a Skilled Nursing Facility, specifically a patient wing. The facility was constructed over 20 years ago in compliance with the code at that time. 5 years ago, ten (10) beds were converted to sub-acute care in this unit and a new emergency generator was installed. The HVAC unit is a direct replacement. Due to the addition of sub-acute care, the new HVAC unit will be required to have essential power. Airflows may comply with the code requirements in effect when the facility was first constructed. If the unit is not on the essential electrical system and it is not serving sub-acute beds, the new unit will not be required to have essential power.