

Orange County Fire Authority

Community Risk Reduction

1 Fire Authority Road, Building A, Irvine, CA. 92602 www.ocfa.org 714-573-6100

Architectural Review



Guideline E-04

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Architectural Review

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PURPOSE

This document is intended as a general guideline pertaining to the submittal and review of architectural plans by the Orange County Fire Authority (OCFA). This document provides guidance related to submittal requirements, general information required on the plans, standard architectural notes, and specific requirements by occupancy type, and clarifying information regarding emergency egress, emergency lighting, exit signs, and exit and exit access doorways.



The items identified in this guideline are not intended to cover all of the various code requirements that apply to architectural plans reviewed by the OCFA. Reference to the relevant adopted codes and standards and interpretive manuals and other guidance documents pertaining to building design and construction will still be required.

SCOPE

The OCFA reviews architectural plans for those structures that, because of the nature of their occupants, use, height, or processes and materials contained within, have an inherently higher potential to endanger life or the community due to the risk of fire, panic, or other emergency conditions. The OCFA reviews architectural plans to ensure that these structures and the people inside them are sufficiently protected by the proper type of construction and fire-resistive assemblies, fire and life-safety systems, and egress systems as required by the relevant codes and standards.

These guidelines apply to all structures built, modified, or moved into the area served by the OCFA over which the OCFA has jurisdictional authority granted by the State Fire Marshal (SFM) or other agencies. In general, the OCFA performs architectural reviews of A, C, E, H, I, L, R-1, R-2, and R-4 occupancies, in addition to certain home-based care facilities classified as R-3 or R-3.1 occupancies. The OCFA also reviews architectural plans for all new high-rise structures regardless of occupancy, with the exception of hospitals – see OCFA Guideline H-01 for information related to high-rise buildings. At the request of partner cities and other agencies, the OCFA may also perform architectural reviews of other occupancy types for compliance with life safety requirements detailed in the California Building Code (CBC), California Fire Code (CFC), and other adopted standards and regulations.

Additionally, the OCFA reviews architectural plans for the installation of electronic locks where the devices potentially affect travel *in the direction of exiting* from a building, tenant space or where such devices are required to be interconnected with sprinkler and alarm or smoke detection systems (e.g., access-controlled egress systems, delayed egress locks, elevator lobby locks). Installation of card readers that only prevent authorized access *into* a building or space *against* the direction of exit travel does not by itself trigger submittal of architectural plans to the OCFA. See page 23 for more information.

Review of R-1 and R-2 Occupancies:

The OCFA generally does not require architectural review of one and two-story R-1 and R-2 occupancies or for three-story R-2 structures with dedicated egress from each dwelling. Additionally, to reduce redundancy and streamline the review process with the Building Department, the OCFA may perform an abbreviated review of some R-1 or R-2 occupancies, focusing on critical design, construction, and fire and life-safety features. Please see Attachment 7 for additional information regarding review of these occupancies.

Review of E and I-4 Occupancies:

To reduce redundancy and streamline the review process with the Building Department, the OCFA performs an abbreviated review of E and I-4 occupancies, focusing on critical design, construction, and fire and life-safety features. Please see Attachment 7 for additional information regarding review of these occupancies.

Review of B, F, M, S, and U Occupancies:

As B, F, M, S, and U occupancies are not SFM regulated occupancies, the OCFA typically does not review architectural plans for these occupancy classifications except when specifically required by the Building Official. However, the processes, operations, equipment, materials, or products within B, F, M, or S occupancies are often regulated by the Fire Code, and many U occupancies are physically and functionally interconnected to an SFM regulated occupancy. By completing the worksheet in Attachment 3 of this document, you should be able to determine if a submittal of architectural plans is necessary or whether submittal of other plan types is required in addition to or instead of an architectural plan for these five specific occupancy classifications.

Review of HCD-Approved Modular Structures Containing SFM Regulated Occupancies:

Modular buildings do not require architectural, sprinkler, or alarm review by the OCFA *if the building and its fire-protection systems have been approved for the intended use by the Department of Housing and Community Development (HCD)*. However, as many of these structures are intended for use as assembly or daycare facilities, which requires permitting or clearance by OCFA on behalf of the State Department of Social Services prior to occupancy, the OCFA encourages applicants to bring plans for State-approved modular units in for a brief evaluation to identify any potential issues that may affect the desired use, and to discuss inspection requirements necessary for final project sign-off. Though architectural, sprinkler, and/or alarm plans may not be required for these pre-approved modular structures, an approved fire master plan (site plan) is required before any structure, including State-approved modular units, may be brought onto a project site. Other reviews, such as for underground fire water supply lines or fuel modification, may also be required.

Review of State- and Federally-Owned or Occupied Buildings:

Projects at public school campuses, State parks, and buildings or tenant spaces that are owned or occupied by a State or Federal government agency do not normally require OCFA architectural review. However, many of these agencies will work closely with the

local jurisdiction and may request an advisory review from the OCFA or may defer a portion of the review to the local jurisdiction. To avoid any unnecessary submittals and delays in project approval, prior to submitting plans to the OCFA for review of these projects, please confer with your contact at the appropriate State or Federal agency that oversees design and construction. If the agency directs you to submit plans to the OCFA, please include a cover letter with the submittal indicating the scope of the review they are requesting and whether they would like the OCFA to perform the related inspections prior to occupancy. For public school projects, OCFA review is generally limited to emergency access and hydrants and not architectural plans; please refer to OCFA Guideline B-10 for specific submittal instructions.

Review of Projects in Mobile Home Parks:

Projects in mobile home parks may be under either the authority of the California Department of Housing and Community Development (HCD) or the local city/county Building Department and OCFA; please consult the list of mobile home parks on the HCD website to determine jurisdiction. Projects in mobile home parks under local jurisdiction will be treated the same as any commercial or residential project in terms of plan submittal processing and requirements; OCFA review is generally limited to fire department access, hydrant location and water supply piping serving hydrants, and voluntary sprinkler installations. Projects at mobile home parks under the authority of the Department of HCD do not normally require OCFA review, however, HCD may work closely with the local jurisdictions and may request an advisory review or may defer a portion of the review to OCFA. To avoid any unnecessary submittals and delays in project approval, prior to submitting plans for review of projects in mobile home parks under the jurisdiction of HCD, please confer with HCD on the degree of local involvement, if any, necessary for your project. If HCD directs you to submit plans to the OCFA, please include a cover letter with the submittal indicating the scope of the review they are requesting and whether they would like the OCFA to perform the related inspections prior to occupancy.

DEFINITIONS

Many terms used within this guideline and in correction letters issued by OCFA are defined specifically in Chapter 2 of the CBC and CFC and further clarified throughout the code by the context in which they are used. In some cases, terms may convey a specific meaning when used by design, construction, and code enforcement professionals that may vary from common use. The following definitions are provided to facilitate the consistent application of this guideline and to aid in clear communication between applicants and OCFA staff:

Alteration - Any construction or renovation to an existing structure other than repair or addition. 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.

Area, Building - The area included within surrounding exterior walls, or exterior walls and fire walls, exclusive of vent shafts and courts. Areas of the building not provided with surrounding walls shall be included in the building area if such areas are included within the horizontal projection of the roof or floor above.

Certification – A declaration by the State Fire Marshal’s office, testing lab, registered engineer, or other agency or individual approved by the OCFA that a product is suitable for an intended use or meets specific testing or listing criteria.

Change of Occupancy - A change in the use of a building or a portion a building which results in one of the following:

1. A change of occupancy classification.
2. A change from one group to another group within an occupancy classification.
3. Any change in use within a group for which there is a change in application of the requirements of this code.

Chemical Classification/Chem Class – An inventory of the hazardous materials stored or used at a facility or site. A hazardous material is defined as *any* liquid, solid, or gas that is required to have a material safety data sheet, or MSDS. The chemical classification does not need to include common products intended for routine cleaning and maintenance of the facility itself such as glass cleaner, floor polish and the like, reasonably expected to be found in limited quantities in all structures. See OCFA Guidelines G-05 and G-06 for additional information related to hazardous materials.

Convenience Doors, Non-required Doors – Additional doors beyond the minimum required to meet code that are installed to facilitate the use of the room for its intended purpose. Doors that are not *required* by code for egress purposes but may still serve as part of a legitimate egress path must comply with the exit door requirements of CBC 1008.

Corridor, Hall, or Hallway – A defined circulation space having wall and ceiling/floor assemblies. Doors, windows, and other openings into corridors may or may not be required to be of rated construction depending on the occupancy and number of persons served by the corridor and whether the building is protected throughout by fire sprinklers or other code requirements. Other spaces that essentially function as corridors but may not be completely enclosed by wall and ceiling/floor assemblies, as is the case for many interior and exterior egress paths, shall be treated as a corridor for purposes of determining minimum width.

Court - An open, uncovered space, unobstructed to the sky, bounded on three or more sides by exterior building walls or other enclosing devices.

Daycare – A facility or area providing supervision or custodial care of individuals who, due to age, mental state, or other conditions, have their ability for self-preservation limited or impaired or who evacuate at a slower rate than the general population. Daycare uses may include facilities such as non-residentially-based babysitting or adult care, services

for the disabled, Alzheimer's facilities, nurseries and preschools, or facilities licensed by the State or local jurisdiction as a daycare or day program facility. These facilities are typically classified as E or I-4 occupancies depending on the number and age of occupants when the occupants are on-site for a period of less than 24 hours or as R occupancies when 24-hour service is provided. Sports training, dance schools, and similarly focused recreational programs where children are on site only for the duration of the training session itself and do not receive other supervision or care services are usually considered an A-3 occupancy if more than 49 occupants are present. See also Nursery and Preschool.

Decorative Materials - All materials applied over the building interior finish for decorative, acoustical or other effect including, but not limited to, curtains, draperies, fabrics and streamers; and all other materials utilized for decorative effect including, but not limited to, bulletin boards, artwork, posters, photographs, batting, cloth, cotton, hay, stalks, straw, vines, leaves, trees, moss and similar items, foam plastics and materials containing foam plastics. Decorative materials do not include wall coverings, ceiling coverings, floor coverings, ordinary window shades, interior finish and materials 0.025 inch (0.64 mm) or less in thickness applied directly to and adhering tightly to a substrate.

Egress Court - A court or yard which provides access to a public way for one or more exits.

Emergency Escape and Rescue Opening - An operable window, door or other similar device that provides for a means of escape and access for rescue in the event of an emergency. See Attachment 5 for required ladder pad setback relative to openings.

Emergency Power System - A source of automatic electric power of a required capacity and duration to operate required life safety, fire alarm, detection and ventilation systems in the event of a failure of the primary power. Emergency power systems are required for electrical loads where interruption of the primary power could result in loss of human life or serious injuries.

Exit Access Doors/Exit Doors/Egress Doors – Doors and doorways required by the CBC that allow travel from a space or structure. Such doors shall meet all of the requirements of the CBC such as quantity, placement, size, door swing direction, and hardware.

Exit Passageway - An exit component that is separated from other interior spaces of a building or structure by fire-resistance-rated construction and opening protectives and provides for a protected path of egress travel in a horizontal direction to an exit or to the exit discharge.

Facility - All or any portion of buildings, structures, site improvements, elements and pedestrian or vehicular routes located on a site [DSA-AC]. All or any portion of buildings, structures, site improvements, elements, and pedestrian routes or vehicular ways located on a site.

Fire Area - The aggregate floor area enclosed and bounded by fire walls, fire barriers, exterior walls or horizontal assemblies of a building. Areas of the building not provided with surrounding walls shall be included in the fire area if such areas are included within the horizontal projection of the roof or floor next above.

Fire Door Assembly - Any combination of a fire door, frame, hardware and other accessories that together provide a specific degree of fire protection to the opening.

Fire Exit Hardware - Panic hardware that is listed for use on fire door assemblies.

Fire Protection System - Approved devices, equipment and systems or combinations of systems used to detect a fire, activate an alarm, extinguish or control a fire, control or manage smoke and products of a fire or any combination thereof.

Fire Safety Functions - Building and fire control functions that are intended to increase the level of life safety for occupants or to control the spread of harmful effects of fire.

Floor Area, Gross - The floor area within the inside perimeter of the exterior walls of the building under consideration, exclusive of vent shafts and courts, without deduction for corridors, stairways, ramps, closets, the thickness of interior walls, columns or other features. The floor area of a building, or portion thereof, not provided with surrounding exterior walls shall be the usable area under the horizontal projection of the roof or floor above. The gross floor area shall not include shafts with no openings or interior courts.

Floor Area, Net - The actual occupied area not including unoccupied accessory areas such as corridors, stairways, ramps, toilet rooms, mechanical rooms and closets.

Hazardous Materials - Those chemicals or substances that are physical hazards or health hazards as classified in Section 307 and the CFC, whether the materials are in usable or waste condition.

High-Rise Building - A building with an occupied floor located more than 75 feet (22,860 mm) above the lowest level of fire department vehicle access. See OCFA Guideline H-01 for detailed high-rise building information and requirements.

Incapable Of Self-Preservation - Persons who, because of age, physical limitations, mental limitations, chemical dependency or medical treatment, cannot respond as an individual to an emergency situation.

Laboratory - A room, building or area where the use and storage of hazardous materials are utilized for testing, analysis, instruction, research or developmental activities.

Laboratory Suite - A laboratory suite is a Group L Occupancy space within a building or structure, which may include multiple laboratories, offices, storage, equipment rooms or similar support functions, where the aggregate quantities of hazardous materials stored and used do not exceed the quantities set forth in Table 453.7.3.1 (see Section 453).

Legitimate Egress Path – A path of travel from a space to the public way or safe dispersal area that complies, or can feasibly be designed to comply, with the egress requirements of CBC Chapter 10. Paths of travel may still qualify as legitimate egress paths though they may not be *required* egress paths. Because many potential egress paths that are not required by code are indistinguishable from required ones and can be expected to be used by occupants in an emergency situation, they shall meet the applicable provisions of required egress paths whenever possible; for example, every door serving occupants of an assembly that is part of a legitimate egress path to the public way shall be equipped with panic hardware.

Letter of Intended Use – A letter provided by a building or business owner detailing the anticipated uses of the structure or space or identifying the types of processes, equipment, or materials used in a facility. Such letters assist in defining the appropriate occupancy or use-related requirements for a project and may include diagrams or plans such as furniture or equipment layouts. Such letters may also establish the conditions of use that approval by the OCFA is based upon.

Lobby – A room located at the entrance of a building that occupants pass through to access other spaces within the structure. Unlike a waiting or reception room, a lobby generally does not serve any use other than circulation. Where lobbies are required to be of rated construction, they shall contain only minimal amounts of combustible furnishings and fixtures, such as an information desk or directional kiosk, and shall not be used for purposes such as a lounge or waiting room.

Normally Occupied Space – Rooms or areas that are occupied frequently throughout the day or intermittently for extended periods during the normal course of operation of a facility. Such areas *may* include offices, conference rooms, break rooms, copier rooms, restrooms, warehouses, file rooms, and similar accessory or administrative areas, but do not normally include supply or storage rooms, janitorial closets, or mechanical rooms.

Nursery – A facility for the care of infants and children younger than two years. See also Daycare and Preschool.

Preschool – A facility for the care and/or education of small children not yet old enough to enter kindergarten, typically under 5 years of age. See also Nursery and Daycare.

Public Way – A street, alley, sidewalk, plaza, or other area permanently dedicated to the general public for their use. Egress requirements typically end at the public way as it is substantially open to the sky, providing safety from smoke inhalation, and provides an opportunity for the occupants of a structure or other space to freely disperse from danger in the event of a fire or other emergency.

Room/Space – An area where travel is constrained or where smoke, fire, or panic may present an immediate hazard. A room or space may include exterior areas such as a balcony, terrace, or patio enclosed by fences, walls, vegetation, or other obstructions. Two areas that are adjacent to each other but visually, physically, acoustically, atmospherically, or functionally separated, may be considered by the fire code official for purposes of code application to be either the same or separate spaces, dependent upon the degree and/or type of separation and how these may potentially affect the occupants in an emergency.

Refrigeration – Industrial or commercial systems used to regulate the air temperature within a building or space for the preservation of food, specimens, equipment, or other material. For purposes of OCFA review, refrigeration systems do not include air conditioners installed as part of a building's ventilation system for the comfort of occupants unless ASHRAE standards require a mechanical equipment room.

Rescue Openings – Exterior doors/windows required in sleeping rooms of certain R-2 occupancies to facilitate evacuation or rescue of occupants. Any area provided with a closet or storage space or en-suite bathroom that could easily be converted into a sleeping room, such as a "bonus room," "den," or "home office," shall be considered a

sleeping room when considering rescue window requirements. See OCFA Guideline B-09 for detailed requirements.

Safe Dispersal Area – An area that allows the occupants evacuating a structure to maintain a safe distance from the structure without actually leaving the property and traveling to the public way.

Smoke Compartment - A space within a building enclosed by smoke barriers on all sides, including the top and bottom.

Special Amusement Building - Any temporary or permanent building or portion thereof that is occupied for amusement, entertainment or educational purposes and that contains a device or system that conveys passengers or provides a walkway along, around or over a course in any direction so arranged that the means of egress path is not readily apparent due to visual or audio distractions or is intentionally confounded or is not readily available because of the nature of the attraction or mode of conveyance through the building or structure.

Standby Power System - A source of automatic electric power of a required capacity and duration to operate required building, hazardous materials or ventilation systems in the event of a failure of the primary power. Standby power systems are required for electrical loads where interruption of the primary power could create hazards or hamper rescue or fire-fighting operations.

Structure/Building – A construct intended to house or contain people, equipment, objects, or processes, within which travel is constrained, or where smoke, fire, or panic may present an immediate hazard. A structure or building may or may not have a roof or be enclosed with walls.

REQUIREMENTS

The information in this section is divided into four main topics:

1. Submittal Process
2. Plan Requirements
3. General Code Requirements
4. Code Requirements by Occupancy



Though the submittal process is fairly similar for all types of plans submitted to the OCFA, there are some variations for architectural plans, so all applicants are encouraged to read the **Submittal Process** section. As basic required plan information can vary between OCFA and other jurisdictions, the **Plan Requirements** section should be reviewed by all applicants who haven't submitted architectural plans to the OCFA. The two **Code Requirements** sections focus on issues that are commonly cited as corrections during review. Explanatory information is included to answer frequently asked questions; provide guidance for areas of the CBC and CFC that are not universally applied or understood; describe code requirements in more depth than allowed for in a correction letter; and promote uniform application of code and life-safety standards by designers and OCFA staff. As such, the **Code Requirements** sections are recommended for individuals who may not be familiar with CBC and CFC requirements or OCFA's application thereof, as well as architects receiving corrections on their plans.

Applicants are encouraged to read the applicable portion(s) of this guideline prior to making corrections or contacting OCFA Planning & Development staff for clarification. Definitions to some commonly used terms appearing in this guideline or on correction letters are available for reference in the preceding section.

1. Submittal Process

- A. **Sequencing** – For typical projects consisting of a new structure or an addition/modification to the footprint of an existing structure, a fire master plan shall be reviewed and approved by the OCFA prior to submittal of the architectural plan. For projects within the footprint of existing structures, the architectural plan may be submitted after completion of the city’s conditional use permit or design development review process.

As the contents, equipment, or processes taking place within a structure may affect construction or egress requirements, any review of hazardous materials, equipment, or processes shall take place either before or concurrently with the architectural review. Common hazards/equipment include:

- 1) Medical or industrial gas piping systems (excluding small compressed air systems like you would find at a repair garage)
- 2) Above or underground tanks containing hazardous materials, including fuel tanks for generators (may also require disclosure with County HCA-please visit esubmit.ocgov.com and occupainfo.com for more information)
- 3) Chemical use, storage, mixing, dispensing, or processing (may also require disclosure with County HCA-please visit esubmit.ocgov.com and occupainfo.com for more information)
- 4) High-piled storage
- 5) Battery systems
- 6) Dipping operations
- 7) Spray booths or other spraying/finishing operations using flammable materials
- 8) Dry-cleaning
- 9) Drying/baking ovens, dehydrators, or autoclaves (industrial and large commercial production devices only, not typical restaurant or residential appliances)
- 10) Refrigeration systems
- 11) Dust producing operations (e.g., woodworking; grinding; sanding; finishing; baking/food production at a commercial-scale, not in restaurants; etc.)
- 12) Hot work (welding, soldering, brazing, jewelry making/repair, etc.)
- 13) Smoke control systems (rational analysis report)

The following types of plans may be submitted after the architectural plan is approved (i.e., “deferred submittals”). Portions of the project that are deferred shall be subject to the codes, standards, and other applicable

requirements in force on the date that the deferred plan is submitted to OCFA.

- 1) Medical or industrial gas piping systems, provided that the construction requirements of the gas storage room are detailed on the architectural plan
- 2) Above or underground tanks containing hazardous materials located outside of the structure and separated per CFC and/or NFPA 30A (may also require disclosure with County HCA - please visit esubmit.ocgov.com and occupainfo.com for more information)
- 3) Battery systems containing less than 50 gallons of electrolyte
- 4) Underground piping systems supplying water to sprinklers and on-site hydrants
- 5) Fire pumps, provided that the construction requirements of the pump room are detailed on the architectural plan
- 6) Sprinkler and standpipe systems
- 7) Special extinguishing systems (FM-200, CO₂, AFFF, etc.)
- 8) Hood and duct extinguishing systems
- 9) Alarm and sprinkler monitoring systems
- 10) Smoke control systems (design and testing report)



It should be noted that under most circumstances only the type(s) of review identified on the Service Request form will be performed by the OCFA. The sheets in architectural plan sets that include information related to non-architectural items, such as the concurrent and deferred submittals identified above, will not be reviewed with or approved as part of the architectural plans, unless this review is specifically requested on the Service Request form with the appropriate fee code. Best practice is that concurrent and deferred plans should be submitted under separate service requests, at the appropriate time, and by the properly licensed professional to facilitate approval of each type of plan and the overall project.

- B. **Submittal Routing** – Plans must be submitted at the locations detailed on the [OCFA Plan Submittal Routing](#) list on ocfa.org. Refer to the routing list for pick-up locations for corrections and approved plans. As plan drop-off and pick-up locations are determined by each city/County building department and not the OCFA, deviation from the established routing list must be approved by the city/County staff and be accompanied by a permission slip or other form of notification issued by them.
- C. **Payment** – Refer to the [OCFA Planning & Development Services Fee Schedule](#) on ocfa.org for current fees related to review of architectural plans. Architectural plan fee codes are listed on the Fee Schedule in the PR200 to PR285 range. If you are unable to determine the correct fee code to use, please contact the OCFA at 714-573-6100 for assistance.

Fees for the type of review requested on the Service Request form will be due upon submittal. This fee covers the cost for the time it takes on average to complete the first two plan reviews and a predetermined number of inspections (usually two) for a typical project. The fee also covers a very

limited amount of time needed to discuss the project with the applicant at the counter or over the phone or email. Additional fees may be due for the extra time necessary to conduct sit-down meetings, complete complex reviews, or for time-intensive or additional inspections such as those involved with large facilities, phased projects, or where fees for plan review and inspections are assessed on an hourly basis. Also, as fees are based on the type of occupancy being reviewed, discrepancies between the occupancy listed on the plan or fee code selected and the actual occupancy or occupancies present may result in fees being adjusted to reflect the full scope of the review. Any additional fees accrued on a Service Request during the course of review will be due upon pick-up and/or resubmittal of the plan as determined by OCFA and, if applicable, city/County staff. Please note that the city/County may also assess a processing or handling fee for projects that are not submitted to and picked up directly from the OCFA; please check with the Building Department prior to submitting plans to them. A completed Service Request form and payment for applicable fees must accompany the plan at the first submittal.

D. **Number of Plan Sets** – *Two hardcopies and one electronic copy of the plan and any additional supporting information are required by the OCFA at the time of approval.* However, due to their complexity, most architectural plans typically require two or more submittals to address various deficiencies or receive additional information necessary for approval. For large plan sets, *the OCFA encourages the submittal of only a single hardcopy plan and electronic copy for review on the first submittal and two sets for all other projects such as simple tenant improvements, minor revisions to previously approved plans or plans that are submitted for review over-the-counter.* Plumbing, structural, mechanical, Title 24 energy compliance, and ADA compliance information is not typically necessary to complete an architectural review. Two hardcopies and one electronic plan set should be submitted on the second and subsequent submittals to facilitate the approval process.

E. **Resubmittals** – When resubmitting plans, please include the following:

- 1) A single copy of the redlined plan from the previous submittal.
- 2) Two hardcopies and one electronic set of revised plans. Originals shall not be submitted with changes in pen or pencil; “burn” these types of changes into new originals by photocopying them.
- 3) A single copy of the correction letter issued by the OCFA for the previous submittal.
- 4) A single copy of a correction response letter from the applicant indicating the type and location or sheet number for each change made to the plan. Alternatively, the responses may be made in the margins of the OCFA correction letter. *Plans submitted without this information may be delayed or returned as incomplete without review.*
- 5) Any supporting documentation requested in the correction letter. Where appropriate, such as for a letter of intended use, certification, or other



document justifying or explaining the validity of the project or design, the documentation shall be scanned or photocopied directly onto the plans.

- 6) Any fees due, such as those assessed on a third submittal or for additional work under the scope of the Service Request, which were not paid initially.

2. Plan Requirements

See Attachment 1 for a description of the specific type of information required. Depending on the complexity of the project, additional information such as building elevation, section, or detail drawings and equipment and furniture layouts may also be required to provide a comprehensive view of the project. If additional information is required, it will be requested during the review process. To simplify the approval process and eliminate unnecessary paper waste and reprographic time and expense, much of the required information identified above may be combined onto one or two fire protection and/or code analysis sheets.

3. General Code Requirements

The information provided in this section generally applies to all projects and is provided to clarify the requirements in CBC Chapters 3, 5, 10, and 30 as enforced by the OCFA.

4. Occupancy Classification or Occupancy Type

The initial step in applying the code is to correctly classify all uses and occupancies on the plans. The classification of a structure or portion thereof is based on use or type of occupants. The occupancy groups are:

A – Assembly of 50+ people for social, civic, entertainment, recreational or religious functions, eating/drinking, or awaiting transportation such as in a restaurant, nightclub, gym, airport or place of worship

B – General business, service and administrative functions such as offices and banks

C – Organized camps

E – Education or daycare for children

F – Factory and industrial operations such as manufacturing, finishing, packaging, assembling/disassembling, repair or processing

H - Hazardous materials storage/use/processing exceeding maximum allowable quantities

I – Institutional use such as hospitals, health care, daycare of adults or infants, or jails

L – Laboratories for research and development or education not otherwise classified as a B or H occupancy

M – Mercantile and retail spaces

R – Residential uses such as hotels, apartments, condos, dorms, eldercare facilities and single-family homes and duplexes

S – Storage and warehousing; vehicle repair; parking structures or private garages over 3,000 square feet



U – Utility structures such as barns, silos, greenhouses, and sheds; private garages and carports up to 3,000 square feet.

Occupancy groups may be further subdivided into divisions depending upon the specific type of structure, use, or occupant characteristics. Where a structure or occupied roof is proposed for a purpose not specifically listed in the code, the structure shall be classified in the group it most nearly resembles based on the fire safety and relative hazard. The importance of occupancy classification cannot be overstated for it is the basis of many code requirements such as allowable building size, construction type, number of stories, egress, and building fire safety functions including sprinkler and alarm requirements.

5. Occupancy Separation

Where identified by CBC Table 508.4, occupancies of different types shall be separated by fire barriers and rated floor/ceiling assemblies unless the occupancies either qualify as accessory spaces or are treated as non-separated.

- A. Non-separated Occupancies, CBC 508.3** – When using the non-separated provisions in exchange for the elimination of rated separations required by Table 508.4, the non-separated areas will be treated as the most stringent occupancy present for purposes of determining allowable area, sprinkler and alarm requirements, and other life-safety provisions in CBC Chapter 9.

The non-separated approach is the most beneficial in:

- 1) Small buildings where none of the occupancies require sprinklers or alarms
- 2) Larger buildings where the allowable area for each occupancy type is similar, or where the allowable area for the most restrictive occupancy is larger than the actual size of the building
- 3) Fully sprinklered buildings where the alarm requirements for each occupancy are similar (e.g., E, I-4, and large A occupancies), or where alarms are not required in any occupancy in the building
- 4) Projects where the design calls for many windows, doors, ducts, or other openings between different occupancies
- 5) Projects where extension of the sprinkler or alarm system is less expensive or more practical than installation of rated separations

Non-separated spaces retain their original occupancy classification and are still subject to specific requirements based on occupancy. This includes, for example rated construction for I-1, R-1, R-2, R-2.1, and R-3 dwelling and sleeping spaces to be separated from each other and adjacent spaces per CBC 420 or the need for rated wall or ceiling/floor assemblies identified in CBC Chapter 7 or 10. Due to the increased hazards inherent in H and L occupancies, these spaces shall always be separated as required by Table 508.4. Due to the nature of the occupants in I-2, I-2.1, I-3 occupancies,

these spaces may also require separation from certain occupancies in some types of construction – see CBC 508.3.3 Exception 3.

If the non-separated approach will be used, identify the areas or occupancies it applies to and provide the following note on the plan: *“For non-separated spaces, sprinkler, alarm, and other life-safety system requirements of CBC Chapter 9 shall be applied throughout the non-separated areas as required for the most stringent of the non-separated occupancies present.”* Where the allowable area is significantly different for the various non-separated occupancies, provide an allowable area calculation (see section 3.E) based on the lowest tabular value from Table 506.2 for the occupancies that are non-separated.

- B. Accessory Occupancies, CBC 508.2** – The CBC allows spaces that would normally be required to be separated from other occupancies by fire resistive walls and ceiling/floor assemblies to omit these rated separations provided that they qualify as accessory occupancies. A space may qualify as an accessory occupancy if it meets all of the following criteria:
- 1) Accessory space shall not be more than 10% of the area of any floor.
 - 2) The aggregate area of all accessory spaces in the building shall not exceed the base allowable area for non-sprinklered buildings listed in Table 506.2 without increases due to the presence of sprinklers or frontage.
 - 3) The space is ancillary to, directly associated with, functionally interdependent upon, and under the direct control of the main use and would not otherwise take place independently. For example, the administrative office at a school or a cafeteria serving the employees of a factory could be accessory to the primary occupancy, but a coffee-shop leasing space in a strip mall and serving the general public would not be accessory to the other B or M occupancy spaces in the building.
 - 4) The room is used for purposes or by persons who are expected to be associated with the main use of the building. For example, a meeting or activity room at city hall that is used for civic functions and city sponsored or supervised events would be accessory to the offices.
 - 5) The space is not used for a purpose that could reasonably be expected to take place independent of the main use. For example, a daycare located in an office building that is used by people other than employees would not be accessory. Similarly, a daycare operating at a place of religious worship that cares for children whose guardians are not concurrently attending religious services or functions would not be considered accessory.
 - 6) The space is occupied outside of the regularly scheduled hours of use for the rest of the facility. For example, a multipurpose room at a civic center that is available to the general public in the evenings or weekends for private functions would not be considered accessory to the rest of the civic center.

For purposes of calculating allowable area only, accessory occupancies are treated as the main occupancy they are accessory to; for all other purposes, such as sprinkler and alarm requirements, egress, maximum stories, etc., they retain their original occupancy classification. If the accessory occupancy provision will be used, note which space(s) it applies to and provide a calculation demonstrating that the accessory spaces occupy less than 10% of the floor area of the individual stories they are located on.

- C. **Incidental uses, CBC 509** – The CBC recognizes that some spaces in a building are inherently more hazardous than others and requires that they be appropriately separated from other spaces with rated construction, protected by fire sprinklers, or both. Incidental uses shall be protected as required in Table 509 *even if they would otherwise qualify as an unseparated accessory space*. Where the option is available to provide sprinkler protection in the place of rated construction, construction shall still be capable of resisting the passage of smoke. Where applicable, call this out on the plan and note automatic closers and smoke gaskets on the door schedule.

Unlike accessory uses, incidental use spaces assume the occupancy of the part of the building they are located in and are not given an occupancy classification based on the use they most closely match from the list in CBC 302.1. For example, an incidental use laundry room in a hotel would be classified as R-1 and not F-1.

The aggregate area of incidental use spaces shall not be more than 10% of the area of the story they are located in. Where they do exceed this limit, they shall be treated as separated occupancies and be provided with the protection and/or separation as required by CBC Table 509 or 508.4, whichever is greater.

6. **Building Height, Construction, & Allowable Area**

- A. **Sprinkler Upgrades** – The CBC allows a building's area, height, and maximum stories above grade permitted for each occupancy to be increased by the installation of an approved fire sprinkler system. If these provisions will be applied to a project, the sprinkler system shall comply with NFPA 13. With the exception of R-2 occupancies of Type V-A construction, sprinklers cannot be used for both a story/height increase and an area increase in buildings or portions of buildings classified as an A, E, H, I, L, R occupancy or high-rise building. See footnotes 'n' and 'o' in CBC Table 504.4 and "j" and "k" in Table 506.2 for limitations on using sprinklers for height/story and area increases.
- B. **Allowable Area** – The maximum size that a building is allowed to be is primarily dependent upon the type of construction used, the occupancies housed in the building, and whether the building is sprinklered. To demonstrate compliance with allowable area restrictions, an allowable area calculation done in accordance with CBC Equations 5-1 through 5-5 is





required to be provided on the plans for any new structure or change of occupancy or use which meets any of the following criteria:

- 1) Any building containing an H occupancy
- 2) Any non-sprinklered building over 6,000 square feet containing a State Fire Marshal regulated occupancy
- 3) Any non-sprinklered building over 9,000 square feet
- 4) Any building over 18,000 square feet and more than one story
- 5) Any building using sprinklers for a story increase or construction equivalency

For existing structures, an allowable area calculation is required when there is a change in occupancy to a more restrictive classification (e.g., from B or M to an A) *and* the building meets any of the criteria in the list above. See the figures in Section 3.F below for an example of how to calculate allowable area.

C. **Frontage** – a building with at least 25% of its perimeter located at least 20 feet away from property lines or other structures on the same lot may qualify for an increase in allowable area. The open space shall be:

- 1) Located on the same property as the building or in a permanently dedicated public open space such as a street or park, *and*
- 2) Accessible from an on-site fire lane or public road serving as a fire lane, *and*
- 3) Available for and facilitate firefighting and rescue operations.

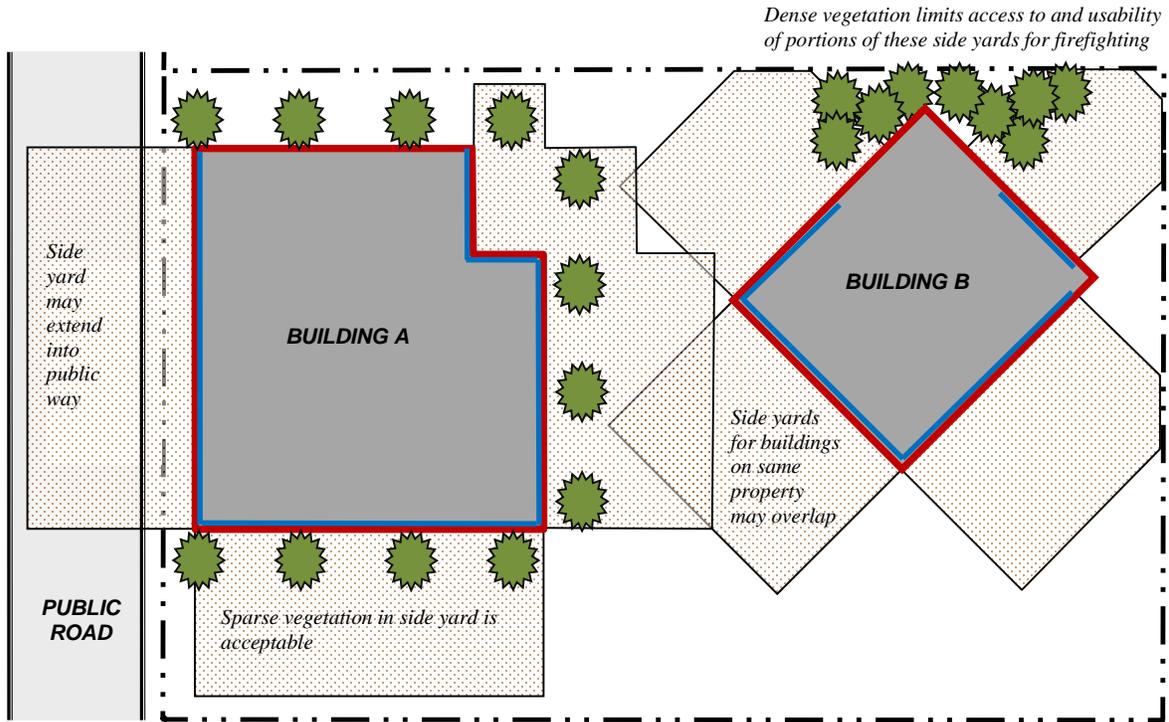
Examples of spaces that do not qualify for frontage increases include:

- 1) Open land on adjacent private property, unless an open space easement is recorded against the adjacent property
- 2) Railroad right-of-way
- 3) Freeways and other high-speed, high-volume streets
- 4) Open space that is separated from the building and made inaccessible by walls, fences, vegetation, topography, or other obstructions
- 5) Open space that is not immediately and readily accessible from a fire lane or public road (i.e., beyond 150 foot hose pull distance from the fire lane)
- 6) Rivers, ponds, and other bodies of water not passable by foot
- 7) Areas where vegetation, terrain, trellises, out-buildings, walls, and similar obstructions impede travel, hose streams, or use of ladders or other firefighting equipment or operations
- 8) Outdoor equipment or material storage or staging areas
- 9) Parking areas for trucks, busses, and other large vehicles

Frontage increases shall be calculated using CBC Equation 5-5. The maximum frontage increase for most buildings with at least 30 feet of open space along the entire perimeter is 75% of the base allowable area for a non-sprinklered building shown in CBC Table 506.2. The full width of open space between buildings on the same property may be used for each of the buildings when calculating frontage.

See the following figures for an example of frontage and allowable area determination:

OPEN SPACE AND FRONTAGE DIAGRAM



 Represents a side yard measuring between 20 and 30 feet between building and property line

 Represents building perimeter: "P"

 Represents portion of building perimeter that may be counted as frontage: "F"

CALCULATING FRONTAGE AND ALLOWABLE AREA, CBC 506.2 and 506.3

FORMULAS:

Allowable Area: $A_a = A_t + (NS \times I_f)$
 Frontage Increase: $I_f = (F/P - 0.25) \times (W/30)$
 Allowable Area—Multistory, Single Occupancy*: $A_a = [A_t + (NS \times I_f)] \times S_a$

Where...

A_a is the allowable area for a single story
 A_t is the area from CBC Table 506.2 (NS, S1, S13R, or SM, as applicable)
 NS is the area from Table 506.2 for a non-sprinklered building (regardless of whether the building is sprinklered)
 I_f is the frontage increase factor (between 0 and 0.75)
 F is the length of the portion of the perimeter that fronts on yards at least 20' wide
 P is the perimeter of the entire building
 W is the average width of the side yard between 20' and 30'
 S_a is the multistory increase factor (2 for buildings containing SFM-regulated occupancies; 3 for other buildings)

Assume the following for Building C:

- Two story
- Building is 15,000 sq.ft. per floor
- Type V-B construction
- R-2 occupancy
- Sprinklered, NFPA 13 system

$A_t = 15,000$
 $I_f = (F/P - 0.25) \times (W/30)$

Where...

$A_t = 21,000$ sq.ft. (CBC Table 506.2, no story increase = SM)
 $NS = 7,000$ sq.ft. (CBC Table 506.2)
 $P = 130 + 120 + 100 + 20 + 30 + 100 = 500'$ (red line)
 $F = 130 + 120 + 100 + 20 + 30 = 400'$ (blue line)
 $W = 25(130 + 120)/400 + 30(100 + 20 + 30)/400 = 27'$ **
 $I_f = (400/500 - 0.25) \times (27/30) = 0.5$

Therefore, the maximum allowable area for a single story is...

$A_a = 21,000 + (7,000 \times 0.5) = 24,500$ sq.ft.

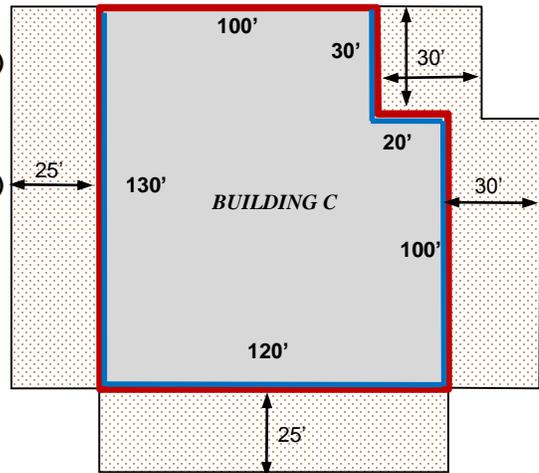
And the total allowable area for the entire building is...

$A_a = [A_t + (NS \times I_f)] \times S_a$
 $A_a = [24,500] \times 2$
 $A_a = 49,000$ sq.ft.

BUILDING COMPLIES AS THE AREA OF ANY INDIVIDUAL STORY (15,000 SQ.FT.) DOES NOT EXCEED THE MAXIMUM ALLOWED FOR A SINGLE FLOOR (24,500 SQ.FT.) AND THE TOTAL BUILDING AREA (30,000 SQ.FT.) DOES NOT EXCEED THE MAXIMUM ALLOWED FOR A MULTISTORY BUILDING (49,000 SQ.FT.).

*For mixed occupancy buildings, a "sum of the ratios" calculation is required; see CBC 506.2.4

**Where the width of the side yards is not uniform, use a weighted average for W (CBC Equation 5-4):
 $W = [(width\ of\ yard_1 \times length\ of\ yard_1) + (w_2 \times l_2) + (w_3 \times l_3) + \dots] / F$



Represents a side yard measuring between 20 and 30 feet between building and property line

Represents building perimeter: "P"

Represents portion of building perimeter that may be counted as frontage: "F"

7. Occupant Load

- A. **Occupant load factors** – Refer to CBC Table 1004.1.2 and the occupancy-specific sections of this guideline for the appropriate occupant load factor (e.g., square feet per person) for each space. If a space has more than one use, or more than one occupant load factor is appropriate, select the factor that results in the greatest number of occupants.



The occupant load determined in accordance with CBC 1004 is the “design” occupant load of the space and anticipates a worst-case situation from a life-safety perspective. It is the figure that is used by the OCFA as the basis for:

- 1) The number of people that the egress system must be designed to accommodate
- 2) Determination of sprinkler and alarm requirements
- 3) Determination of occupancy classification, where such is based on occupant load
- 4) Posting of maximum occupant load in assemblies and classrooms
- 5) Fire department documentation and operational permits, if any

The design occupant load is not necessarily dependent upon and may vary significantly from:

- 1) Occupant load based on limitations in the planning department’s conditional use permit
- 2) Occupant load allowed due to available parking spaces
- 3) Actual or anticipated occupant load based on business model projections
- 4) Occupant load used to determine number of plumbing fixtures
- 5) Occupant load requested for daycare licensing

- B. **Concurrent occupancy** – For purposes of designing the egress system, all spaces except restrooms and defined circulation spaces will be assumed to be occupied concurrently. Where circulation spaces can also function as waiting or other activity areas, such as the lobby and main hallways in movie theaters and pre-function spaces in hotels and event centers, they shall be assumed to be occupied concurrently. Where lobbies will be occupied by the same people as the primary assembly space, as is common in performing arts facilities and places of worship, the assumption of concurrent occupancy may not be appropriate – where this is the case, note on the plan that such spaces are not occupied concurrently.

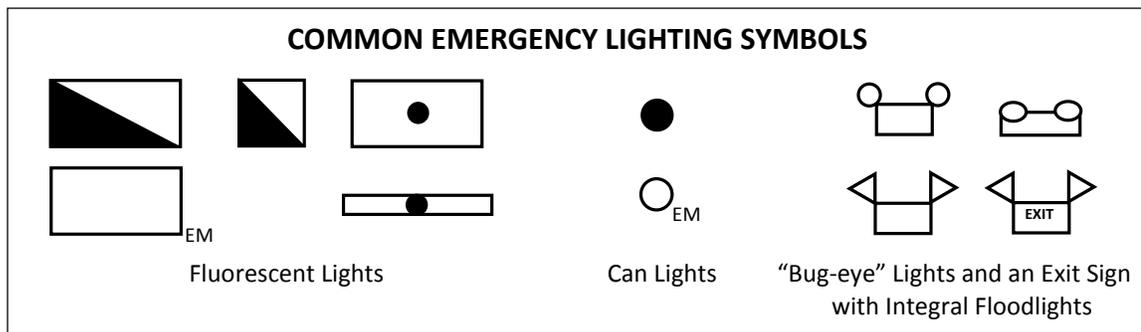
8. Egress

- A. **Emergency Lighting, CBC 1008.3** – Where two or more paths of egress travel are required within a room or from a building, emergency lighting shall be provided in the following locations:
- 1) Along main circulation paths or aisles in rooms requiring two or more exits
 - 2) Interior stairs and ramps

- 3) Corridors and exit enclosures (passageways, vestibules, open and enclosed stairwells, etc.)
- 4) Exterior portions of the egress system above or below grade level, such as outdoor exit stairs and exit balconies
- 5) Lobbies and vestibules serving exit enclosures as described in CBC 1028.1
- 6) Exterior landings outside of exit doors

Required emergency lighting shall be continuous along the entire length of the egress path up to and including the exterior landing outside the building. In instances where the means of egress beyond the landing serving the exterior exit doors of the building is restricted by such elements as an exit court, fences, topography, vegetation, or the building itself, the means of egress shall be illuminated to the public way or point where occupants can freely disperse from the exit discharge path in a manner that facilitates evacuation.

Emergency lighting must be either by standard lighting fixtures on an emergency circuit powered by a UPS system or generator, or by independent emergency lights such as bug-eye fixtures. Emergency lighting must be capable of sustained illumination for 90 minutes at an average intensity of one foot-candle at floor level.



B. Non-required Exit Doors, Convenience Doors – Exit and exit access doors are required in the quantity indicated by CBC Tables 1006.2.1, 1006.3.1, 1006.3.2(1), and 1006.3.2(2). Where additional doors are provided beyond the minimum required and such doors are part of a legitimate egress path for the occupants of a space, they must comply with all requirements for exit doors listed in CBC 1010 including, but not limited to:

- 1) Panic hardware
- 2) Door swing direction
- 3) Door and doorway width and height
- 4) Clear opening width
- 5) Opening force
- 6) Floor level and landings
- 7) Type of lock or latch

- C. **Gates, CBC 1010.2** – Gates that serve as a component of the means of egress system must comply with all the requirements for exit doors listed in CBC 1010 including, but not limited to, door swing, width, and panic hardware. Additionally, exit signs may be required.
- D. **Electrical rooms** – Provide panic hardware on doors in electrical rooms with equipment rated >800 amperes and >6 feet in width and that contain overcurrent devices, switching devices
- E. **Electronic locks** – Submittal of architectural plans for installation of electronic locks is required when the locks potentially impact the movement of occupants in the direction of exit travel from the space or building. Please refer to **CBC 1010.1.9.7, 1010.1.9.8, 1010.1.9.9, and 1010.1.9.12** and OCFA Guideline E-01 for specific requirements. Include the notes and other information described in that Guideline on the architectural plan.
- 1) Delayed egress doors - For delayed egress doors and secured elevator lobby doors, and for sensor-released egress doors in buildings equipped with a sprinkler or alarm system, an alarm plan is also required to be submitted to OCFA as these devices must be interconnected to the alarm panel and disengage upon activation of the alarm and/or sprinkler system.
 - 2) Card readers – Generally, card readers that are installed to prevent unauthorized *entry into* a building or tenant space do not require submittal of plans to the OCFA on their own; however, if an architectural submittal is otherwise required per the OCFA Plan Submittal Criteria Form, include a note on the plan stating *“Doors equipped with a card reader shall always be operable in the direction of egress travel without the use of a card or other key, without special knowledge regarding operation of the door or lock, and regardless of the status of power or alarm systems. Installation of wiring or hardware shall not compromise the listing of rated door assemblies.”*
 - 3) Electromagnetically locked doors installed in accordance with CBC 1010.1.9.9 do not require integration with the alarm panel. If these devices are interconnected, though, an alarm plan shall be submitted to the OCFA for review.
- F. **Visual exit signs, CBC 1013.1, 1013.5, 1013.7** – The means of egress from any portion of the building must be readily apparent to the occupants. Where a space has more than one required exit door or doorway, exit signs shall be provided at each door or doorway comprising part of a required egress path. Where only one exit is required but more than one door or doorway is present and multiple paths of travel could potentially appear to be available, an exit sign shall be used to define, at a minimum, the required exit path. Exit signs are required elsewhere along the egress path to clearly identify a path of travel from any point in the building to an exterior exit doorway. Care should be taken in locating exit signs so that the egress path is as clear as possible to the first-time user or occupant unfamiliar with the

building. Provide exit signs at each change in direction in hallways and corridors and, whenever possible, avoid placing directional exit signs immediately above doors that are not exits. When permitted, signs may be omitted from a building’s main exit when the exit doors are readily identifiable as such and obviously lead to the exterior, such as in the main lobby of a theater or performing arts center where the exit doors are part of a window wall.

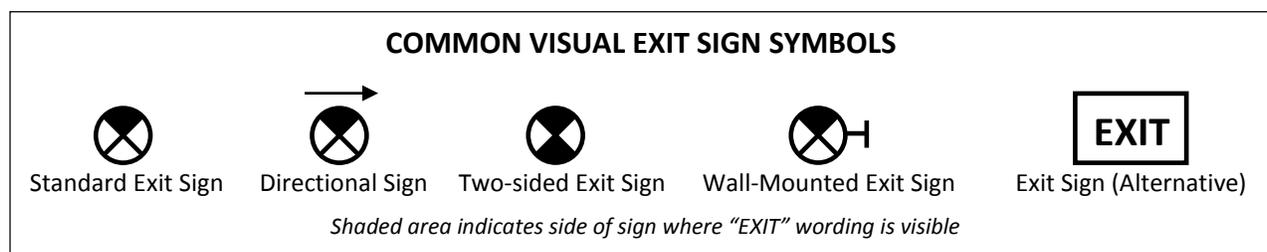
Where the exit discharge portion of the egress system is constrained by walls, fences, or topography, exterior exit signs also may be required to direct occupants to the public way or safe dispersal area.

In portions of the building where exit signs are required, at least one sign shall be visible from any point and no point shall be farther than 100 feet to the nearest visible exit sign, or less if the sign is listed for a viewing distance other than 100 feet as is often the case with photo luminescent (“glow-in-the-dark”) or self-luminous (“nuclear”) signs.

In addition to overhead visual exit signs, floor level exit signs shall be provided:

- 1) In interior corridors of Group A occupancies, unless the fire area is protected with sprinklers and the sprinkler system is supervised
- 2) In interior corridors of Group E occupancies, unless direct exits to the exterior have been provided from each classroom
- 3) Throughout all I-1, I-2, I-2.1, I-4, and R-2.1 occupancies, unless smoke barriers are provided
- 4) In all areas serving guest rooms in R-1 occupancies

Due to line of sight issues that may not be readily apparent on a two-dimensional plan, OCFA inspectors may require additional exit signs to be added or ask that exit signs be moved from the locations indicated on the approved plans to better clarify the exit path.



G. Tactile Exit Signs, CBC 1013.4 – Tactile exit signs shall be provided at every doorway where a visual exit sign is provided. Additional signs shall be provided to direct visually-impaired occupants to elements of the egress path that have a visual exit sign but no doorways or vice versa, such as the entrance to an unenclosed stairway or where the omission of a visual exit

sign has been permitted at an exterior door that is readily apparent to sighted occupants as the main exit from the building.

A detail of a typical tactile sign shall be provided on the plan that demonstrates compliance with the applicable requirements of CBC 1143A or CBC 11B-703.1, -703.2, -703.3 and -703.5. The location and wording of each tactile sign shall be shown on the plan with a keynote or letter symbol (i.e., “E” for EXIT, “ER” for EXIT ROUTE, “ESD” for EXIT STAIR DOWN, etc.) or the generic sign placement requirements from CBC 1011.4 shall be noted clearly on the plan.

Mount tactile signs so that the bottom of the top-most line of raised text is no more than 5 feet above the floor and the bottom of the lowest line of Braille is at least 4 feet above the floor. Mount signs on the latch side of the door on single leaf doors and to the right of double doors. If double doors have only a single active leaf, mount the sign on the inactive leaf. Where this is not possible, mount signs on the nearest available wall.

- H. **Floor Identification Signs** – Signage meeting the specifications of CBC 1023.9 and 1023.9.1 shall be provided in enclosed egress stairs where the stairwell serves 4 or more stories. For purposes of this section, a mezzanine shall be considered a story where access from the stairwell is provided. If these signs are required, provide a drawing of a sample sign and indicate the location of the signs on the plan – see OCFA Guideline E-02 for specifications and additional information.
- I. **Emergency Evacuation Signs** – Evacuation signs shall be provided in the facilities and locations described in OCFA Guideline E-02. When such signs are required, provide a drawing of a sample sign and indicate the location of the signs on the architectural plan.

9. Elevators

- A. **Elevators, CBC 3002.4a** – When elevators are provided in buildings with SFM regulated occupancies, at least one elevator shall be designated as a medical emergency elevator and be able to accommodate a gurney measuring 2 feet x 7 feet with 5 inch radius corners. OCFA’s preferred location of the medical elevator is the elevator closest to the main point of entry where firefighters would likely respond in an emergency. In structures where there are multiple elevators serving different sections of the building or where medical calls would be more frequent, such as in a large apartment building or care facility, multiple elevators may be required to be designated as medical elevators. If elevators are present, identify which is the medical elevator and provide a diagram on the plan demonstrating that a gurney can be maneuvered into and fits fully within the elevator cab with doors closed.



In two-story buildings, and in limited cases in three-story buildings where two more stories are at grade and each of those stories is served by a fire lane, the elevator may not need to be sized to accommodate a gurney provided that a gurney can be carried up the stairs. If this option will be

used, provide a diagram demonstrating that the gurney can be maneuvered up the stairs in a horizontal position. For two story buildings, your stamped, approved architectural plan will be evidence to the State elevator inspector of OCFA's concurrence with this design – *a separate concurrence letter is not required and will not be provided*. Where this exemption is granted on three-story buildings, written concurrence from the OCFA is required and may be requested at time of plan approval.

10. Swimming Pools

- A. **Swimming Pools** – OCFA review of swimming pools is generally limited to the chemicals either stored in the pool equipment room or present in the equipment itself. Architectural plans for a pool enclosure are required only for the following two situations:
- 1) When egress from another occupancy reviewed by the OCFA, such as an apartment building or hotel (R occupancy) or a clubhouse or restaurant (A occupancy), passes through the pool enclosure; or,
 - 2) For indoor pools with 50 or more occupants.

In that event, the OCFA will review the pool area for typical assembly occupancy egress requirements including, but not limited to, number and proximity of exits, installation of panic hardware, door swing direction, and signage.

Regardless of whether architectural review is required by the OCFA, Knox key boxes shall be provided on all exterior gates or doors to permit immediate firefighter access to the pool area in the event of an emergency. Pools and pool enclosures shall also comply with applicable requirements of other enforcing agencies, such as County Environmental Health and the local building department. See OCFA Guideline B-09 for Knox device requirements and submittal instructions.



11. Phased Occupancy

- A. **Phased Occupancy of Apartment Buildings** – If occupancy of a portion of the structure will be requested before occupancy of the entire structure is approved, it is incumbent upon the developer, architect, general contractor, and fire and life-safety systems subcontractors to collaborate early with OCFA in the design process to develop a plan that will facilitate this consideration. A phased occupancy plan must be submitted to and reviewed by OCFA as part of the architectural plan submittal. Requests for permission to phase occupancy will not be accepted after the start of construction unless the plan includes successful completion of the fire sprinkler final inspection for the entire structure prior to occupying any portion of the structure.

At a minimum, considerations that require OCFA approval on the phasing plan shall include, but are not limited to:

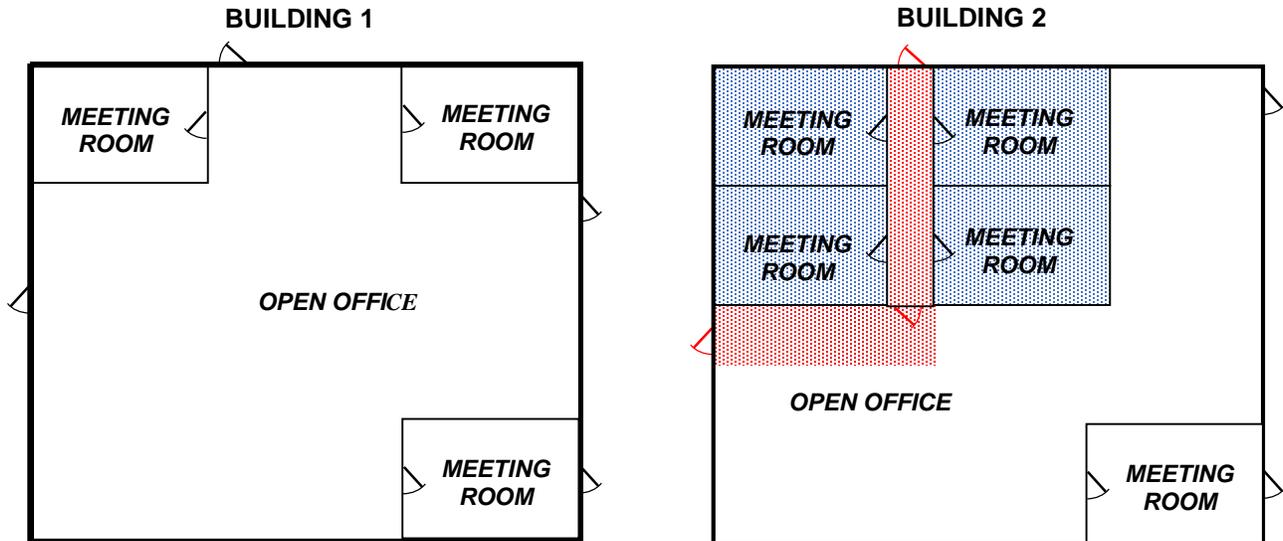
- 1) Clearly identify areas which are proposed to be occupied zones, areas to be unoccupied buffer zones, and areas to be unoccupied construction zones. The zones must be separated by fire walls and/or physical separation.
- 2) A buffer zone must be provided between the occupied zones and the construction zones.
- 3) An occupied zone is an area of the structure where the Building Department has approved occupancy for the general public. These areas may include the leasing office, dwelling units, parking garages, and other common areas. All fire and life safety requirements, including egress, standpipes, fire extinguishers, etc., in occupied zones shall meet all Fire Code and Building Code requirements independently of the unoccupied zones.
- 4) A buffer zone is an unoccupied area surrounded by fire walls and exterior walls where all construction has been completed and all Building Department and Fire Authority final inspections have passed.
- 5) A construction zone is an area not occupied by the general public where some construction may be incomplete and ongoing, and all Building Department and Fire Authority final inspections have not passed. These areas have a functioning fire sprinkler system, but in some cases the fire sprinkler final inspection may not have passed. Exposed raw lumber is prohibited, except heavy timber.
- 6) Fire alarm systems in occupied portions shall be zoned to ensure they will not be interrupted or impacted by construction, installation and testing in other phases.
- 7) All fire suppression systems including fire pumps, standpipes, and fire sprinkler systems shall be functional throughout every phase prior to occupying the first phase of the project. These systems may not be disrupted during future construction.
- 8) An approved written plan to ensure that on-site fire department access roads and fire hydrants are not compromised during construction. This plan is usually approved as part of the fire master plan and is maintained on-site until final occupancy.

12. Requirements by Occupancy

- A. **A OCCUPANCIES: Assembly Occupancies** – Assembly occupancies are buildings or portions of buildings used for the gathering of 50 or more people for purposes such as civic, social or religious functions; recreation; food or drink consumption; awaiting transportation (e.g., airports, train and subway platforms/stations); or production facilities with live audience stages. Training rooms, classrooms, lecture halls, and similar spaces used for education or instruction of adults are also considered assemblies when the occupant load is 50 or more. Accessory dining and gathering spaces for employees, such as break rooms and conference rooms, in businesses,

factories, and similar occupancies are also considered assemblies when greater than 750 square feet in area.

Where no individual room used for the purposes listed above has an occupant load of 50 or more but multiple similar rooms located in the same general part of a building have an aggregate occupant load of 50 or more, the portion of the building containing these rooms may be classified as an assembly occupancy. See the scenarios in Buildings 1 through 4 on the following page for examples.

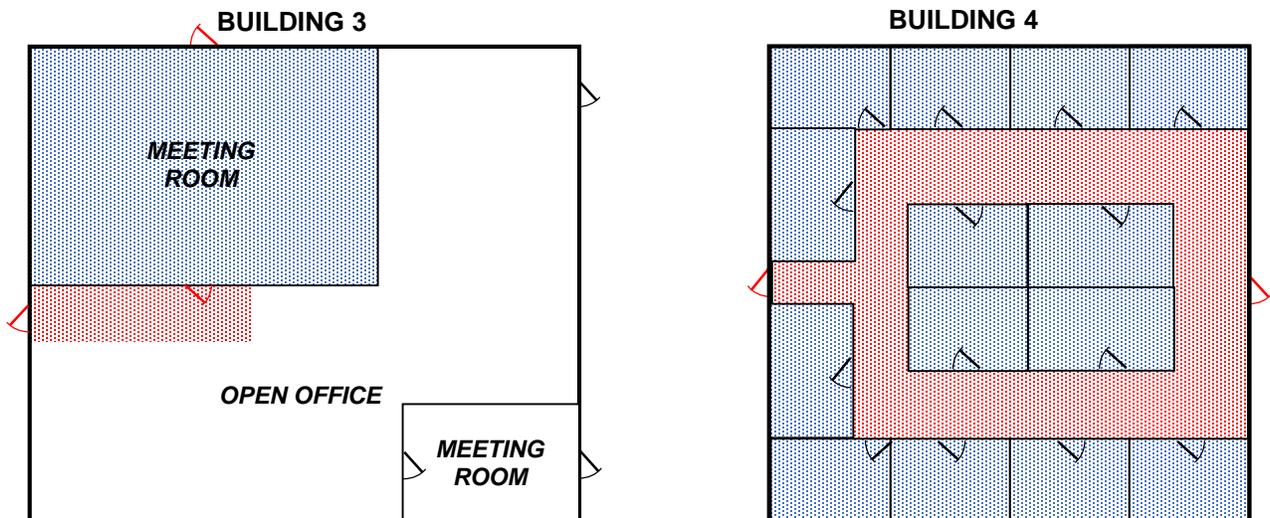


BUILDING 1: Each small meeting room has an occupant load of 20 and when considered individually would not be classified as an assembly. As the occupants of these meeting rooms are not concentrated in one part of their building, their potential exposure to a hazard, as a group, is not as high as it would be in either Building 2 or 3. The entire building would be classified as a B occupancy.

BUILDING 2: Each small meeting room has an occupant load of 20. Individually, each meeting room would not be classified as an assembly, but due to the proximity, combined occupant load, and egress system shared by the four meeting rooms shaded in blue, this part of the building presents a hazard that is very similar to the single meeting room in Building 3 and would be considered as a combined space to be an assembly occupancy (A-3). Occupancy separation may be required for the interface between the office and assembly spaces in accordance with CBC 508, though egress requirements common to an assembly (e.g., panic hardware, door swing, exit signs, emergency lighting) would only be applied from the point where the combined occupant load has reached 50 (areas in red), not within each individual meeting room.

BUILDING 3: The large blue meeting room is the same area as the four individual blue meeting rooms in Building B and has the same aggregate occupant load of 80. This room would be classified as an assembly. Occupancy separation may be required between the A-3 occupancy meeting room and adjacent B occupancy office space in accordance with CBC 508, and assembly egress requirements (number of exits, panic hardware, door swing direction, etc.) would apply to the meeting room and along the egress path from the meeting room through the open office to the exterior.

BUILDING 4: In the karaoke facility in Building 4, each individual room has less than 50 occupants and would not qualify as an assembly on its own. However, when taken as a whole, the building contains more than 50 occupants who are in the building for the purpose of recreation, so the whole facility would be classified as an assembly. The individual karaoke rooms would not need to meet the egress requirements for an assembly occupancy, but the remainder of the egress system would.



- 1) Division – Assembly occupancies are separated into Divisions, depending on the type of use or activities taking place. An assembly space used for multiple functions may have more than one Division.

A-1: theaters, performing arts centers, television and radio studios with live audiences, and similar facilities

A-2: restaurants, bars, lounges, banquet halls, nightclubs, cafeterias, employee break rooms, and other facilities intended for food and/or drink consumption

A-3: meeting/conference/training/lecture rooms, places of worship, gymnasias, indoor sports areas without spectator seating, and other similar spaces used for general assembly purposes and not classified under another Division

A-4: indoor sports arenas with spectator seating

A-5: outdoor sports arenas and stadia, amusement park structures, grandstands and bleachers

Occupied roofs are assigned the occupancy they most nearly resemble and where allowed by code, the sprinkler, alarm and means of egress provisions can be found in CBC 503.1.4. From a fire fighting perspective these occupied roofs function as a story although they do not technically meet the definition of a story for the purpose of calculating the allowable area or story limitation set forth in the CBC Chapter 5. Please note that overhead structures are not allowed more than 48 inches above the surface of the occupied roof.



Where more than one division is applicable, conformance with the most stringent requirements for each division will be required. For example, an event center may host both meetings (A-3) and banquets (A-2) simultaneously in the same building or at different times in a single room. The same is applicable when more than one occupancy is present, such as when an A occupancy multi-purpose room also serves part-time as a play area for an E occupancy daycare – the space would have to comply with the most stringent requirements for an A and an E occupancy.

- 2) Occupant load factors, CBC 1004, Table 1004.1.2 – Refer to CBC Table 1004.1.2 for the appropriate occupant load factor for each space. For dining rooms, conference rooms, lounges, and other assembly spaces continuously equipped with tables and chairs, an occupant load of 15 square feet per person shall apply. For multi-purpose rooms, rooms that are normally unfurnished and used for assembly purposes, rooms with chair-only seating without accompanying tables, and lobbies serving assembly spaces, an occupant load factor of 7 square feet per person shall apply. When a space can have more than one use, the occupant load factor giving the greatest number of occupants must be used.

The occupant load to be posted on the occupant load sign(s) is the total of all publicly accessible spaces associated with the assembly use, for instance the waiting area, bar, and dining room in a restaurant, and typically does not account for those individuals that would normally be found in back-of-house spaces supporting the assembly, such as a restaurant's kitchen area or manager's office.

- a. **Occupant Load in Restaurants, Banquet Halls, and similar dining facilities** – Calculate the occupant load by the following methods:

Kitchens – Calculate the occupant load of a restaurant's kitchen area at 200 square feet per person.

Dining Room with Fixed Seating – Calculate the occupant load for fixed seating by the number of fixed chairs or at 24 inches per person for bench or booth seating (use the larger outside radius of the booth's back for curved seating).

Non-fixed Seating – Calculate the occupant load of dining areas at 15 square feet per person. If a bar is present, calculate the number of patrons sitting or standing at the bar at 24 inches per person; this will be in addition to the occupants seated elsewhere in the bar or dining areas.

Combination Fixed/Non-fixed Seating – Calculate the occupant load for fixed seating areas as shown above. Calculate the remaining area occupied by non-fixed tables and chairs at 15 square feet per person. The occupant load of the dining space will be the combined sum of these two totals.

Waiting and queuing areas – Calculate the occupant load of these areas at 7 square feet per person.

- b. **Occupant Load in Gyms, Dance Studios, and Exercise Rooms** – Calculate the occupant load by the following methods:

Gyms – Calculate the occupant load for gyms with exercise equipment at one occupant per piece of equipment or 50 square feet per person, whichever yields a higher total occupant load. Areas used for team games such as basketball and volleyball should be calculated at 50 square feet per person for the area within the court or at the number normally anticipated for that sport, whichever is more, and at 7 square feet per person for viewing or waiting areas on the sidelines. If the area can function as a general assembly

space, such as a school gymnasium, calculate the occupant load of the entire space at 7 square feet per person.

Dance Studios – Calculate the occupant load for instruction or practice rooms at 50 square feet per person. If the studio will host performances or social events such as parties and dances on-site, use an occupant load factor of 7 square feet per person.

Aerobics/Yoga/Martial Arts rooms – Calculate the occupant load for such spaces devoted to only these uses at 50 square feet per person. If the studio will host performances or social events such as athletic meets or demonstrations, use an occupant load factor of 50 square feet per person for the actual activity area and 7 square feet per person for the viewing area on the sidelines.

- c. **Occupant Load in Training Rooms and Conference Rooms** – If the room will be set up permanently with rows of tables or desks with chairs in a manner that facilitates instruction, an occupant load factor of 20 square feet per person may be used. If the space is used for conferences and meetings, an occupant load factor of 15 shall be used. If the space contains rows of seating without tables or may be used without furnishings, an occupant load factor of 7 shall be used. When a space can have more than one use, the occupant load factor giving the greatest number of occupants must be used.
- d. **Occupant Load in Clubhouses** – If the space is generally not furnished, and equipped with chairs only (such as for “lecture style” seating), or is used as a multi-purpose space where furnishings will be removed or rearranged to accommodate various functions, use an occupant load factor of 7 square feet per person. Use an occupant load factor of 15 if the space is permanently furnished similar to a lounge or living room with tables, sofas, armchairs, etc. – a furniture layout plan will be required to justify use of the higher occupant load factor. In clubhouses where the kitchen is directly open to and integrated with the lounge area, use the same occupant load as applicable to the lounge area. Catering kitchens that are physically separated from the lounge area may be calculated at 200 square feet per person.



- 3) Classrooms Accessory to Places of Worship, CBC 303.1.4 – Sunday school rooms, religious study rooms for children, lecture halls, and similar classroom spaces found at places of religious worship that could otherwise be considered an E occupancy shall be classified as an A occupancy if all of the following apply:
- The occupant load of each of the classrooms is less than 100
 - The classrooms qualify as an accessory use

- c. The rooms are located in the same building as the main sanctuary
- d. The aggregate area of the classrooms is less than 10% of the story occupied
- e. The classrooms are not used for commercial daycare (daycare outside of normal hours of services or when guardians do not remain on-site) or for educational purposes by persons not normally frequenting the place of worship.



- 4) Panic Hardware, CBC 1010.1.10 – Panic hardware shall be provided on all exit doors serving assembly spaces, with the exception of the main exit door for some buildings as described in the next section. Panic hardware shall be provided on doors serving spaces with 50 or more occupants in E, I-2, and I-2.1 occupancies and spaces used for assembly purposes that are not classified as “A” occupancies. Doors serving spaces containing hazardous materials in L occupancies and doors in H occupancies shall be provided with panic hardware regardless of occupant load. Signify this on the plan with a “PH” by each door or on the door schedule.

Per CBC 1010.1, where additional doors are provided for convenience purposes and those doors can function as egress doors, they shall be equipped with panic hardware when panic hardware is needed on the required egress doors. French doors/windows, secondary or tertiary entrance doors, or similar decorative or convenience doors shall not be equipped with knobs, levers, handles or similar hardware that would suggest that they are available for use as an exit door; key locks without operating knobs/levers, concealed latches, floor bolts, slide latches, and similar mechanisms may be used in lieu of operating knobs/levers to secure these assemblies.

- 5) Panic Hardware on the Main Exit, CBC 1010.1.9.3 Exception 2 – Panic hardware that would normally be required on the main exit door from a building housing an A occupancy with less than 300 occupants or a place of religious worship may be omitted if a durable sign is placed immediately adjacent to the door in a visible location and reads *“This door to remain unlocked when this space is occupied.”* Where the main exit consists of a pair of doors, the sign must read *“These doors to remain unlocked when this space is occupied.”* In projects undergoing tenant improvement, existing signs reading *“This door must remain unlocked during business hours”* or similar must be changed to read as described above.



In addition to the sign, the door shall be equipped with a locking device that is operable only by the use of a key and that visually indicates whether the door is secured (e.g., the word “LOCKED” or “OPEN” appears in a small window by the lock when it is engaged or

disengaged). Other types of locks or latches, including thumb turns, slide bolts, or secondary deadbolts are not permitted.

Panic hardware may only be omitted from *a single door or a single set of double doors* serving as the *main exit* from an A occupancy with less than 300 occupants or a place of worship. Where a group of multiple single or double doors constitutes a single exit point, only one door or one double door may have a sign and indicating lock in lieu of panic hardware – all other doorways must have assemblies equipped with panic hardware.

- 6) Exiting from A Occupancies with 300+ occupants, CBC 1029.2, 1029.3
– Buildings or portions thereof housing A Occupancies with an aggregate occupant load of 300 or more must have a main exit that is capable of accommodating at least one-half of the occupant load of the areas it serves. The remaining secondary exits serving the space shall also be capable of accommodating at least half of the occupant load. The main and secondary exits shall be sized such that loss of any single door or group of proximate doors does not reduce the available egress width by more than one half. Where a single door or set of double doors does not provide sufficient egress width to accommodate the number of occupants a group of adjacent doors may be considered the main exit provided that all such doors function equally as the primary exits from the space (e.g., the banks of double doors to each side of the ticket booth in a multi-theater complex). Additionally, certain structures such as stadia, convention centers, and some civic complexes may not have a well-defined primary entrance or may have multiple main entries oriented toward different streets or parking areas. Where this is the case, these multiple entries may be considered the main exit where they are distributed evenly around the building to facilitate the rapid evacuation of the assembly space(s).
- 7) Sprinklers, CBC 903.2.1 – Sprinklers shall be provided in assembly occupancies that meet any of the following criteria:
 - a. Multiple fire areas of any of the following groups where occupancies share exit or exit access components and the combined occupant load is >300 persons.
 - b. A-1, A-3, A-4 occupancies
 - (a) In fire areas >12,000 square feet
 - (b) With fire areas having 300+ occupants
 - (c) In fire areas that are located on a floor other than the level of exit discharge
 - (d) In structures >12,000 square feet containing 2 or more fire areas with exhibition/display rooms not separated by 4-hour fire walls without penetrations
 - (e) Fire areas containing a multi-theater complex

- c. A-2 occupancies
 - (a) In fire areas >5,000 square feet
 - (b) With fire areas with 100+ occupants
 - (c) In fire areas that are located on a floor other than the level of exit discharge
 - (d) In structures >5,000 square feet containing 2 or more fire areas with A-2 occupancies not separated by 4-hour fire walls without penetrations.
- d. A-5 occupancies

In concession stands, retail areas, press boxes, and other accessory use areas over 1,000 square feet - Stages and platforms, CBC 410.7, 2016 NFPA 13 Section 8.15.1

In an otherwise un-sprinklered building, the portion of the building containing a stage, as defined in CBC Chapter 2, and all accessory spaces such as dressing rooms, lounges, green rooms, shops, and storerooms shall be sprinklered if the stage exceeds 1000 square feet or 50 feet in height or if curtains and scenery are retractable vertically. Sprinklers are also required if combustible hangings beyond a single main curtain, borders, legs, and a single backdrop are provided.

When sprinklers are required either for the stage area or throughout the occupancy or structure, the area underneath stages or raised platforms shall also be sprinklered. Sprinklers may be omitted beneath stages and platforms if the space beneath is less than 4 feet in height, and either of the following two conditions is satisfied:

- (a) the space beneath the stage or platform is completely filled with non-combustible insulation, or
- (b) the area underneath the stage or platform is not used for any purpose other than storage of tables and chairs or routing of low-voltage wiring, ducting, or similar equipment that does not present a fire hazard; and
 - i. the underside of the stage or platform is constructed to be either at least one-hour rated (5/8 inch Type X drywall or equivalent); or
 - ii. the stage or platform is constructed of fire-retardant treated wood.

Sprinklers are required to be installed throughout the fire area containing the assembly occupancy and any fire areas that contain egress paths serving the assembly. Where the assembly is above or below the level of exit discharge, the sprinkler system shall also protect all floors between the assembly and the level of exit discharge. In A-5 occupancies, sprinklers shall be required only in those individual areas indicated for that Division.

- 8) Alarms, CBC 907.2.1 – An alarm system shall be provided when the occupant load exceeds 299. When the occupant load exceeds 999, the alarm shall be provided with voice evacuation capability, including a pre-recorded voice message and a microphone; if applicable, note this on the coversheet of the plan.
- 9) Measurement of Aisles and Aisle Accessways, CBC 1029.12.1 – The clear width of the means of egress in dining rooms shall be measured with the back of non-fixed seats located 19 inches from the edge of the table.
- 10) Fire Pits, Fire Places, and Other Sources of Open Flame, CFC Chapter 3, CCR Title 19 Division 1 – As open flames are potential sources of ignition for structures and their contents and injury to occupants, they are prohibited from being installed in assembly occupancies without proper safeguards in place. Whenever fireplaces are proposed for an assembly, note on the plan that a mesh, glass, or other non-combustible screen shall be provided to prevent contact with the flame and embers from escaping. Fire pits *may* be permitted if they are designed to minimize the potential for accidental contact with the flame by use of a screen or a ledge, hearth, or other element intended by virtue of height, width, or location to prevent occupants from stumbling or falling into the flame. Open fire pits shall be located a minimum of 10 feet from combustible construction. Fire places and fire pits shall include a hood/chimney to vent hot gasses and fumes if installed within or under a structure.

Open flame cooking devices utilizing charcoal or other solid fuel shall not be operated in restaurants except in the kitchen area or other locations at least 10 feet from combustible construction unless the restaurant is protected by an automatic sprinkler system. If such devices are used to cook foods that release grease-laden vapors, a Type I exhaust hood and a hood and duct extinguishing system shall be provided to protect the device.

Other use of open flame for decorative or cooking purposes shall be as required by CFC 308 and other applicable sections of the Building, Fire, and Mechanical Codes and CCR Title 19.

- B. **E & I-4 OCCUPANCIES: Educational Occupancies and Daycare Facilities** – Please refer to the table in Attachment 4 to determine the appropriate occupancy classification for daycare and educational facilities. See Attachment 7 for a pre-submittal checklist to verify that your plan has addressed the common issues that will be evaluated by the OCFA.

- 1) Letter of intended use – Provide a statement on the plans detailing the intended use of any facility containing an educational space for children

or a daycare use for any age. Include the age (younger than 2 years, 2 to 17, 18, or older) and/or grade range (preschool, less than 3rd grade, 3rd-12th) of the occupants, and state whether the child's or adult's primary caregiver(s) will remain on-site for the entire duration of their stay. On the coversheet, indicate if the facility will be licensed by the Community Care Division of the California Department of Social Services or similar governmental agency.

For religious education rooms occupied by children, the spaces may be classified as A-3 instead of E or I-4 if all of the following apply:

- a. The occupant load of each space must be less than 100
- b. The rooms must occupy less than 10% of each floor level
- c. The aggregate area of the portion of the building used for this purpose shall not exceed 6,000 square feet
- d. The rooms shall not function like a commercial daycare or school (i.e., be used during hours when the rest of the building is closed or unoccupied, or serve the general population instead of only members of the congregation)
- e. Religious education rooms not meeting these criteria would be classified as I-4 if occupied by children less than two years old and/or E if occupied by children at least 2 years old but less than 18.

2) Location, CBC 436.1, 452.1.4 – E occupancies used by children under third grade and all I-4 occupancies shall be located on the first story unless:

- a. Exterior exits from the story containing the daycare are within 4 feet of adjacent ground level; or
- b. The building is sprinklered and has for the exclusive use of these occupants either 1) two or more exterior exit doors or 2) a corridor leading to two or more exits, then these occupants may be located on the second story; or
- c. The building is sprinklered and meets all of the construction type, alarm, egress, and other requirements listed under CBC 436.1 for I-4 occupancies or CBC 452.1.4 for E occupancies.

3) Occupant Load Factors, CBC 1004, Table 1004.1.2 – Use the following occupant load factors for spaces in E and I-4 occupancies:

USE	OCCUPANT LOAD FACTOR (sq. ft./person)
Daycare room, napping room, daycare play and activity areas	35
Lobby, waiting, check-in/pick-up areas	15
Classrooms with tables and chairs or rows of desks	20

Offices and similar administrative areas for employees	100
Concentrated office use such as call centers, data processing centers	50
Conference rooms, break rooms, teacher lounges, or cafeteria with tables and chairs or similar furnishings	15
Storage and mechanical rooms	200
Multipurpose rooms and other spaces used for assembly purposes (unfurnished or with only chairs)	7
Shops, labs, and vocational spaces	50
Gymnasium, weight room, wrestling room, or other spaces dedicated to sports activities	50
Gymnasium or cafeteria, when used for assembly purposes without furnishings or with rows of chairs	7
Lobby or similar pre-function space serving a gymnasium, theater, or other assembly	7
Theater, seating area with fixed seats	Seat count
Theater, black box or without fixed seats	7
Stages, platforms, and similar areas	15
School kitchens	200

When a space can have more than one use, such as a gymnasium used during the day for physical education but also used on occasion for plays, dances, graduation ceremonies, PTA meetings, or similar assembly purposes, the occupant load factor giving the greatest number of occupants must be used.

- 4) Sprinklers, CBC 903.2.3, 903.2.6 – Sprinklers shall be installed:
- In new, remodeled, change of occupancy or expanded structures exceeding the local threshold for un-sprinklered commercial buildings (see the local sprinkler ordinances at www.ocfa.org).
 - When the fire area containing the E occupancy >12,000 square feet.
 - In structures >12,000 square feet containing E occupancies separated into more than one fire area by less than a 4-hour fire wall without penetrations.
 - In portions of the building below the level of exit discharge, unless every classroom/daycare room in the building has at least one exterior exit door at ground level.
 - In rooms such as labs, shops, and other areas where hazardous materials are present.
 - Throughout buildings containing a daycare classified as an I-4 occupancy.



- 5) Alarms, CBC 907.2.3, 907.2.6 – An alarm shall be provided in all I-4 occupancies. Alarms shall be installed throughout E occupancies meeting any one or more of the following criteria:
- Containing more than one classroom
 - Used for daycare purposes
 - With >49 occupants

For I-4 occupancies, the alarm system shall consist of:

- Manual pull stations at each exit
- Notification devices in all public or common use spaces that will be triggered by use of the manual pull stations or activation of the sprinkler system

For E occupancies, if the building is equipped with fire sprinklers, the alarm system shall consist of:

- Notification devices in all public or common use spaces, including at least one exterior device serving playground areas adjacent to the building
- A single manual pull station at a normally attended location, typically the administrative office or reception area
- Smoke detectors are not required except in rooms used for sleeping or napping purposes

If the building is not sprinklered:

- Smoke detector coverage shall be provided throughout every space in the building and in “ceiling-plenums” used for environmental air
- The alarm system shall include notification devices and a single manual pull station as described above

Where multiple buildings containing E occupancies are present on the same site, the alarm for each building shall be interconnected unless *all* of the following apply:

- Buildings are separated a minimum of 20 feet and in accordance with CBC requirements
- An approved method of two-way communication (e.g., phone, intercom, or radio system, not a cell phone) is provided between each classroom and the administrative office
- A manual pull station is provided for each building

All alarm systems serving E occupancies with 100 or more occupants shall be an emergency voice/alarm communication system in accordance with CFC 907.2.3.

- 6) Egress – The following requirements specific to E occupancies apply:

- a. Daycare rooms and buildings require a second exit at 50 occupants; spaces used for children under 2 years of age require a second exit at 11 occupants.
- b. In E occupancies, every room with an occupant load of 300 or more shall be provided with a means of egress meeting the separation requirements of CBC 452.1.2.
- c. Corridors and similar circulation spaces serving 11 or more occupants may be unrated in accordance with CBC Table 1020.1. and each room served by the corridor has at least one exit opening directly to the exterior, the corridor may be unrated unless otherwise required for the other occupancies using the corridor.
- d. All buildings housing E occupancies shall front directly onto a public street or exit discharge at least 20 feet in width. At least one required exit shall be located on the public street or exit discharge. CBC 452.1.1
- e. Safe dispersal – As fences and gates are provided in many E and I occupancies to control ingress and egress from the facility, a safe dispersal area may be provided in lieu of an unobstructed egress path to the public way. The safe dispersal area shall contain at least 3 square feet per occupant and be located so that no occupant is closer than 50 feet from a structure on that site. The safe dispersal area shall be readily accessible to firefighters to facilitate evacuation. CBC 452.1.3
- f. Door locking – Locking arrangements are allowed to prevent intruders from entering the room where all of the following conditions are met; 1.) The door is capable of being unlocked from the outside with a key or other approved means 2.) The room is readily openable from within the room to comply with Section 1010.1.9 and 3.) Modifications may not be made to listed panic hardware, fire door or door closers.



C. **F OCCUPANCIES: Factory and Manufacturing Facilities** – Complete the Plan Submittal Disclosure (Attachment 3) in this Guideline to determine whether submittal of architectural or other plan types is required for F occupancies. If an architectural plan is required, include the following on the plan:

- 1) **Letter of Intended Use** – The owner or occupant shall provide a letter describing in detail the types of processes and materials that will be used at the facility. Include information regarding the presence of hazardous materials (including MSDS sheets), the types of machinery used (lathes, sanders, saws, injection molding equipment, etc.), any hot work that will take place (brazing, soldering, welding, cutting, etc.), and any special processes used (dipping, spraying, painting, coating, plating, etching, patination, inking/screen printing, drying/baking, etc.). If the project is a tenant improvement by the current occupant of the facility, describe in

the letter how the change in the building will affect the items above, if at all.

- 2) Chemical Classification – If a chemical classification is required, it shall be in the OCFA standard format; use OCFA Guideline G-06 when preparing the chemical classification documentation. Refer to Guideline G-05 for specifications for hazardous materials signage that is required to be posted whenever quantities of any hazard classification exceeds the permit threshold listed in CFC Division II Section 105
- 3) Hot Work – Indicate if any welding or other hot work will be performed at the facility. If so, provide the following notes on the plan:
 - a. Persons engaged in hot work shall be able to demonstrate a working knowledge of the provisions of CFC Chapter 35.
 - b. Where the hot work area is accessible to persons other than the one performing the activity, sign(s) shall be posted in conspicuous locations warning others before they enter the area: “CAUTION – HOT WORK IN PROGRESS – STAY CLEAR”.
 - c. Hot work areas shall not contain combustibles or shall be provided with appropriate shielding to prevent sparks, slag, or heat from igniting exposed combustibles.
 - d. Fixed hot work areas shall be provided with non-combustible partitions to segregate the hot work area from other areas in the building.
 - e. Floors shall be of a non-combustible material.
 - f. Hot work shall not be performed on containers or equipment that contains or has contained flammable liquids, gasses, or solids until the containers/equipment have been thoroughly cleaned or purged.
 - g. In sprinklered buildings or areas, hot work shall not be performed when the sprinkler system is shut off. Where hot work is performed in close proximity to sprinkler heads, they shall be individually shielded while the work is performed.
 - h. A minimum of one portable 2-A:20-B:C extinguisher shall be located within 30 feet of the hot work area.
 - i. Oxygen, fuel gas cylinders, and acetylene generators shall be located away from the hot work area to prevent such equipment from being heated by radiation, sparks or slag, or misdirection of the torch flame.
 - j. Torch valve shall be closed and the gas supply to the torch completely shut off when gas welding or cutting operations are discontinued for a period of 1 hour or more.
 - k. The frame or case of electric hot work machines, except internal combustion engine driven machines, shall be adequately grounded.
 - l. A switch or circuit breaker installed in accordance with the CEC shall be provided so that fixed electric welder and control equipment can be disconnected from the supply circuit.

- m. A pre-hot work check shall be performed prior to work to ensure that all equipment is safe and hazards are addressed. The check shall include, at a minimum:
 - (a) Equipment to be used is in satisfactory operating condition and in good repair
 - (b) Hot work area is clear of combustibles or combustibles are protected
 - (c) Exposed construction is of non-combustible material or, if combustible, protected
 - (d) Openings between hot work and other areas are protected
 - (e) Floors are kept clean
 - (f) Actions have been taken to prevent accidental activation of sprinkler, detection, and alarm systems
 - (g) Fire extinguishers are operable and available
 - n. When appropriate due to the hazards present or work performed, a fire watch shall be provided for a minimum of 30 minutes after conclusion of hot work activities.
- 4) Painting or Coating – Indicate if any painting or coating work utilizing flammable or combustible liquids will be performed at the facility. If so, indicate whether the work will be performed in a spray booth/spray room or a limited spraying space. If a spray booth/room is present, submit a spray booth plan (PR345) under a separate service request number. If a limited spray area is present, provide the following notes on the architectural plan:
- a. The aggregate surface area to be sprayed shall not exceed 9 square feet. CFC 2404.9.1
 - b. Spraying operations shall not be of a continuous nature. CFC 2404.9.2
 - c. Positive mechanical ventilation providing a minimum of 6 air changes per hour shall be installed. Such systems shall meet the requirements of the fire code for flammable vapor areas. Explosion venting is not required. CFC 2404.9.3
 - d. Electrical wiring within 10 feet of the floor and 20 feet horizontally of the limited spraying space shall be designed for Class I, Division 2 locations in accordance with the CEC. CFC 2404.9.4.
- 5) Fixed-piping gas distribution systems transporting hazardous materials or associated with welding or gasses other than compressed air shall be reviewed under fee code PR350.
- D. **H OCCUPANCIES: Hazardous Occupancies** – Facilities, structures, or areas containing hazardous materials in excess of the maximum allowable quantities as detailed in CBC 307 shall be classified as an H occupancy. All new Group H are required to be provided with fire sprinklers per footnote “c” of Table 506.2.
- 1) Letter of Intended Use – The owner or occupant shall provide a letter describing in detail the types of processes and materials that will be used

at the facility. Include information regarding the presence of hazardous materials (including MSDS sheets), the types of machinery used (lathes, sanders, saws, injection molding equipment, etc.), any hot work that will take place (brazing, soldering, welding, cutting, etc.), and any special processes used (dipping, spraying, painting, coating, plating, etching, patination, inking/screen printing, drying/baking, etc.). If the project is a tenant improvement by the current occupant of the facility, describe in the letter how the change in the building will affect the items above, if at all. Copy this letter onto the plan.

- 2) Chemical Classification – A chemical classification shall accompany the architectural plans in order to verify that classification as an H occupancy is necessary and, if so, which occupancy group the space or building falls under (e.g., H-1, H-2, H-3, etc.). All chemical classifications shall be in the OCFA standard format; use OCFA Guideline G-06 when preparing the chemical classification documentation. Refer to Guideline G-05 for specifications for hazardous materials signage that is required to be posted whenever hazardous materials quantities exceed the permit threshold listed in CFC Section 105.
- 3) Plan information – Show the location of all control areas; hazardous materials warning signs; no smoking signs; hazardous materials alarm pull stations; hazardous and flammable materials cabinets, hoods, and enclosures; and the location of all equipment utilizing hazardous materials.
- 4) Equipment – All equipment utilizing or storing hazardous materials shall be designed and listed for the intended purpose and include necessary safeguards against fire, over pressurization, explosion, and other potential dangers associated with the material or process. Provide manufacturer's specification sheets, detail drawings, and process diagrams for each piece of equipment or system to demonstrate this.
- 5) General Requirements – Demonstrate compliance with all other general hazardous materials provisions contained in CBC Chapter 4 and CFC Chapter 50, such as spill control, secondary containment, and drainage including volumetric calculations for sprinkler water or rain collection; classification of protected electrical installations; ventilation; separation from incompatible materials, other systems/tanks, and brush, trash, and other combustibles; standby or emergency power; and weather protection.
- 6) Hazard Specific Requirements – Demonstrate compliance with hazard-specific requirements contained in CFC Chapters 51 through 67, as applicable to the types of hazardous materials stored or used in the facility.
- 7) Hot Work – Indicate if any welding or other hot work will be performed at the facility. If so, provide the following notes on the plan:
 - a. Persons engaged in hot work shall be able to demonstrate a working knowledge of the provisions of CFC Chapter 35.

- b. Where the hot work area is accessible to persons other than the one performing the activity, sign(s) shall be posted in conspicuous locations warning others before they enter the area: "CAUTION – HOT WORK IN PROGRESS – STAY CLEAR".
- c. Hot work areas shall not contain combustibles or shall be provided with appropriate shielding to prevent sparks, slag, or heat from igniting exposed combustibles.
- d. Fixed hot work areas shall be provided with non-combustible partitions to segregate the hot work area from other areas in the building.
- e. Floors shall be of a non-combustible material.
- f. Hot work shall not be performed on containers or equipment that contains or has contained flammable liquids, gasses, or solids until the containers/equipment have been thoroughly cleaned or purged.
- g. In sprinklered buildings or areas, hot work shall not be performed when the sprinkler system is shut off. Where hot work is performed in close proximity to sprinkler heads, they shall be individually shielded while the work is performed.
- h. A minimum of one portable 2-A:20-B:C extinguisher shall be located within 30 feet of the hot work area.
- i. Oxygen, fuel gas cylinders, and acetylene generators shall be located away from the hot work area to prevent such equipment from being heated by radiation, sparks or slag, or misdirection of the torch flame.
- j. Torch valve shall be closed and the gas supply to the torch completely shut off when gas welding or cutting operations are discontinued for a period of 1 hour or more.
- k. The frame or case of electric hot work machines, except internal combustion engine driven machines, shall be adequately grounded.
- l. A switch or circuit breaker installed in accordance with the CEC shall be provided so that fixed electric welder and control equipment can be disconnected from the supply circuit.
- m. A pre-hot work check shall be performed prior to work to ensure that all equipment is safe and hazards are addressed. The check shall include, at a minimum:
 - (a) Equipment to be used is in satisfactory operating condition and in good repair
 - (b) Hot work area is clear of combustibles or combustibles are protected
 - (c) Exposed construction is of non-combustible material or, if combustible, protected
 - (d) Openings between hot work and other areas are protected
 - (e) Floors are kept clean
 - (f) Actions have been taken to prevent accidental activation of sprinkler, detection, and alarm systems
 - (g) Fire extinguishers are operable and available

- n. When appropriate due to the hazards present or work performed, a fire watch shall be provided for a minimum of 30 minutes after conclusion of hot work activities.
 - 8) Painting or Coating – See Section B4 above.
 - 9) Fixed-piping – See Section B5 above.
- E. **I OCCUPANCIES: Institutional Occupancies** – The OCFA conducts plan review of all I occupancies with the exception of hospitals that are under the jurisdiction of OSHPD.
- 1) Egress – As I occupancies are highly regulated for construction and egress requirements and particular attention should be paid to design to ensure compliance with all codes. Provide an egress analysis diagram for all I occupancies.
 - 2) Daycare facilities – Please see section 4.B of this guideline for requirements related to I-4 facilities providing adult and child care services (i.e., daycare). See Attachment 4 for guidance in classifying various daycare uses.
 - 3) Special Requirements – CBC Chapter 4 contains several sections with specific requirements for various I occupancies. In addition to the usual requirements of CBC Chapters 3, 5, and 10 as they pertain to I occupancies, ensure that I occupancies also conform with the special requirements of the following sections:
 - a. 407: Group I-2 and I-2.1
 - b. 408: Group I-3
 - c. 422: B and I-2.1 ambulatory care facilities
 - d. 436: Group I-4
- F. **L OCCUPANCIES: Laboratory Occupancies** – Research and development facilities shall be classified as a B occupancy unless the aggregate quantity of hazardous materials in a control area exceeds maximum allowable quantities. Such facilities shall be classified as H occupancies, unless they are designed to meet the requirements for L occupancies listed in CBC 453. All new Group H and L are required to be provided with fire sprinklers per footnote “c” of Table 506.2.
- Chemistry and science labs located in a middle or high school setting shall be classified as an E occupancy unless the aggregate quantity of hazardous materials in a control area exceeds maximum allowable quantities, in which case they shall be classified as an H occupancy. They may be classified as L occupancies when designed in accordance with CBC 453.
- G. **M & S OCCUPANCIES: Mercantile and Storage Occupancies** – Complete the Plan Submittal Questionnaire (Attachment 3) in this Guideline to determine whether submittal of architectural or other plan types is required.

Gas Stations – While submittal of a fire master plan or tank plan may be required for gas stations or other refueling facilities, the OCFA does not review *architectural* plans unless the facility also repairs or services vehicles; see below.

Motor Vehicle Repair and Service Facilities – If a facility is used for motor vehicle or aircraft repair or service, an architectural plan is required to be submitted to the OCFA for review of these facilities as they and the materials and operations taking place within them are specifically regulated by the CFC. Provide the following information on the plan:

- 1) Letter of Intended Use – The owner or occupant shall provide a letter describing in detail the types of operation at the facility (parts exchange, oil change, body work/repair, painting, etc.). Include information regarding the presence of hazardous materials (epoxies, solvents, oil, gasoline, etc.), the types of machinery used (sanders, grinders, etc.), any hot work that will take place (brazing, soldering, welding, cutting, etc.), and any special processes used (dipping, spraying, painting, coating, plating, etching, drying, etc.). If the project is a tenant improvement by the current occupant of the facility, describe in the letter how the change in the building will affect the items above, if at all.
- 2) Chemical Classification – A chemical classification shall accompany the architectural plans in order to verify that the facility is not an H occupancy. All chemical classifications shall be in the OCFA standard format; use OCFA Guideline G-06 when preparing the chemical classification documentation. Refer to Guideline G-05 for specifications for hazardous materials signage that is required to be posted whenever quantities of any hazard classification exceeds the permit threshold listed in CFC Section 105.
- 3) Plan information – Show the location of all hazardous materials and activities warning signs; no smoking signs; hazardous and flammable materials cabinets, tanks, and other containers; and the location of all equipment utilizing hazardous materials on the plan.
- 4) General Notes – Provide the following notes on the plan for all vehicle service and repair facilities:
 - a. Cleaning of parts shall be conducted in listed and approved parts-cleaning machines in accordance with CFC Chapter 57.
 - b. Waste oil, motor oil, and other Class IIIB liquids shall be stored in approved tanks or containers.
 - c. Self-closing metal cans shall be used for oily waste.
 - d. Floor drains shall drain to approved oil separators in accordance with the CPC. Contents shall be collected at sufficient intervals to prevent oil from entering the sewage system.
 - e. Sources of ignition shall not be located within 18 inches of the floor.
 - f. Smoking shall not be permitted within 25 feet of a repair garage or flammable or combustible liquids storage areas.

- g. Pits and below-grade work areas shall be provided with ventilation at a rate of 1-1/2 cubic feet per minute per square foot of floor area where Class I liquids or LP gas are present.
 - h. Fuel shut-off valves shall be closed prior to repairing the fuel system on vehicles using gaseous fuels.
- 5) Servicing Lighter-than-air Fuel Vehicles – Indicate on the plan if the facility will service vehicles fueled by lighter-than-air fuels (e.g., CNG, LNG, hydrogen). If so, the provisions of CFC 2311.7 through 2311.7.2.3 shall apply. If the facility will service vehicles fueled by hydrogen, the provisions of CFC 2311.8 and 2309.6 will also apply.
- 6) Hot Work – Indicate if any welding or other hot work will be performed at the facility. If so, provide the following notes on the plan:
- a. Persons engaged in hot work shall be able to demonstrate a working knowledge of the provisions of CFC Chapter 35.
 - b. Where the hot work area is accessible to persons other than the one performing the activity, sign(s) shall be posted in conspicuous locations warning others before they enter the area: “CAUTION – HOT WORK IN PROGRESS – STAY CLEAR”.
 - c. Hot work areas shall not contain combustibles or shall be provided with appropriate shielding to prevent sparks, slag, or heat from igniting exposed combustibles.
 - d. Fixed hot work areas shall be provided with non-combustible partitions to segregate the hot work area from other areas in the building.
 - e. Floors shall be of a non-combustible material.
 - f. Hot work shall not be performed on containers or equipment that contains or has contained flammable liquids, gasses, or solids until the containers/equipment have been thoroughly cleaned or purged.
 - g. In sprinklered buildings or areas, hot work shall not be performed when the sprinkler system is shut off. Where hot work is performed in close proximity to sprinkler heads, they shall be individually shielded while the work is performed.
 - h. A minimum of one portable 2-A:20-B:C extinguisher shall be located within 30 feet of the hot work area.
 - i. Oxygen, fuel gas cylinders, and acetylene generators shall be located away from the hot work area to prevent such equipment from being heated by radiation, sparks or slag, or misdirection of the torch flame.
 - j. Torch valve shall be closed and the gas supply to the torch completely shut off when gas welding or cutting operations are discontinued for a period of 1 hour or more.
 - k. The frame or case of electric hot work machines, except internal combustion engine driven machines, shall be adequately grounded.
 - l. A switch or circuit breaker installed in accordance with the CEC shall be provided so that fixed electric welder and control equipment can be disconnected from the supply circuit.

- m. A pre-hot work check shall be performed prior to work to ensure that all equipment is safe and hazards are addressed. The check shall include, at a minimum:
 - (a) Equipment to be used is in satisfactory operating condition and in good repair
 - (b) Hot work area is clear of combustibles or combustibles are protected
 - (c) Exposed construction is of non-combustible material or, if combustible, protected
 - (d) Openings between hot work and other areas are protected
 - (e) Floors are kept clean
 - (f) Actions have been taken to prevent accidental activation of sprinkler, detection, and alarm systems
 - (g) Fire extinguishers are operable and available
- n. When appropriate due to the hazards present or work performed, a fire watch shall be provided for a minimum of 30 minutes after conclusion of hot work activities.
- 7) Painting or Coating – See Section B4 above.
- 8) Fixed-piping – See Section B5 above.

H. **R OCCUPANCIES: Residential Occupancies** – The OCFA reviews the following types of residential structures, with some exceptions for R-1 and R-2 occupancies based on number of stories and specific design features – see Attachment 7 for additional clarification:

- 1) R-1 occupancies, which include hotels, motels, short-term boarding houses, and other residential facilities with relatively temporary occupants.
- 2) R-2 occupancies, which consist primarily of apartments, condominiums, vacation timeshare properties, and other multi-family residential facilities with relatively permanent occupants. Congregate living facilities such as dorms, monasteries, and fraternity/sorority houses with more than 16 occupants are also classified as R-2 occupancies.
- 3) R-2.1 occupancies, which consist of facilities that house clients on a 24 hour basis who live in a supervised environment due to age, mental disability, social rehabilitation, or similar reason. Facilities with this occupancy classification house 7 or more clients; unlike R-4 occupancies, R-2.1 occupancies may house more than 6 occupants who are non-ambulatory and/or bedridden.
- 4) R-3 occupancies; the OCFA requires architectural plans to be submitted for large family daycare homes; homes licensed by a government agency for placement of occupants for protective social care, supervision, or rehabilitation with no more than 6 clients; home-based health/personal care facilities with no more than 6 clients.
 - a. R-3 large family daycare homes and R-3.1 home-based facilities shall be reviewed and inspected by OCFA Safety and Environmental Services; please see OCFA Guidelines F-02 and F-03 for

requirements. Facilities with more than 6 clients, other than large family daycare homes, are classified as R-2.1 or R-4 occupancies and shall be reviewed and inspected by OCFA Planning & Development Services.

- b. The OCFA does not perform architectural review of R-3 single family residences or duplexes that are not used for the care or rehabilitation purposes described above.
- 5) R-4 occupancies, which include assisted living, residential care, or social rehabilitation facilities with 7 to 16 clients, no more than 6 of these being bedridden or non-ambulatory.
- a. Sprinklers – All new R-1, R-2, and R-4 occupancies shall be equipped with an automatic fire sprinkler system conforming to NFPA 13 or 13-R. All new attached multi-family R-3 row houses and townhouses shall be equipped with a sprinkler system complying with NFPA 13-R; a 13-D system may be installed in each dwelling when each dwelling unit has its own separate domestic water supply. All new detached R-3 homes and duplexes shall be equipped with an NFPA 13-D system. For sprinkler requirements for R-3.1 facilities please refer to CBC 903.2.8. Where certain exceptions or bonuses are allowed by the code for a sprinklered structure, such as an increase in allowable stories or area, an NFPA 13 sprinkler system shall be provided when required by the code section applied.

An existing non-sprinklered structure may be required to be retrofit with sprinklers when the size of the structure and scope of work exceeds the sprinkler threshold for the jurisdiction it is located in (see the local ordinance posted at www.ocfa.org), when the use changes the building to an occupancy classification that would require sprinklers if it were treated as new construction (e.g., an existing R-3 occupancy changing to an R-2 congregate residence with 17+ occupants; a third dwelling unit added to an existing duplex), or if site conditions or deficiencies such as poor fire flow, lack of hydrants, or excessive hose pull distance require such mitigation.

- b. Garage/Dwelling Unit Separation – Where doors are provided between an individual dwelling unit and a private garage serving that dwelling unit, provide a door schedule or note indicating that the doors from the garages to the residential portions of the units will be either 1) 20-minute rated, or 2) solid wood not less than 1-3/8 inches thick, or 3) solid- or honeycomb-core steel doors not less than 1-3/8 inches thick. In multi-family residential structures where the garages may be classified as an S-2 occupancy due to aggregate size exceeding the 3,000 square feet limit, a 45 minute rated door assembly shall be provided. Doors shall be self-closing and latching. CBC 406.3.4
- c. Rescue Openings, CBC 1030 – Rescue openings shall be provided for all sleeping rooms located in basements and on the first 3 stories



above grade unless the building meets the exceptions in CBC 1030.1, such as for R-1 and R-2 occupancies in Type I, IIA, IIIA, or IV buildings protected with an NFPA 13 sprinkler system. Identify each rescue window on the floor plan and elevation and specify the dimensions required and provided on the window schedule.

- d. Laddering Rescue Windows – An approved access walkway must be provided that enables firefighters to easily and safely reach a clear, flat space beneath each rescue opening. This “laddering pad” shall be no less than 3 feet wide and 3 feet long. Obstructions such as shrubs, trees, trellises, carports, raised planters, walls, fences, pools, steeply sloped roofs, overhangs, and similar building and site elements shall not impede the use of or access to the walkway, pad, or rescue opening. Walkways and laddering pads may consist of hardscape, decomposed granite, grass, or any other material that does not inhibit use of the area for laddering operations. Shrubs and certain types of woody groundcover or vines that present a trip hazard or create an unstable laddering surface (e.g., ivy, rosemary, ice plant) are not permitted to be installed on access walkways or laddering pads; other groundcovers on walkways and pads shall be maintained at a low height that facilitates foot traffic and firefighting and rescue operations, generally 4 to 10 inches depending on plant type and density or other characteristics that may impact their suitability for this use. Trees that encroach on walkways shall provide a minimum 7 foot clearance underneath to allow unhindered passage by firefighters, however, trees and shrubs shall not encroach on laddering pads or adjacent areas needed to raise the ladder to the rescue opening.

The distance between the nearest edge of the laddering pad and the structure is based on standardized operational procedures and safe practice to achieve a proper laddering angle – too steep an angle and the ladder is difficult to climb and may fall away from the structure; too shallow and the ladder will bounce and may bend or break under use. The proper laddering angle is calculated using the following formula:

$$d = (h/5)+2$$

Where **h** = the height of the window sill or balcony railing
d = the distance in feet from the edge of the pad nearest the building to a point on the ground directly beneath the rescue window sill or balcony edge

Refer to Attachment 5 for a graphic representation of this formula and a table of approximate distances for given window sill or balcony railing heights.

Provide a plan demonstrating that vegetation *at its fully-grown size* and building and site features will not obstruct the access walkways,

laddering pads, or area between the pads and rescue openings. It is incumbent upon the developer, architect, landscape architect, and facility maintenance personnel to collaborate and carefully consider a site and building design and plant palette that complies with these requirements not only at time of building completion but throughout the life of the building.

- I. **ROOFTOP AMENITY DECKS**: Occupied rooftops, including elevated amenity decks, rooftop gardens, and similar areas, shall comply with the following:
- 1) A roof level or portion thereof shall be permitted to be used as an occupied roof provided the occupancy of the roof is an occupancy that is permitted by Table 504.4 for the story immediately below the roof. The area of the occupied roofs shall not be included in the building area as regulated by Section 506.
 - 2) The occupancy located on an occupied roof shall not be limited to the occupancies allowed on the story immediately below the roof where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and occupant notification in accordance with Section 907.5 is provided in the area of the occupied roof.
 - 3) Assembly occupancies shall be permitted on roofs of open parking spaces of Type I or Type II construction, in accordance with the exception to Section 903.2.1.6.
 - 4) These spaces shall be considered assembly occupancies if the area exceeds 750 square feet or the occupant load is 50 or more. If the occupants of one amenity deck share any component of the egress system with another amenity deck or similar space used for assembly purposes, or the amenity spaces are sufficiently visually or functionally interconnected to be considered a single space by the fire code official, the aggregate area and occupant load shall be considered for determination of occupancy classification (i.e., two or more deck areas are substantially separated but utilize a common corridor to access the exit stairs).
 - 5) The egress system shall comply with CBC Chapter 10.
 - a. An amenity deck on top of a parking structure may share the exit stairs required for egress from the garage provided the stairs and path(s) of travel to the stairs meet all of the requirements for egress from the amenity deck. Egress width shall be calculated based on the highest aggregate number of garage and amenity area occupants entering the stairway at any individual tier.
 - 6) Pool chemicals located above the first floor shall be limited to the reduced maximum allowable quantities specified in CBC Table 414.2.2 (5% above the 6th floor, 12.5% on floors 4 through 6, 50% on floor 3, and 75% on floor 2).

- J. **HIGHRISE AMENITY DECKS:** Buildings with amenity decks located more than 75 feet above the lowest floor level where firefighters enter the building shall be considered high-rise structures and fully comply with the requirements in CBC 403.

ATTACHMENT 1

Plan submittal content checklist

The following information, if applicable, shall be provided on or with the architectural plan

PROJECT INFO

- Construction documents shall be prepared and stamped by a registered design professional.
- A detailed description of the scope of the project.
- Project name, street address, and tract/tentative tract/parcel map (not assessor's parcel) number.
- The current code editions and relevant standards that apply to this project (e.g., 2019 CFC, 2019 CBC).
- If applicable, photocopy the approved planning documents with conditions of approval onto the plans.
- If applicable, reference the approved OCFA Service Request number for the fuel modification or fire protection plan.
- A list of submittals to the OCFA that will be deferred (e.g., sprinklers, alarms, hood and duct extinguishing system, sprinkler monitoring system, etc.).
- If the project is a new building or addition, a photocopy of the stamped approved fire master plan.
- Standard OCFA architectural notes, customized where appropriate for the proposed use or occupancy - See Attachment 2.
- Where special conditions exist, the OCFA may request additional construction documents to be prepared by a registered design professional.
- If the project incorporates an alternate method or material (AM&M), a copy of the AM&M documentation is scanned onto the plan.
- For plans submitted directly to the OCFA and not through the building department: structural, mechanical, and plumbing plans have been removed from the set if not specifically requested to be included by the OCFA reviewer.
- Provide a 4 inch by 5 inch blank area at the lower right of the cover sheet for the OCFA plan stamp.
- If this is a B/M/F/S/U Group Occupancy—photocopy the completed, signed and dated disclosure form (Attachment 3) onto the plans.

BUILDING INFO

- The total area and height of the building, including garages, breezeways and similar spaces.
- Size of the project, if it is a tenant improvement.
- The number of stories in the building.
- The occupancy type(s) for the project.
- The area of each occupancy classification on each floor.
- The construction type of the building.

- Indicate which code approach is being used along with justification: separated, non-separated or unlimited building areas.
- An allowable area calculation in the format specified by CBC Equations 5-1 through 5-5. Clearly indicate which provisions of CBC Chapter 5 have been used to increase the size of the structure or number of stories.
- Fire walls, frontage, and assumed property lines used to justify allowable area shown.
- Wall area to opening ratio shown for exterior walls required to be rated due to proximity to property lines.
- If the property is adjacent to a fuel modification zone, non-combustible construction setback is identified.
- If project is located in FHSZ, note indicating "*Construction to conform to CBC Chapter 7A or an approved fire protection plan*" is included.

FIRE SPRINKLER/ALARM SYSTEMS

- Indicate whether the building and/or tenant space is currently fully or partially fire sprinklered; if the building/tenant space is not currently sprinklered, indicate whether sprinklers will be installed as part of this project, what type of system will be installed (NFPA 13 or 13-R), and what portion of the building/tenant space the system will protect if it is not the whole building.
- State whether the building is fully or partially equipped with an alarm system, and if so what type (detection, evacuation/notification, sprinkler monitoring, etc.) and where. If not, indicate whether an alarm will be installed as part of this project. Specify the type of system to be installed and what portion of the building/tenant space it will protect if it is not the whole building.

USE/OCCUPANCY

- Occupancy classification and use indicated for each space, including adjacent tenant spaces.
- Occupancy separations and rated construction shown on plan. If the "non-separated" approach will be used, specify this on the plan and show the extent of the building or tenant space it will apply to.
- Include the area, occupant load factor, and total number of occupants for each space. For projects with complex egress systems or over 100 occupants, or for projects involving an "I" occupancy, provide this information as part of an egress analysis diagram. The egress analysis shows the number of occupants in each space, travel distance, the cumulative number of occupants passing through each portion of the means of egress system (doorways, corridors, stairs, etc.), and the required vs. provided width of each means of egress component - See Attachment 6.
- A letter of intended use on the business owner's letterhead, if not readily apparent from the room titles (e.g., a more specific name such as "Library" or "Conference Room" as compared to a generic use such as "Multi-purpose Room" or "Activity Room") and for daycare occupancies (include quantity, age range, and grade-level of occupants for each space). Photocopy to the letter on the plans.
- A seating diagram showing the location of all tables and/or chairs in each anticipated configuration for A occupancies.

- Call out accessory uses and demonstrate with a calculation that they do not exceed 10% of area of the floor they are located on or, if in a multi-tenant building, 10% of the area of the primary use they support.
- Call out incidental use spaces. If sprinklers are being used in lieu of rated separation, note that incidental use spaces shall be separated from adjacent spaces by construction capable of resisting the passage of smoke.

EGRESS

- Identify all doors equipped with panic hardware with a "PH" on the floor plan and/or in the door schedule.
- Identify doors equipped with electronic locks (e.g., card readers, delayed egress devices, electromagnetic locks, or access control devices) - See Guideline E-01.
- Doors serving spaces with an occupant load of 50 or more or H occupancies swing in the direction of egress travel.
- Indicate the maximum travel distance to the nearest exit on the plan.
- Fire-resistive construction (shafts, corridor walls, egress enclosures, door/window assemblies) identified and rating called out on plan.
- The location of all visual (i.e., illuminated) exit signs and, when required, the location of low-level exit signs.
- The location, wording, and specifications for all tactile exit signs. Include a diagram demonstrating that the proposed signs meet the applicable requirements of CBC 1013.4 and Chapter 11A or 11B.
- The location, wording, and specification for all stair identification signs for stairwells serving four or more floors - See Guideline E-02.
- The location of all emergency lighting fixtures. A photometric analysis may be required if sufficient emergency lighting does not appear to have been provided.
- The slope of ramps and aisles or other changes in elevation along the egress path.
- The rise and run measurements of all stairways.
- The location, sill height, and opening dimensions of all rescue windows and railing heights of all balconies serving rescue openings in R occupancies.
- The location and wording of occupant load signs in all A occupancies and classrooms that do not consist solely of fixed seating.
- The minimum aisle access way spacing between rows of seats in auditorium-style seating or the clear space between each set of tables and chairs in dining areas. The clear space is measured in accordance with CBC 1029.9 and 1029.12.

MISCELLANEOUS

- Provide a location on the plan elevations for the building address visible to the street from which the building is addressed - See standard plan note #4.
- A diagram demonstrating that elevators serving more than 2 floors comply with the gurney/stretchers requirements of CBC 3002.
- Elevator lobbies are provided when required, or the feature(s) allowing omission of a lobby are identified on the plan

ATTACHMENT 2

Standard OCFA Architectural Notes

Instructions: Place the following notes on the plan under the heading "OCFA NOTES." Individual notes that do not apply to the project may be omitted (e.g., Note #3 if the building does not require standpipes; #20 - 23 if the project does not include an A occupancy; etc.). If the building is or will be sprinklered, select the type of system (NFPA 13 or 13-R) required in the structure in Note #24.

INSPECTIONS

1. OCFA final inspection required. Please schedule all field inspections *at least* 48 hours in advance. Inspections canceled after 1 p.m. on the day before the scheduled date will be subject to a reinspection fee. Phasing of inspections may require additional fees, also. Call OCFA Inspection Scheduling at 714-573-6150.
2. Buildings under construction or demolition shall conform to CFC Chapter 33. No smoking or cooking is allowed in structures where combustible materials are exposed or within 25 feet of combustible materials storage areas. Cutting, welding, or other hot work shall be in conformance with CFC Chapter 35.
3. In buildings four or more stories in height, standpipes shall be provided during construction when the height reaches 40 feet above the lowest point of fire department access. A fire department connection shall be no more than 100 feet from available fire department vehicle access roadways. A hydrant shall be located along the access roadway within 150 feet of the location(s) that the FDC can be accessed from. CFC 3310, 3313
4. Address numbers shall be provided for all new and existing buildings, be a *minimum* of 4 inches high for individual dwelling units and 6 inches high for all other installations and structures, contrast with their background, and be plainly visible from the roadway the building is addressed on. Temporary address numbers shall be provided on construction fencing or the building until permanent numbers can be provided. CBC 501.2, CFC 505.1
5. Locations and classifications of extinguishers shall be in accordance with CFC 906 and CCR Title 19. At least one extinguisher shall be provided during construction on each floor at each stairway, in each storage and construction shed, in locations where flammable or combustible liquids are stored or used, or where similar hazards are present per CFC 3315.1. Before final occupancy, at least one 2A:10B:C extinguisher shall be provided so that no point is more than 75 feet travel distance from the extinguisher. Extinguishers shall be located along the path of egress travel and in a readily visible and accessible location, with the bottom of the extinguisher at least 4 inches above the floor. Additional extinguishers may be required by OCFA inspectors depending on project or site conditions and final placement is subject to their approval.
6. Wall, floor and ceiling finishes and materials shall not exceed the flame spread classifications in CBC Table 803.11. Decorative materials shall be properly treated by a product or process approved by the State Fire Marshal with appropriate documentation provided to the OCFA. Such items shall be approved and inspected by the OCFA prior to installation.
7. Knox boxes/key cabinets shall be provided for all high-rise buildings, pool enclosures, gates in the path of firefighter travel to structures, secured parking levels, doors giving access to alarm panels and/or annunciators, and any other structures or areas where immediate access is required or is unduly difficult. An OCFA inspector can assist with locking gate keys in Knox boxes, contact your local fire station to arrange an appointment to secure master building keys in the Knox box.
8. Approval of these plans shall not permit the violation of any code or law. Requirements or features not identified on the plan may apply and OCFA inspectors may require additional information or items from those shown on the plan depending on actual or anticipated field conditions. Such changes may necessitate submittal of revised or as-built plans to the OCFA and the City/County where the project is located.

GENERAL REQUIREMENTS

9. The project shall comply with 2019 California Building Code, 2019 California Fire Code, and other currently adopted codes, standards, regulations and requirements as enforced by the OCFA.

10. Approval of this plan is contingent upon a certificate of occupancy being issued upon completion of all construction on the entire project. Phased occupancy shall be permitted only with prior approval from OCFA and the Building Official. Requests for phased occupancy shall be submitted to OCFA for evaluation as an alternate materials and methods proposal accompanying the architectural submittal. Such requests shall be made prior to start of construction only.
11. Dumpsters and trash containers exceeding 1.5 cubic yards shall not be stored in buildings or placed within 5 feet of combustible walls, openings or combustible roof eave lines unless protected by an approved sprinkler system or located in a Type I or IIA structure separated by 10 feet from other structures. Containers larger than 1 cubic yard shall be of non- or limited-combustible materials or similarly protected or separated. CFC 304.3
12. Exits, exit signs, fire alarm panels, hose cabinets, fire extinguisher locations, and standpipe connections shall not be concealed by curtains, mirrors, or other decorative material.
13. The egress path shall remain free and clear of all obstructions at all times. No storage is permitted in aisles.
14. Exit doors shall be openable from the inside without the use of a key or any special knowledge or effort. Doors shall not be provided with thumb-turn locks or deadbolts that do not unlatch in tandem with the normal operating lever. The opening force for interior doors without closers shall not exceed 5 pounds. The unlatching and opening force for other doors, including fire doors, shall not exceed 15 pounds. CBC 1010
15. The exit path shall be clearly identified with exit signs conforming to CBC 1013. Illuminated exit signs must have 90-minute emergency power back-up.
16. Tactile signs shall be provided in commercial buildings, public buildings/accommodations, and publicly funded housing subject to CBC Chapters 11A and B and conform to 1143A or 11B-703.1, -703.2, -703.3, and 703.5, be mounted with the bottom of the lowest line of Braille characters at least 4 feet above the floor but the bottom of the highest line of raised text characters no more than 5 feet above the floor and, whenever possible, on the strike side of the door. Lettering shall be between 5/8 inches and 2 inches high. CBC 1013.4
17. Stairs serving 4+ stories shall have stairwell signs conforming to CBC 1023.9 and OCFA Guideline E-02.
18. The exit path shall be illuminated at all times in accordance with CBC 1006. Emergency lighting shall be provided with 90-minute back-up.
19. Rated assemblies shall conform to approved methods and materials of construction. Penetrations through rated walls, ceilings, or floors shall be protected in an approved manner complying with CBC/CFC Chapter 7.
20. Rated doors shall be self-closing and latching; such doors shall not be equipped with door stops or otherwise propped open. Rated doors shall be equipped with rated hardware. CFC 703

PROJECT-SPECIFIC REQUIREMENTS

ASSEMBLY OCCUPANCIES

21. Occupant load sign, with minimum one-inch letters and numbers contrasting with their background, shall be posted in a conspicuous location near the main exit per CBC 1004.3 and Title 19 3.30. Where multiple seating configurations or uses are anticipated, seating diagrams and their respective occupant loads may also be required to be posted.
22. Panic hardware shall be provided for all exit and exit access doors in assembly occupancies. Such doors shall swing in the direction of exit travel. Doors equipped with panic hardware shall have no other lock or latch except panic hardware. If panic hardware is omitted on the main door when permitted by CBC 1010.1.9.3, a sign stating "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED" in minimum 1-inch letters contrasting with their background shall be posted in a conspicuous location on or adjacent to the door and the door shall be equipped only with a key-operated lock that visually indicates whether it is open or locked.
23. Tables shall be spaced at least 50 inches apart where seating is back to back and aisle accessways serve more than 4 occupants or are longer than 6 feet. Aisle widths shall be a minimum of 36 inches where seating is only on one side of the aisle or 42 inches for seating on both sides. Where seats back up into aisles, seat backs shall be located at 19 inches from the table edge and the clear aisle width shall be measured from the back of the seat. CBC 1029.12

24. Open flame in assembly areas is prohibited except as specifically permitted by OCFA in compliance with CFC Chapter 3.

EXTINGUISHING SYSTEMS

25. An automatic fire sprinkler system shall be provided throughout the building in compliance with CFC 903 and the applicable 2016 NFPA sprinkler standard. Review and approval of a sprinkler plan is required prior to installation or modification.
26. An automatic extinguishing system shall be provided to protect commercial-type food heating equipment that produces grease-laden vapors and shall comply with 2016 CFC and CMC and 2009 NFPA 17A. Review and approval of a hood and duct *extinguishing system plan* is required prior to installation or use of cooking equipment.

ALARM and MONITORING SYSTEMS

27. A fire alarm system shall be provided in compliance with CBC/CFC 907 and 2016 NFPA 72. A separate plan submittal is required for approval prior to installation or modification.
28. Automatic fire sprinkler system(s) and all control valves, with the exception of those listed in CFC 903.4, shall be monitored by a UL listed central alarm station.

HAZARDOUS MATERIALS, EQUIPMENT, and PROCESSES

29. Storage, dispensing, or use of any hazardous materials shall comply with CBC 414 and 415 and CFC regulations. The storage and use of hazardous materials shall be reviewed and approved by the OCFA prior to such materials being brought on site. Appropriate hazardous materials warning signs shall be prominently placed in the vicinity/entrances to areas where hazardous materials are stored in quantities sufficient to require a CFC permit.
30. Hazardous processes and equipment (e.g., storage tanks, refrigeration, vapor recovery, spray booths and drying rooms, dip tanks, industrial ovens, dust collection systems, medical/industrial gas systems, etc) shall be reviewed and approved by the OCFA prior to installation. Such equipment and processes may require specific building features and protection beyond what is identified on this plan.
31. Battery systems with more than 50 gallons of electrolyte (aggregate quantity) require review and approval by OCFA prior to installation.
32. High-piled combustible storage shall be in accordance with CFC Chapter 32. High hazard materials cannot be stored higher than 6 feet and other materials cannot be stored higher than 12 feet without first submitting plans to and obtaining approval from the OCFA.

OTHER REQUIREMENTS

33. At least one emergency escape and rescue window shall be provided for every sleeping room below the fourth story in R occupancies, except in R-1/R-2 of Type I, IIA, IIIA, or IV construction. Access to rescue openings shall be in accordance with OCFA Guidelines B-09 and E-04. Vegetation, topography, fences/walls and other obstructions shall not impede laddering of rescue openings or the path of firefighter travel from the fire lane to such openings. CBC 1030, CFC 504.1
34. The smoke control system shall comply with CBC/CFC 909 and CFC regulations. Review and approval of a rational analysis report is required prior to commencing construction. Acceptance testing shall be performed by a qualified third party and verified by an OCFA inspector prior to occupancy.
35. Projects located within a D.O.G.G.R. field boundary, near an oil/gas well or seep, or other locations with a potential for combustible soil gas shall undergo evaluation and possible mitigation as described in OCFA Guideline C-03.

ATTACHMENT 3

Plan Submittal Disclosure for B/F/M/S/U Occupancies

While construction of B, F, M, S, and U occupancies are not regulated by the OCFA, the materials, equipment, and activities within those occupancies may be. Completing this worksheet will assist in determining whether an **architectural and/or special equipment, process, or hazard plan**, is required to be submitted for fire department review; *review of other plan types not identified in this worksheet may also be required by the fire department, depending on the specific scope and circumstances of your project.* Refer to the OCFA Plan Submittal Criteria form and your conditional use permit, planning resolution, and approved plans and project documentation to identify additional submittals. By completing the certification information in Step 4, this disclosure form may be submitted to the building department as evidence that OCFA review of architectural and/or special equipment, process, or hazard plans is or is not required; when used in this manner, the disclosure form should be accompanied by a completed OCFA Plan Submittal Criteria form (available at www.ocfa.org or city hall).

STEP 1: DETERMINE YOUR OCCUPANCY CLASSIFICATION

Check each box that describes the use(s) associated with your project or facility.

- B occupancy:** general business administration or professional services such as a bank, salon, veterinary clinic, data processing, doctor/dentist office, car dealership/showroom, research and testing lab, dry cleaner (pick-up/drop off only, no cleaning done on-site), self-service laundry, etc.; small restaurants, adult education or training facilities, and similar gathering spaces with an occupant load of less than 50 occupants.
- F occupancy:** fabrication, manufacturing, assembling, packaging, cleaning/repair (including dry-cleaning facilities where laundry is done on-site), or processing of goods or materials.
- M occupancy:** display and sale of merchandise or products (e.g., department store, drug store/pharmacy, market, gas station, retail/wholesale store, sales room).
- S occupancy:** storage of materials or products over 100 square feet in area; a parking garage or vehicle maintenance or repair facility (e.g., warehouse, stockroom, distribution center, auto body, or car service center).
- U occupancy:** barn, stable, shed, greenhouse, or other agricultural structure; a carport or garage for private or pleasure-type vehicles no more than 3,000 square feet in area.

If after completing this step you are still unsure of the proper occupancy classification(s), contact the Building Department for clarification before continuing to Step 2.

STEP 2: IDENTIFY PROJECT SCOPE, MATERIALS, PROCESSES, and EQUIPMENT

For each of the occupancy classifications you've identified in Step 1, answer the questions in the following sections below that correspond to that occupancy. If your project meets any of the criteria, check the box and *submit the type of plan associated with the PR service code listed for that item.* A building or space may contain one or more occupancies, so ensure that you answer all the questions for each of the occupancy classifications associated with your project or facility.

B occupancy

- For projects with commercial kitchens, does the project either: 1) include the installation, modification, replacement, or relocation of equipment for cooking food that contains or is prepared using grease, fat, oil, or shortening, or 2) involve modification of the hood or odor/vapor extraction system serving this equipment? Submit plans for a hood and duct *fire extinguishing system* (PR335).

- For high-rises (>75 feet from the lowest level of building access to the highest occupiable floor), buildings with an atrium connecting 3+ stories, and other structures with a smoke control/management system, will the proposed work affect the performance of the system? Submit architectural plans (PR224 or PR228) along with a report prepared by the engineer of record or other qualified professional familiar with the smoke control system describing the impact of the project and proposed method of mitigation.
- Does your project involve any of the following: 1) an eating/drinking establishment with either 50+ occupants, excluding kitchen staff, or 750+ square feet in the dining, ordering, and waiting areas, including exterior spaces if those customers must pass back through the building to leave the facility; 2) a conference room, break/lunch room, or similar gathering area over 750 square feet.; 3) a training room or classroom with tables/desks and chairs for adults over 1000 square feet.? 4) a training room or classroom with chairs in rows, sanctuary, multipurpose room, or similar gathering area over 350 square feet? It contains an A occupancy; submit an architectural plan (PR200 through PR208).
- Is your facility an elementary school, tutoring center, or similar supplemental educational facility with more than 6 children in any space at the same time? It may be an E occupancy. Verify occupancy with the Building Department and submit an architectural plan to the OCFA if it is classified as an E occupancy (PR212).

F occupancy: Does the project include any of the following processes, operations, or equipment:

- Baking or use of powdered ingredients, sanding, grinding or other processes that produce fine combustible dust (PR360)
- Chipping, composting, or recycling operation (PR315; a PR145 may also be required)
- Dipping, coating, or spraying of flammable finishes (PR345)
- Dry cleaning performed on-site (PR355)
- Fabrication or use of plastics or other combustible solids (matches, charcoal, semi-conductors, explosives/fireworks, combustible metals) or tire rebuilding (PR315)
- Liquefied petroleum gas storage or use, including LPG-fueled vehicles (PR315)
- Ovens (industrial or commercial production ovens, dryers, autoclaves and similar equipment or commercial ovens in a retail restaurant/bakery kitchen serving the public) (PR360)
- Refrigeration systems (Complete the refrigeration worksheet in Guideline G-02)
- Storage, production, or use of baled cotton or combustible fibers (e.g., hay, jute, moss, straw, waste paper or similar materials) in excess of 100 cubic feet (PR315)
- Tanks for cryogenic or flammable/combustible liquids (PR300 or PR305)
- Welding, brazing, soldering, or other hot work (PR315)
- Woodworking or lumber yard (PR360; a PR145 may also be required)

M occupancy

- Does your project include installation or modification of a fuel tank or fuel dispensing station (gasoline, compressed natural gas, hydrogen, or liquefied petroleum gas)? Submit a tank plan (PR300 or PR305, as appropriate).

S occupancy

- Does your operation include the use of liquefied petroleum gas or compressed natural gas fueled vehicles (e.g., forklifts, loaders)? Submit a hazardous materials process/storage plan (PR315).
- Does your project include a parking garage >3000 square feet within, attached to, or beneath a SFM-regulated building such as an apartment building, hotel, restaurant, or mall? Include plans for the garage (PR224 or PR228) with your architectural plans (PR200 through PR280) for the SFM-regulated occupancy.
- Is your project a motor vehicle or aircraft service/repair facility? Submit an architectural plan (PR236 or PR240).

U occupancy

- Does this project have a carport or garage attached to or within 10 feet of an R-1, R-2, or R-4 multi-family residential occupancy? Include plans for the carport/garage area with the architectural plan submitted to the OCFA for the R occupancy (PR264 through PR280).

STEP 3: GENERAL REQUIREMENTS

Answer the following questions for *all* B, F, M, S, or U occupancies. If your project meets any of the criteria listed, check the box and *submit the type of plan associated with the PR service code listed for that item*.

- Is another regulatory agency or official *requiring* submittal of your architectural plan to the OCFA? Submit an architectural plan along with a completed OCFA referral form or similar documentation prepared by the regulatory agent indicating the scope of review requested (PR 224 or PR228).
- With the exception of limited quantities of typical janitorial supplies used for general cleaning and upkeep purposes, does this facility produce, store, dispense, display, or otherwise utilize chemicals or other hazardous materials (e.g., oil/lubricants, paint, epoxies/adhesives or solvents, acids, alcohol/industrial disinfectants, oxygen/acetylene/nitrogen or other compressed gasses, etc.)? Submit a hazmat compliance plan and chemical classification (PR315 and PR320 through PR328).
- Does the facility have a generator containing 60 or more gallons of fuel? Submit a tank plan (PR300).
- Does the project include an uninterrupted power supply (UPS) or other battery backup system with more than 50 gallons of electrolyte; and/or do you recharge or service battery powered vehicles such as golf carts or forklifts indoors and the aggregate quantity of electrolyte in all the batteries exceeds 50 gallons? Submit a battery plan (PR375).
- Does the project include the addition of or modification to industrial or medical gas storage or distribution piping (not including compressed air systems of a scale as would be expected at a small vehicle repair shop)? Submit a gas system plan (PR350).
- Does your project include installation or modification of refrigerated equipment (e.g., cooling plant; large or multiple refrigerated grocery cases, refrigerated warehouses, or walk-in coolers)? Complete the refrigeration worksheet in Guideline G-02.
- Will the facility include storage, stock, or sales areas in excess of 500 square feet where the top of items stored or displayed will be 12 feet or higher (or 6 feet for more hazardous commodities such as plastics, tires, flammable/combustible liquids, etc.)? Submit a high-piled storage plan (PR330).
- Does your project involve the installation of a photovoltaic (PV) system on a one or 2-family residential dwelling? Submit a PV plan if required by the city Building Official (PR363).
- Does your project involve the installation of a photovoltaic (PV) system on a commercial building or on a residential building with 3 or more dwelling units? Submit a PV plan (PR363).
- Is the building a new high-rise (>75 feet from the lowest level of building access to the highest occupiable floor)? Submit an architectural plan (PR285).
- Does your project involve construction of or modification to the common area of an enclosed mall (not including individual storefronts adjacent to the common area)? Submit an architectural plan (PR200 through PR228).
- Is your building in whole or in part a tent, canopy, inflatable or other membrane structure? Submit an architectural plan (PR224 or PR228).
- Does the project involve the installation or modification of electronic locking devices (e.g., delayed egress, controlled egress, elevator lobby locks, remote access control locks) on doors that may obstruct or inhibit passage *in the direction of exit travel* from the room, suite, or building to the outside? Submit an alarm plan (PR500 through PR520) and/or an architectural plan (PR224 through PR228).
- Does the project involve the installation or modification of card readers, key pads or similar security devices on doors that require the use of a card, pass code, or similar knowledge or key to allow passage *in the direction of exit travel to the outside*, and/or will revert to fail-secure mode and lock upon power failure or activation of an alarm? Submit an architectural and alarm plan (PR224 or PR228, and PR500 through PR520).

ATTACHMENT 4 CLASSIFICATION OF DAYCARE AND EDUCATIONAL USES

Use	Age/Grade	# of Occupants	Description/Conditions*	Occupancy
Commercial and Institutional Daycare	Under 2 years	7 to 100	Room must be on level of exit discharge and have direct exit to outside	E
			Room not on level of exit discharge or without exterior exit door	I-4
			Located in place of religious worship and utilized only while parents/guardians are attending religious services or other activities on-site	A if accessory to the sanctuary; E if located in separate classroom building
		7+	All other daycare uses not meeting criteria above	I-4
	At least 2 but under 18 years	7 to 99	Located in place of religious worship and utilized only while parents/guardians are attending religious services or other activities on-site	A-3 if accessory to the main sanctuary; E if located in a separate classroom building
		100+	Located in a place of religious worship and utilized only while parents or guardians are attending religious services or other activities on-site	E
		7+	All other daycare uses for 7+ children 2 or more years old not meeting the conditions above	E
	Any	Any	Daycare services provided for the convenience of customers who remain within the building (e.g., short-term babysitting services at gyms, bowling alleys, or stores)	B, M, or A-3 if accessory to main use
		7+	Custodial/personal care by other than parents, guardians, or relatives where occupants are not capable of immediately and effectively responding to emergency or need assistance from staff to do so	I-4
		1 to 6	Any and all daycare uses	B, or main occupancy if accessory
	18+ years	7+	Facility provides supervision and personal care; licensed adult day program	I-4
		50+	Facility does not provide custodial or personal care; unlicensed facility where occupants do not require assistance in an emergency and rate of evacuation is not less than that of the general population	A-3
		1 to 49	Facility does not provide custodial or personal care; unlicensed facility where occupants do not require assistance in an emergency and rate of evacuation is not less than that of the general population	B

Table continued on next page

CLASSIFICATION OF DAYCARE AND EDUCATIONAL USES (Continued)

In-home Daycare	18+ years	1 to 6	Custodial care by other than parents, guardians, relatives in a home setting	R-3
		7+	Custodial care by other than parents, guardians, relatives in a home setting	E or I-4: see “Commercial and Institutional Daycare” category. This use requires reclassification of the home to a commercial facility and may not be permitted by local zoning or planning regulations
	Under 18 years	1 to 8; includes care provider’s own children <10 yrs.	Custodial care in a home setting; small family daycare	R-3
		9 to 14; includes care provider’s own children <10 yrs.	Custodial care in a home setting; large family daycare	R-3
		15+	Custodial care in a home setting	E or I-4: see “Commercial and Institutional Daycare” category. This use requires reclassification of the home to a commercial facility and may not be permitted by local zoning or planning regulations
	Schools	Preschool to 12 th	1 to 6	Any and all educational uses
7+			Schools and similar facilities with classroom-style instruction	E
100+			Religious education rooms; Sunday school classrooms	E
7 to 100			Religious education rooms; Sunday school classrooms	A-3 when accessory to the main sanctuary; E otherwise
50+			Assembly spaces in schools	E when accessory to other E occupancies; A otherwise
Any			Home schooling for children who normally reside at the residence	R-3
College or Adult Education		1 to 49	Adult education or training, college or university classroom	B
		50+	Adult education or training, college or university classroom	A-3

CLASSIFICATION OF DAYCARE AND EDUCATIONAL USES (Continued)

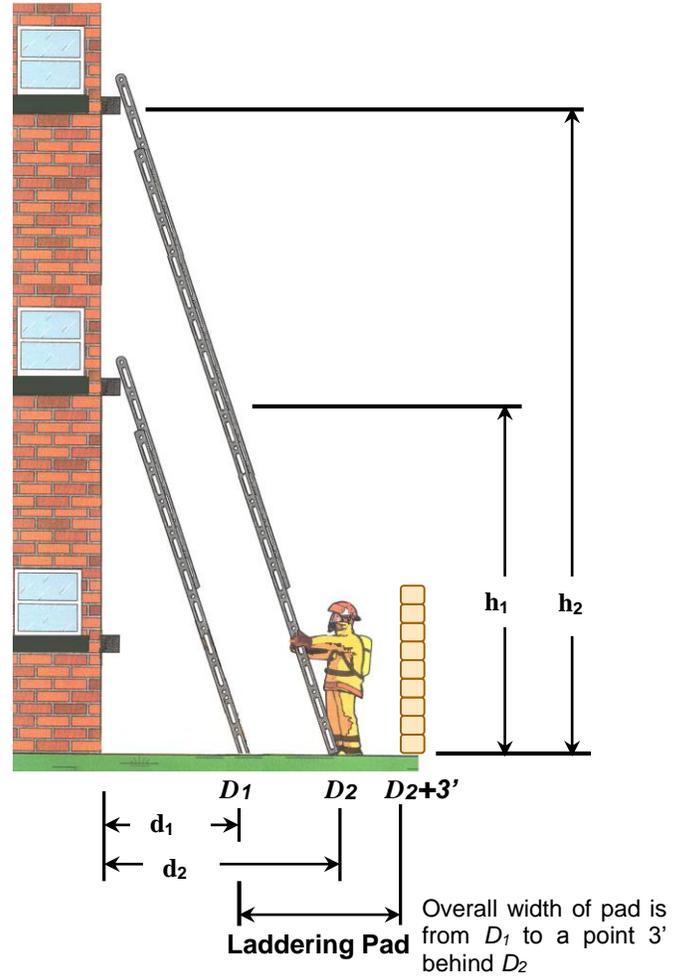
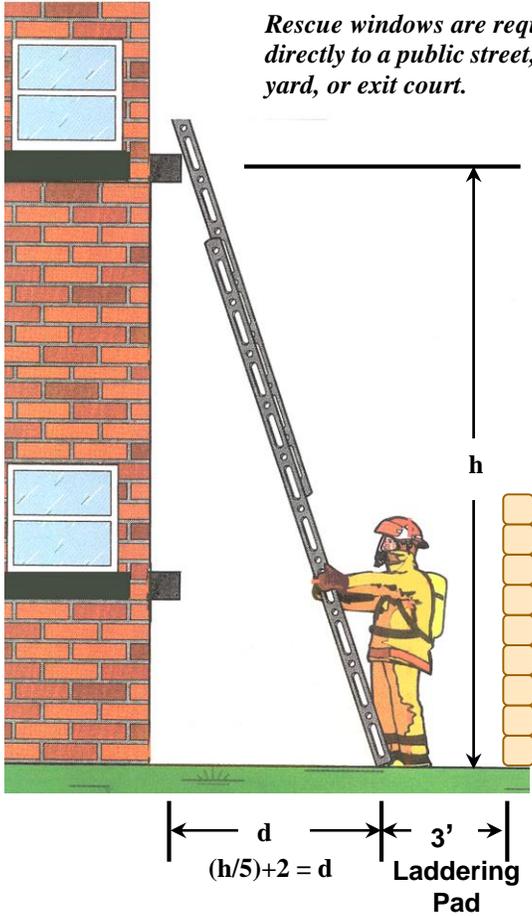
Tutoring	K to 12 th	1 to 6	Tutoring centers or similar educational programs	B, or main occupancy if accessory
		7+	Tutoring centers or similar educational programs not located at a school or daycare facility	B <i>Large facilities, those where the duration of attendance is lengthy, or off-campus after-school continuation programs affiliated with a school may be classified by the building department or OCFA as E</i>
			Tutoring centers, after-school continuation programs, or similar educational uses located at a school	E
	Preschool	1 to 6	Tutoring centers or similar educational programs not located at a school or daycare facility	B
		7+	Tutoring centers or similar educational programs not located at a school or daycare facility; facilities classified as a child care center or with a DSS CCLS daycare license	E or I-4 depending on age and egress
	Recreational	Any	7+	Martial arts, dance, gymnastics or similar recreational activities at facilities with a DSS CCLS daycare license or classified as a child care center
K to 12 th		1 to 49	Martial arts, dance, swimming, gymnastics school, or similarly focused training program; no DSS CCLS daycare license/850 form clearance required	B
		50+	Martial arts, dance, swimming, gymnastics school, or similarly focused training program; no DSS CCLS daycare license/850 form clearance required	A-3
Nursery/Preschool		1 to 6	Any recreational program	B, or main occupancy if accessory
		7+	Activities for pre-kindergarten children where child's guardian does not remain on site	E or I-4 depending on age and egress
		Any	Martial arts, dance, gymnastics or similar recreational activities for pre-kindergarten children where children's guardian must remain on site	B if less than 50 occupants, including children and adults; A-3 otherwise

* Duration of stay for all uses described in this table is assumed to be less than 24 hours or as noted. For facilities where occupants stay more than 24 hours, contact OCFA Planning & Development and the Building Department for assistance in classifying your occupancy.

ATTACHMENT 5

Ladder Pad Setback at Rescue Openings

Rescue windows are required to open directly to a public street, public alley, yard, or exit court.



Placement of Ladders

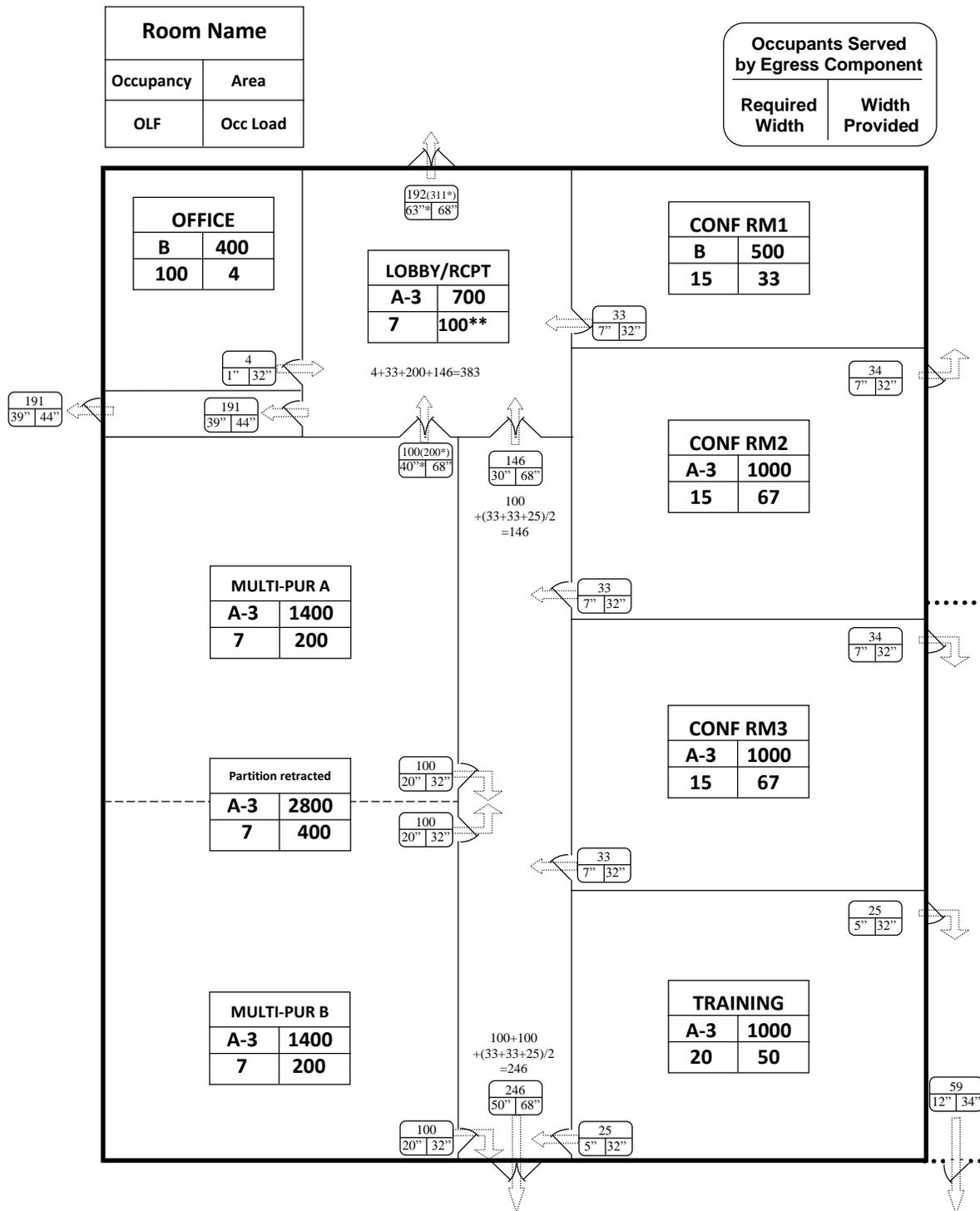
Sill Height (h)	Distance (d)
35'	9'-0"
34'	8'-10"
33'	8'-7"
32'	8'-5"
31'	8'-2"
30'	8'-0"
29'	7'-10"
28'	7'-7"
27'	7'-5"
26'	7'-2"

Sill Height (h)	Distance (d)
25'	7'-0"
24'	6'-10"
23'	6'-7"
22'	6'-5"
21'	6'-2"
20'	6'-0"
19'	5'-10"
18'	5'-7"
17'	5'-5"
16'	5'-2"

Sill Height (h)	Distance (d)
15'	5'-0"
14'	4' to 5'
13'	4' to 5'
12'	3' to 5'
11'	3' to 4'
10'	2' to 4'
9'	2' to 4'
8'	2' to 3'
7'	1' to 3'
<7'	1' to 2'

ATTACHMENT 6

Sample Egress Analysis Diagram



* Main exit must accommodate 50% of overall occupant load of space/building served per CBC 1028.2.

** Lobby occupants are same as those in other spaces. Egress provided for this space as if fully occupied, but occupant load is not counted in overall total for building.

ATTACHMENT 7

Submittal Criteria and Pre-submittal Checklists for R-1, R-2, E, and I-4 Occupancies

Consult the table below to determine if your project requires architectural review. If the building contains SFM regulated occupancies or uses other than R-1, R-2, E, or I-4, a full OCFA review is required for the portion of the building containing that occupancy regardless of whether the R-1, R-2, E, or I-4 portion does not require review or qualifies for an abbreviated review. For projects undergoing abbreviated review, use the pre-submittal checklists on the following page as a guide to verify that your plan has addressed the items that are commonly identified as deficiencies – additional information not listed in the checklist may be required depending on the project scope and building design. Architectural inspections are generally not required on E or I-4 occupancies or for R-1/R-2 occupancies with less than 51 units, but may be conducted by the OCFA for those projects identified with an asterisk in the table below.

	No Review	Abbreviated evaluation	Full evaluation
R-1 and R-2 Occupancies	<ul style="list-style-type: none"> ▪ 1 or 2 stories ▪ 3 stories with dedicated egress from each unit 	<ul style="list-style-type: none"> ▪ 3+ stories with shared egress (e.g., corridors, exit balconies, stair enclosures) ▪ Use of fire walls to separate the structure into separate buildings ▪ Use of sprinklers for a story increase, construction upgrade, allowable area increase, or allowable opening increase 	<ul style="list-style-type: none"> ▪ 4+ stories ▪ podium or wrap style construction ▪ AM&M (may allow abbreviated review depending on scope and approval conditions)* ▪ high-rise residential (PR285)* ▪ R-2.1 occupancy* ▪ Other projects, as needed*
E and I-4 Occupancies	<ul style="list-style-type: none"> ▪ Tutoring (generally small tenant space, low occupant load, short attendance period per day/week, not located at a school; and classified as a B occupancy by the Building Official) ▪ Accessory daycare used while the child’s guardian is patronizing the business, such as at a store or gym (where accessory to the A, these would be included as part of the A occupancy review) ▪ Accessory daycare at places of religious worship when 1) used while the child’s guardian is attending services in the same building and 2) serving less than 100 children (these would be reviewed as an accessory A occupancy where the aggregate occupant load is 50+) 	<ul style="list-style-type: none"> ▪ Private schools ▪ Adult/infant daycare ▪ Adult day programs for the disabled ▪ “Sunday school” and similar religious education rooms not classified as an A or B occupancy ▪ Recreational/themed training programs for children (dance, karate, swimming, theater, art, etc.) that serve as daycare ▪ Tutoring classified as E by the Building Official ▪ Other educational or daycare facilities not classified as B occupancy ▪ See also Attachment 4 in this guideline 	

R-1 and R-2 Occupancies Pre-submittal Checklist

Occupancy Classification	<input type="checkbox"/> Verify correct occupancy classification §302 <input type="checkbox"/> Classify accessory spaces according to use, not as the main occupancy §508.2.1
Allowable Area, Construction Type, Maximum Stories	<input type="checkbox"/> Provide allowable area calculation per current method in CBC Chapter 5 §506 <input type="checkbox"/> Check for errors in: <input type="checkbox"/> math <input type="checkbox"/> frontage value <input type="checkbox"/> sprinkler increase factor §506 <input type="checkbox"/> Use correct base area for proposed construction type Table 506.2 <input type="checkbox"/> Verify that accessory use area does not exceed 10% limit §508.2.3 <input type="checkbox"/> Non-separated occupancies are calc'd as most restrictive occupancy present §508.3.2 <input type="checkbox"/> Sprinklers cannot be used for both area & story increase unless Type V-A R-2 Table 504.4 <input type="checkbox"/> Verify that occupancy is not located above maximum story allowed Table 504.4
Sprinklers	<input type="checkbox"/> Specify type of sprinkler system: NFPA <input type="checkbox"/> 13 <input type="checkbox"/> 13-R §903.2.8 <input type="checkbox"/> NFPA 13-D system OK if all units separated as per an R-3 townhouse §903.3.1.3
Alarm	<input type="checkbox"/> Building requires alarm system §907 <input type="checkbox"/> Alarm required unless corridors are open ended per 1027.6 exception 3 §907.2.9.1 <input type="checkbox"/> Alarm required unless attic/crawl/common spaces separated by 1-hr partitions §907.2.9.1
Rated Assemblies	<input type="checkbox"/> Fire walls/barriers, if used, are shown on plan §503.1, 508.4.4.1 <input type="checkbox"/> Openings too close to assumed property line extending from FW §706.5.1, Table 705.8 <input type="checkbox"/> Verify that wall/opening ratio has not been exceeded Table 705.8 <input type="checkbox"/> Rated walls provide continuous/complete separation §706.5, 706.6, 707.5, 508.4.4.1 <input type="checkbox"/> Fire barriers provided for separation of different occupancies Table 508.4 <input type="checkbox"/> Incidental use spaces have rated and/or smoke resistant construction §509.4
Egress	<input type="checkbox"/> Rated corridors required at 11 occupants §Table 1020.1 <input type="checkbox"/> If required, rated stairwells are shown on plan §713, 1023 <input type="checkbox"/> If required, elevator lobbies or approved alternative have been provided §3006

E and I-4 Occupancies Pre-submittal Checklist

Occupancy Classification/ Load	<input type="checkbox"/> Letter of intended use has been provided <input type="checkbox"/> Verify correct occupancy classification §305, 308.6 <input type="checkbox"/> I-4 classified as E only if <100 occ on discharge level w/ direct exits to exterior §308.6.1 <input type="checkbox"/> Classify accessory spaces according to their own use, not as the main occupancy §508.2.1 <input type="checkbox"/> Calculate occupant load of classrooms at 20 sq.ft./person Table 1004.1.2 <input type="checkbox"/> Calculate occupant load of daycare spaces at 35 sq.ft./person Table 1004.1.2 <input type="checkbox"/> Calculate occupant load of gathering spaces at 7 sq.ft./person Table 1004.1.2
Allowable Area, Construction Type, Max. Stories	<input type="checkbox"/> Accessory use area does not exceed 10% limit §508.2.3 <input type="checkbox"/> Non-separated occupancies are calc'd as most restrictive occupancy present §508.3.2 <input type="checkbox"/> Occupancy is not located above maximum story allowed Table 504.4 <input type="checkbox"/> <3 rd grade limited to 1 st floor if unsprinklered or w/out dedicated egress §436.1, 452.1.4
Sprinklers	<input type="checkbox"/> When required, sprinklers are provided in fire area containing E §903.2.3 <input type="checkbox"/> Buildings containing I occupancy must be sprinklered §903.2.6
Alarm	<input type="checkbox"/> Building requires alarm system with: §907.2.3, 907.2.6

	<input type="checkbox"/> Smoke detectors in areas used for sleeping/napping §907.2.3.8.2 <input type="checkbox"/> Smoke detection in every room and ceiling plenum space §907.2.3.6 <input type="checkbox"/> Notification in common areas §907.2.3.3, 907.5.2.3.1 <input type="checkbox"/> Manual pull station in constantly attended location §907.2.3 <input type="checkbox"/> Manual pull station at each exit §907.4.2.1
Rated Wall Assemblies	<input type="checkbox"/> Rated walls provide continuous/complete separation §706.5, 706.6, 707.5, 508.4.4.1 <input type="checkbox"/> Fire barriers provided for separation of different occupancies Table 508.4 <input type="checkbox"/> Incidental use spaces have rated and/or smoke resistant construction §509.4
Egress	<input type="checkbox"/> Rated corridors required for non-sprinklered E and I-4 §Table 1020.1 <input type="checkbox"/> Two exit paths required at 11 occupants for I-4 occupancies §Table 1006.2.1 <input type="checkbox"/> Panic hardware provided on doors serving spaces w/ 50+ occupants §1010.1.10

Code references are from 2019 California Building Code