

CHAPTER 33

FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION

User note:

***About this chapter:** Chapter 33 outlines general fire safety precautions for all structures and all occupancies during construction and demolition operations. In general, these requirements seek to maintain required levels of fire protection, limit fire spread, establish the appropriate operation of equipment and promote prompt response to fire emergencies. There is an emphasis on owner responsibility and the need to create and implement a site safety plan. Features regulated include fire protection systems, fire fighter access to the site and building, water supply, means of egress, hazardous materials storage and use, and temporary heating equipment and other ignition sources. Fire watches are an important component of this chapter. This chapter correlates with Chapter 33 of the International Building Code®.*

SECTION 3301 GENERAL

[S] 3301.1 Scope. This chapter shall apply to structures in the course of construction, *alteration* or demolition, including those in underground locations. Compliance with NFPA 241 is required for items not specifically addressed herein.

Construction, *alteration* and demolition of fixed guideway transit and passenger rail system tunnels shall comply with NFPA 130 as amended and WAC 296-155, Part Q, Underground Construction.

Construction, *alteration* and demolition of road tunnels shall comply with NFPA 502 as amended and WAC 296-155, Part Q, Underground Construction.

3301.2 Purpose. This chapter prescribes minimum safeguards for construction, *alteration* and demolition operations to provide reasonable safety to life and property from fire during such operations.

[S] 3301.3 Alterations and additions. Required exits, existing structural elements, and fire protection devices shall be maintained at all times during alterations, repairs or additions to any building or structure.

Exceptions:

1. When such required elements or devices are being altered, adequate substitute provisions shall be made.
2. Maintenance of such elements and devices is not required when the building is not occupied.

SECTION 3302 DEFINITIONS

[S] 3302.1 Terms defined in Chapter 2. Words and terms used in this chapter and defined in Chapter 2 shall have the meanings ascribed to them as defined therein.

ADDITION.

ALTERATION.

CHANGE OF OCCUPANCY

EXISTING BUILDING, EXISTING STRUCTURE.

REHABILITATION.

REPAIR.

SUBSTANTIAL ALTERATION.

[W] SECTION 3303 **~~((OWNER'S RESPONSIBILITY FOR FIRE PROTECTION))~~ ADMINISTRATIVE SAFETY CONTROLS**

[W] 3303.1 Program development and maintenance. The *owner* or *owner's* authorized agent shall be responsible for the development, implementation and maintenance of an *approved*, written *site safety plan* establishing a fire prevention program at the project site applicable throughout all phases of the construction, repair, *alteration* or demolition work. The plan addresses the requirements of this chapter and other applicable portions of this code, the duties of staff and staff training requirements. The plan shall be submitted and *approved* before a building permit is issued. Any changes to the plan shall be submitted for approval.

3303.1.1 Components of site safety plans. *Site safety plans* shall include the following as applicable:

1. Name and contact information of site safety director.
2. Documentation of the training of the site safety director and fire watch personnel.
3. Procedures for reporting emergencies.
4. Fire department vehicle access routes.
5. Location of fire protection equipment, including portable fire extinguishers, standpipes, fire department connections and fire hydrants.
6. Smoking and cooking policies, designated areas to be used where *approved*, and signage locations in accordance with Section ((3305.8)) 3305.7.
7. Location and safety considerations for temporary heating equipment.
8. Hot work permit plan.
9. Plans for control of combustible waste material.
10. Locations and methods for storage and use of *flammable* and *combustible liquids* and other hazardous materials.
11. Provisions for site security.
12. Changes that affect this plan.
13. Other site-specific information required by the *fire code official*.

[S] 3303.2 Site safety director. The *owner* shall designate a person to be the site safety director. The site safety director shall be responsible for ensuring compliance with the *site safety plan*. The site safety director shall have the authority to enforce the provisions of this chapter and other provisions as necessary to secure the intent of this chapter. ((Where guard service is provided in accordance with NFPA 241, the site safety director shall be responsible for the guard service.))

[W] ((3303.6)) 3303.2.1 Training. Training of fire watch and other responsible personnel in the use of fire protection equipment shall be the responsibility of the site safety director. Records of training shall be kept and made a part of the written plan for the *site safety plan*.

[W] 3303.3 Daily fire safety inspection. The site safety director shall be responsible for completion of a daily fire safety inspection at the project site. Each day, all building and outdoor areas shall be inspected to ensure compliance with the inspection list in this section. The results of each inspection shall be documented and maintained on-site until a certificate of occupancy has been issued. Documentation shall be immediately available on-site for presentation to the *fire code official* upon request.

1. Any contractors entering the site to perform hot work each day have been instructed in the hot work safety requirements in Chapter 35, and hot work is performed only in areas *approved* by the site safety director.
2. Temporary heating equipment is maintained away from combustible materials in accordance with the equipment manufacturer's instructions.
3. Combustible debris, rubbish and waste material is removed from the building in areas where work is not being performed.
4. Temporary wiring does not have exposed conductors.
5. *Flammable liquids* and other hazardous materials are stored in locations that have been *approved* by the site safety director when not involved in work that is being performed.
6. Fire apparatus access roads required by Section ((3314)) 3307 are maintained clear of obstructions that reduce the width of the usable roadway to less than 20 feet (6096 mm).
7. Fire hydrants are clearly visible from access roads and are not obstructed.
8. The location of fire department connections to standpipe and in-service sprinkler systems are clearly identifiable from the access road and such connections are not obstructed.
9. Standpipe systems are in service and continuous to the highest work floor, as specified in Section ((3313.4)) 3307.5.
10. Portable fire extinguishers are available in locations required by Sections ((3316)) 3306.6 and ((3318.3)) 3305.10.2.

3303.3.1 Violations. Failure to properly conduct, document and maintain documentation required by this section shall constitute an unlawful act in accordance with Section 112.1 and shall result in the issuance of a notice of violation to the site safety director in accordance with Section 112.3. Upon the third offense, the *fire code official* is authorized to issue a stop work order in accordance with Section 113, and work shall not resume until satisfactory assurances of future compliance have been presented to and *approved* by the *fire code official*.

3303.4 Qualifications. Site safety directors shall acquire training specific to their roles and responsibilities. Upon request, the training and qualifications of the site safety director shall be submitted to the *fire code official* for approval.

[W] (~~(3305.5)~~) **3303.5 Fire watch.** Where required by the *fire code official* or the *site safety plan* established in accordance with Section 3303.1, a fire watch shall be provided for building demolition and for building construction.

EXCEPTION: New construction that is built under the IRC.

[W] (~~(3305.5.1)~~) **3303.5.1 Fire watch during construction.** A fire watch shall be provided during nonworking hours for new construction that exceeds 40 feet (12 192 mm) in height above the lowest adjacent grade at any point along the building perimeter, for new multistory construction with an aggregate area exceeding 50,000 square feet (4645 m²) per story or as required by the *fire code official*.

[W] (~~(3305.5.2)~~) **3303.5.2 Fire watch personnel.** Fire watch personnel shall be provided in accordance with this section.

[W][S] (~~(3305.5.2.1)~~) **3303.5.2.1 Duties.** The primary duty of fire watch personnel shall be to perform constant patrols and watch for the occurrence of fire, extinguishing spot or incipient phase fires and communicating an alarm. The combination of fire watch duties and site security duties is acceptable.

[W] (~~(3305.5.2.2)~~) **3303.5.2.2 Training.** Personnel shall be trained to serve as an on-site fire watch. Training shall include the use of portable fire extinguishers. Fire extinguishers and fire reporting shall be in accordance with Sections (~~3340~~) 3303.6 and 3306.6.

[W] (~~(3305.5.2.3)~~) **3303.5.2.3 Means of notification.** Fire watch personnel shall be provided with not fewer than one *approved* means for notifying the fire department.

[W] (~~(3305.5.3)~~) **3303.5.3 Fire watch location and records.** The fire watch shall include areas specified by the *site safety plan* established in accordance with Section 3303.

[W] (~~(3305.5.4)~~) **3303.5.4 Fire watch records.** Fire watch personnel shall keep a record of all time periods of duty, including the log entry for each time the site was patrolled and each time a structure was entered and inspected. Records shall be made available for review by the *fire code official* upon request.

[W] (~~(3310.1)~~) **3303.6 Emergency telephone.** Emergency telephone facilities with *ready access* shall be provided in an *approved* location at the construction site, or an *approved* equivalent means of communication shall be provided. The street address of the construction site and the emergency telephone number of the fire department shall be posted adjacent to the telephone. Alternatively, where an equivalent means of communication has been *approved*, the site address and fire department emergency telephone number shall be posted at the main entrance to the site, in guard shacks and in the construction site office.

[S] **3303.7.** A fire watch shall be provided during hot work activities and shall continue for a minimum of 30 minutes after the conclusion of the work. The fire prevention program superintendent is authorized to extend the fire watch based on the hazards or work being performed.

Exception: Where the hot work area has no fire hazards or combustible exposures.

[S] **3303.7.1.** A fire watch shall be posted for the duration of the work and for 2 hours thereafter for torch-applied roofing operations.

[S] **3303.7.2.** The fire watch shall include the entire hot work area. Hot work conducted in areas with vertical or horizontal fire exposures that are not observable by a single individual shall have additional personnel assigned to fire watches to ensure that exposed areas are monitored.

[S] **3303.7.3.** Individuals designated to fire watch duty shall have fire-extinguishing equipment readily available and shall be trained in the use of such equipment.

[S] **3303.7.4.** The individuals responsible for performing hot work and individuals responsible for providing the fire watch shall be trained in the use of portable fire extinguishers.

[S] **3303.8 Site security.** Guard service and/or security fences shall be provided where required by the *fire code official*.

[S] **3303.8.1.** Where guard service is provided, the guard(s) shall be trained in all of the following:

1. Notification procedures that include calling the fire department and management personnel.
2. Function and operation of fire protection equipment.
3. Familiarization with fire hazards.
4. Use of construction elevators, where provided.
5. Any special status of emergency equipment or hazards.

[S] **3303.8.2.** Where guard service is provided, the fire prevention program superintendent shall be responsible for the guard service.

[S] **3303.8.3.** Entrances (e.g., doors and windows) to the structure under construction, alteration, or demolition shall be secured where required by the *fire code official*.

[W] SECTION 3304
((TEMPORARY HEATING EQUIPMENT)) PROTECTION OF COMBUSTIBLE MATERIALS

[W] ((3305.2)) 3304.1 Combustible debris, rubbish and waste. Combustible debris, rubbish and waste material shall comply with the requirements of Sections ((3305.2.1 through 3305.2.4)) 3304.1.1 through 3304.2.

[W] ((3305.2.1)) 3304.1.1 Combustible waste material accumulation. Combustible debris, rubbish and waste material shall not be accumulated within buildings.

[W] ((3305.2.2)) 3304.1.2 Combustible waste material removal. Combustible debris, rubbish and waste material shall be removed from buildings at the end of each shift of work.

[W][S] ((3305.2.3)) 3304.1.3 Rubbish containers. ((Where rubbish)) Rubbish containers with a capacity exceeding 5.33 cubic feet (40 gallons) (0.15 m³) ((are)) used for temporary storage of combustible debris, rubbish and waste material ((; they)) shall have tight-fitting or self-closing lids. Such rubbish containers and lids shall be constructed entirely of materials that comply with either of the following:

1. Noncombustible materials.
2. Materials that meet a peak rate of heat release not exceeding 300 kW/m² when tested in accordance with ASTM E1354 at an incident heat flux of 50 kW/m² in the horizontal orientation.

Exceptions:

1. Wastebaskets complying with Section 808.
2. Waste accumulated for collection by the City's solid waste utility shall be stored in containers (to include recycling containers) specified in the City's solid waste collection contracts authorized by ordinance.
3. Containers in areas protected by an approved automatic sprinkler system installed throughout in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.

[W][S] ((3305.2.4)) 3304.2 Spontaneous ignition. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a listed disposal container. Contents of such containers shall be removed and disposed of daily.

[S] 3304.3 Trash chutes. Trash chutes used on the exterior of a building shall be of noncombustible construction, or shall be protected in accordance with the following, if of combustible construction:

1. The interior of combustible trash chutes shall be provided with not less than one temporary automatic sprinkler within a recess near the top of the chute.
2. The temporary sprinkler shall be protected by the recess as well as a listed sprinkler guard.
3. The temporary sprinkler shall be connected to any available water supply with a listed fire hose, or a flexible, commercial rubber hose, with a diameter of not less than 3/4 inch (19 mm) and a listed flexible connector.
4. The temporary sprinkler shall be protected against freezing where required by the fire code official.

[W] SECTION 3305
((PRECAUTIONS AGAINST FIRE)) IGNITION SOURCE CONTROLS

[W] ((3304.4)) 3305.1 Listed. Temporary heating devices shall be *listed* and *labeled*. The installation, maintenance and use of temporary heating devices shall be in accordance with the listing and the manufacturer's instructions.

[W] ((3304.2)) 3305.1.1 Oil-fired heaters. Oil-fired heaters shall comply with Section 605.

[W] ((3304.3)) 3305.1.2 LP-gas heaters. Fuel supplies for liquefied-petroleum gas-fired heaters shall comply with Chapter 61 and the *International Fuel Gas Code*.

[S] 3305.1.2.1. LP-gas containers are allowed to be used in buildings or areas of buildings under construction or undergoing alterations as set comply with this section.

[S] 3305.1.2.2. LPG cylinders, equipment, piping, and appliances shall comply with NFPA 58.

[S] 3305.1.2.3. LPG cylinders used and transported for temporary heating in buildings or structures under construction or undergoing substantial alteration, and such buildings are not occupied by the public, shall comply with the following:

1. Liquefied-petroleum gas (LPG) fired heaters used for temporary heating in buildings under construction or undergoing substantial alteration shall be located at least 6 feet (1.8 m) from any LPG cylinder.

Exception: Integral heater-cylinder units specifically designed for the attachment of the heater to the cylinder, or to a supporting standard attached to the cylinder, and designed and installed to prevent direct or radiant heat application to the cylinder shall be exempt from the spacing requirement above.

2. Blower-type and radiant-type units shall not be directed toward any cylinder within 20 feet (6.1 m).

3. If two or more heater-cylinder units of either the integral or non-integral type are located in an unpartitioned area on the same floor, the cylinder(s) of each such unit shall be separated from the cylinder(s) of any other such unit by at least 20 feet (6.1 m).
4. If heaters are connected to cylinders manifolded together for use in an unpartitioned area on the same floor, the total water capacity of cylinders manifolded together serving any one heater shall not be greater than 735 lb (333 kg) [nominal 300 lb (136 kg) propane capacity]. If there is more than one such manifold, it shall be separated from any other by at least 20 feet (6.1 m).
5. Where cylinders are manifolded together for connection to a heater(s) on another floor, the following shall apply:
 - a. Heaters shall not be installed on the same floors with manifolded cylinders.
 - b. The total water capacity of the cylinders connected to any one manifold shall not be greater than 2,450 lb (1111 kg) [nominal 1,000 lb (454 kg) propane capacity].
 - c. Manifolds of more than 735 lb (333 kg) water capacity [nominal 300 lb (136 kg) propane capacity], if located in the same unpartitioned area, shall be separated from each other by at least 50 feet (15 m).

[S] 3305.1.3. The use and transportation of LPG cylinders in the unoccupied portions of buildings or structures under construction or undergoing substantial alteration that are partially occupied by the public shall be *approved* by the *fire code official*.

[S] 3305.1.4. Cylinders used and transported for repair or minor renovation in buildings frequented by the public during the hours the public normally occupies the building shall comply with the following:

1. The maximum water capacity of individual cylinders shall be 50 lb (23 kg) [nominal 20 lb (9.1 kg) propane capacity], and the number of cylinders in the building shall not exceed the number of workers assigned to the use of the propane.
2. Cylinders having a water capacity greater than 2.7 lb (1.2 kg) shall not be left unattended.

[S] 3305.1.5. During the hours the building is not open to the public, cylinders used and transported within the building for repair or minor renovation and with a water capacity greater than 2.7 lb (1.2 kg) shall not be left unattended.

[S] 3305.1.6. Portable heaters, including salamanders, shall comply with the following:

1. Portable heaters shall be equipped with an *approved* automatic device to shut off the flow of gas to the main burner and to the pilot, if used, in the event of flame extinguishment or combustion failure.
2. Portable heaters shall be self-supporting unless designed for cylinder mounting.
3. Portable heaters shall not be installed utilizing cylinder valves, connectors, regulators, manifolds, piping, or tubing as structural supports.
4. Portable heaters having an input of more than 50 000 Btu/hr (53 MJ/hr) shall be equipped with either a pilot that must be lighted and proved before the main burner can be turned on or an *approved* electric ignition system.

Exception: Portable heaters with less than 7,500 Btu/hr (8 MJ/hr) input if used with cylinders having a maximum water capacity of 2.7 lb (1.2 kg) and filled with not more than 16.8 oz (0.522 kg) of LP-gas.

[S] 3305.1.7 LP-gas storage. LP-gas cylinders not connected for use shall be stored outside of buildings in locked, ventilated metal cabinets or other *approved* enclosures located in accordance with Table 6109.12.

[S] 3305.1.7.1 Alternative location and protection of storage. Where the provisions of Section 3305.1.7 are impractical at construction sites, or at buildings or structures undergoing major renovation or repairs, the storage of containers shall be as required by the *fire code official*.

[S] 3305.1.8 Fire District prohibition. Storage and use of LP-gas containers having an individual capacity in excess of 239 pounds (108.4 kg) water capacity [nominal 100 pounds (48.3 kg) LP-gas] and all stationary installations are prohibited in the *Fire District*.

[W][S] ((3304.4)) 3305.1.9 Refueling. Refueling operations for liquid-fueled equipment or appliances shall be conducted in accordance with Section 5705. The equipment or appliance shall be *shut down* and allowed to cool prior to refueling.

[W][S] ((3304.5)) 3305.1.10 Installation. Clearance to combustibles from temporary heating devices shall be maintained in accordance with the *labeled* equipment. When in operation, temporary heating devices shall be fixed in place and protected from damage, dislodgement or overturning in accordance with the manufacturer's instructions.

[W][S] ((3304.6)) 3305.1.11 Supervision. The use of temporary heating devices shall be supervised and maintained only by competent personnel.

[W] ((3305.1)) 3305.2 Smoking. Smoking shall be prohibited except in *approved* areas. Signs shall be posted in accordance with Section 310. In *approved* areas where smoking is permitted, *approved* ashtrays shall be provided in accordance with Section 310.

[S] **3305.3 Burning of combustible debris, rubbish and waste.** Combustible debris, rubbish and waste material shall not be disposed of by burning on the site. ~~((unless approved.))~~

[S] **3305.4 Open burning.** ~~Open burning ((shall comply with Section 307))~~ is prohibited in Seattle.

[W][S] ~~((3305.6 Cutting and welding))~~ **3305.5 Hot work.** Welding, cutting, open torches and other hot work operations and equipment shall comply with Chapter 35.

[S] **3305.5.1.** Hot work shall only be conducted in areas designed or authorized for that purpose by the fire prevention program superintendent.

[S] **3305.5.2.** Hot work shall not be conducted in the following areas unless approval has been obtained from the fire code official:

1. Areas where the sprinkler system is impaired.
2. Areas where there exists the potential of an explosive atmosphere, such as locations where flammable gases, liquids or vapors are present.
3. Areas with readily ignitable materials, such as storage of large quantities of bulk sulfur, baled paper, cotton, lint, dust or loose combustible materials.

[S] **3305.5.3.** Portable LP-gas containers are allowed to be used to supply *approved* self-contained torch assemblies or similar appliances. Such containers shall not exceed a water capacity of 2 1/2 pounds (1 kg).

[W] ~~((3305.7))~~ **3305.6 Electrical.** Temporary wiring for electrical power and lighting installations used in connection with the construction, *alteration* or demolition of buildings, structures, equipment or similar activities shall comply with NFPA 70.

[S] **3305.6.1.** All temporary branch circuits shall originate in an *approved* power outlet or panelboard. Conductors shall be permitted within multi-conductor cord or cable assemblies or as open conductors. All conductors shall be protected by overcurrent devices rated for the ampacity of the conductors. Runs of open conductors shall be located where the conductors are not subject to physical damage, and the conductors shall be fastened at intervals not exceeding 10 feet (3 m). Each branch circuit that supplies receptacles or fixed equipment shall contain a separate equipment grounding conductor where run as an open conductor.

[S] **3305.6.2.** Temporary lights shall be equipped with guards to prevent accidental contact with the bulb unless the construction of the reflector is such that the bulb is deeply recessed. Temporary lighting fixtures, such as quartz, that operate at temperatures capable of igniting ordinary combustibles shall be fastened securely so that the possibility of their coming in contact with such materials is precluded. Temporary lights shall be equipped with heavy-duty electrical cords with connections and insulation maintained in safe condition. Temporary lights shall not be suspended by their electrical cords unless such cords and lights have been designed for that purpose. Splices shall have insulation equivalent to that of the cable. Temporary wiring shall be removed immediately upon the completion of the construction or purpose for which the wiring was installed.

[W] ~~((3305.8))~~ **3305.7 Cooking.** Cooking shall be prohibited except in *approved* designated cooking areas separated from combustible materials by a minimum of 10 feet (3048 mm). Signs with a minimum letter height of 3 inches (76 mm) and a minimum brush stroke of 1/2 inch (13 mm) shall be posted in conspicuous locations in designated cooking areas and state:

DESIGNATED COOKING AREA
COOKING OUTSIDE OF A DESIGNATED COOKING AREA IS PROHIBITED

[W][S] ~~((3309.1 General))~~ **3305.8 Portable generators.** Portable generators used at construction and demolition sites shall comply with Section 1204.

[W][S] ~~((3303.8))~~ **3305.9 Hot work operations.** The site safety director shall ensure hot work operations and permit procedures are in accordance with Chapter 35.

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[W] ~~((3318.1 General))~~ **3305.10 Safeguarding roof operations.** Roofing operations utilizing heat-producing systems or other ignition sources shall be conducted in accordance with Sections ~~((3318.2))~~ 3305.10.1 and ~~((3318.3))~~ 3305.10.2 and Chapter 35.

[W][S] ~~((3318.2))~~ **3305.10.1 Asphalt ~~((and))~~ tar kettles.** Asphalt ~~((and))~~ tar kettles shall be operated in accordance with ~~((Section 303))~~ Sections 3305.10.1.1 through 3305.10.1.9.

[S] **3305.10.1.1.** Asphalt (tar) kettles shall not be located within 20 feet (6096 mm) of any combustible material, combustible building surface or any building opening and within a controlled area identified by the use of traffic cones, barriers or other *approved* means.

[S] **3305.10.1.2.** Asphalt (tar) kettles and pots shall not be utilized inside or on the roof of a building or structure. Roofing kettles and operating asphalt (tar) kettles shall not block means of egress, gates, roadways or entrances. In no case shall kettles be closer than 10 feet (3048 mm) from exits or means of egress.

Exception: Rubberized asphalt melters are allowed to be utilized on the roofs of a building or structure.

[S] 3305.10.1.3. Fuel containers shall be located at least 10 feet (3048 mm) from the burner.

Exception: Containers properly insulated from heat or flame are allowed to be within 2 feet (610 mm) of the burner.

[S] 3305.10.1.4. An operating kettle shall be attended by a minimum of one employee knowledgeable of the operations and hazards. The employee shall be within 25 feet (7600 mm) of the kettle and have the kettle within sight. Ladders or similar obstacles shall not form a part of the route between the attendant and the kettle.

[S] 3305.10.1.5. Hi-boys shall be constructed of noncombustible materials. Hi-boys shall be limited to a capacity of 55 gallons (208 L). Fuel sources or heating elements shall not be allowed as part of a hi-boy.

[S] 3305.10.1.6. Asphalt (tar) kettles shall be equipped with tightfitting lids that can be closed by means of gravity constructed of steel having a thickness of not less than No. 14 manufacturer's standard gauge (0.075 inch (2 mm)).

[S] 3305.10.1.7. Roofing kettles shall be constructed of noncombustible materials.

[S] 3305.10.1.8. Used roofing mops and rags shall be cleaned of excessive asphalt and stored away from the building and combustible materials. Discarded roofing mops and rags shall not be in contact with combustibles.

[S] 3305.10.1.9. Fuel containers that operate under air pressure shall not exceed 20 gallons (76 L) in capacity and shall be approved.

[W] ((3318.3)) 3305.10.2 Fire extinguishers for roofing operations. Fire extinguishers shall comply with Section 906. There shall be not less than one multiple-purpose portable fire extinguisher with a minimum 3-A 40-B:C rating on the roof being covered or repaired.

[W] SECTION 3306 ((FLAMMABLE AND COMBUSTIBLE LIQUIDS)) FIRE PROTECTION SYSTEMS AND DEVICES

[W] ((3303.7)) 3306.1 Fire protection devices. The site safety director shall ensure that all fire protection equipment is maintained and serviced in accordance with this code. Fire protection equipment shall be inspected in accordance with the fire protection program.

[W][S] ((3303.9)) 3306.2 Impairment of fire protection systems. ((The site safety director shall ensure impairments to any fire protection system are in accordance with Section 901.)) Where a fire protection system is out of service, the procedures in Administrative Rule 9.04, Impaired Fire Protection Systems and Emergency Responder Radio Amplification Systems, shall be implemented.

[S] 3306.2.1. The fire prevention program superintendent shall be the impairment coordinator to comply with the requirements of this section. In the absence of the fire prevention program superintendent, the building owner shall be considered the impairment coordinator.

[S] ((3303.9.1)) 3306.3 Smoke detectors and smoke alarms. Smoke detectors and smoke alarms located in an area where airborne construction dust is expected shall be covered to prevent exposure to dust or shall be temporarily removed. Smoke detectors and alarms that were removed shall be replaced upon conclusion of dust-producing work. Smoke detectors and smoke alarms that were covered shall be inspected and cleaned, as necessary, upon conclusion of dust-producing work.

[W] ((3303.10)) 3306.4 Temporary covering of fire protection devices. Coverings placed on or over fire protection devices to protect them from damage during construction processes shall be immediately removed upon the completion of the construction processes in the room or area in which the devices are installed.

[W][S] ((3315.1 Completion before occupancy)) 3306.5 Automatic sprinkler system. In buildings where an *automatic sprinkler system* is required by this code or the *International Building Code*, it shall be unlawful to occupy any portion of a building or structure until the *automatic sprinkler system* installation has been tested and *approved*, ((except as provided in Section 105.3.4)) unless approved by the building code official.

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[S] 3306.5.1. The provisions of Section 3306.5 shall not prohibit occupancy of the lower floors of a building, even where the upper floors are in various stages of construction or protection, provided the following conditions are satisfied:

1. The sprinkler protection of the lower occupied floors is completed and tested in accordance with Section 3306.5.
2. The lower floor sprinkler protection is supplied in such a manner that its water supply does not have to be shut off to facilitate the sprinkler system installation on the upper floors, except for a one-time closure to complete the riser installation.

[W][S] ((3315.2)) 3306.5.2 Operation of valves. Operation of sprinkler control valves shall be allowed only by ((properly authorized)) personnel ((and shall be accompanied by notification of duly designated parties)) who have obtained the proper certificate from the fire code official in accordance with Administrative Rule 9.01, Certificates of Competency for Installing, Inspecting, Testing and Maintaining Fire Protection Systems. The Seattle Fire Department must be notified in accordance with Administrative Rule 9.04, Impaired Fire Protection Systems and Emergency Responder Radio Amplifica-

tion Systems, if a planned or emergency impairment is anticipated to take a system out of service for more than eight hours. Where the sprinkler protection is being regularly turned off and on to facilitate connection of newly completed segments, the sprinkler control valves shall be checked at the end of each work period to ascertain that protection is in service.

**** [W][S] ((3316.1 Where required)) 3306.6 Portable fire extinguishers.** Structures under construction, *alteration* or demolition shall be provided with not less than one *approved* portable fire extinguisher in accordance with Section 906 and sized for not less than ordinary hazard as follows:

1. At each *stairway* on all floor levels where combustible materials have accumulated.
2. In every storage and construction shed.
3. Additional portable fire extinguishers shall be provided where special hazards exist including, but not limited to, the storage and use of *flammable* and *combustible liquids*.
4. In every room or space within the building used for storage, a dressing room, or a workshop.
5. Temporary enclosures shall be equipped with a minimum of one fire extinguisher suitable for all classes of fires that are expected inside the enclosure located so that the travel distance to a fire extinguisher does not exceed 50 feet (15 240 mm).
6. A minimum of one portable fire extinguisher complying with Section 906 and with a minimum 2-A:20-B:C rating shall be readily accessible within 30 feet (9144 mm) of the location where hot work is performed.

[W] SECTION 3307 ((FLAMMABLE GASES)) FIRE DEPARTMENT SITE ACCESS AND WATER SUPPLY

[W][S] ((3311.1)) **3307.1 Required access.** *Approved* ((*vehicle*)) fire apparatus access ((*for fire fighting*)) shall be provided to all construction or demolition sites at the start of the project and maintained until completion. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), exclusive of shoulders, except for *approved* security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 14 feet (4267 mm). Fire apparatus access shall be provided to within 150 feet (45 720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an *approved* route around the exterior of the building or facility. ((*Vehicle*)) Fire apparatus access shall be provided to within 100 feet (30 480 mm) of temporary or permanent fire department connections. ((*Vehicle*)) Fire apparatus access shall be provided by either temporary or permanent roads, capable of supporting vehicle loading under all weather conditions. Vehicle access shall be maintained until permanent fire apparatus access roads are available. "No parking" signs or other appropriate notices, or both, prohibiting obstruction shall be provided and shall be maintained.

[W][S] ((3311.2)) **3307.1.1 Key boxes.** ((*Key boxes shall be provided as required by Chapter 5.*)) Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the *fire code official* is authorized to require a key box to be installed in an *approved* location. The key box shall be of an *approved* type and shall contain keys to gain necessary access as required by the *fire code official*.

**** [W][BE] ((3312.1)) 3307.1.2 Stairways required.** Where building construction exceeds 40 feet (12 192 mm) in height above the lowest level of fire department vehicle access, a temporary or permanent *stairway* shall be provided. As construction progresses, such *stairway* shall be extended to within one floor of the highest point of construction having secured decking or flooring.

[S] **3307.1.2.1 Stairway floor number signs.** Temporary stairway floor number signs shall be provided in accordance with the requirements of Section 1023.9.1.

[W][S] ((3312.2)) **3307.1.3 Maintenance.** ((*Required means of egress and required accessible means of egress shall be maintained during construction and demolition, remodeling or alterations and additions to any building.*)) Buildings, or portions of buildings, shall be permitted to be occupied during construction, repair, alterations, or additions only where required means of egress are in place and continuously maintained for the portion occupied or where *approved* alternative life safety measures are in place.

Exception: ((*Approved*)) Existing means of egress need not be maintained where temporary *means of egress* and *accessible means of egress* systems and facilities *approved* by the building code official are provided.

[S] **3307.1.4 Hoists and elevators.** Where hoists and elevators provide the only efficient means of transporting hose and other cumbersome fire-fighting equipment to upper floors, they shall be available to the fire department whenever necessary.

**** [W] ((3313.1 When required)) 3307.2 Water supply for fire protection.** An *approved* water supply for fire protection, either temporary or permanent, shall be made available as soon as combustible building materials arrive on the site, on

commencement of vertical combustible construction and on installation of a standpipe system in buildings under construction, in accordance with Sections ~~((3313.2 through 3313.5))~~ 3307.2.1 through 3307.4.

Exception: The *fire code official* is authorized to reduce the fire-flow requirements for isolated buildings or a group of buildings in rural areas or small communities where the development of full fire-flow requirements is impractical.

[W] ~~((3313.2))~~ 3307.2.1 Combustible building materials. When combustible building materials of the building under construction are delivered to a site, a minimum fire flow of 500 gallons per minute (1893 L/m) shall be provided. The fire hydrant used to provide this fire-flow supply shall be within 500 feet (152 m) of the combustible building materials, as measured along an *approved* fire apparatus access lane. Where the site configuration is such that one fire hydrant cannot be located within 500 feet (152 m) of all combustible building materials, additional fire hydrants shall be required to provide coverage in accordance with this section.

[W] ~~((3313.3))~~ 3307.2.2 Vertical construction of Types III, IV and V construction. Prior to commencement of vertical construction of Type III, IV or V buildings that utilize any combustible building materials, the fire flow required by Sections ~~((3313.3.1 through 3313.3.3))~~ 3307.2.2.1 through 3307.2.2.3 shall be provided, accompanied by fire hydrants in sufficient quantity to deliver the required fire flow and proper coverage.

~~((3313.3.1))~~ 3307.2.2.1 Fire separation up to 30 feet. Where a building of Type III, IV or V construction has a *fire separation distance* of less than 30 feet (9144 mm) from property lot lines, and an adjacent property has an existing structure or otherwise can be built on, the water supply shall provide either a minimum of 500 gallons per minute (1893 L/m) or the entire fire flow required for the building when constructed, whichever is greater.

~~((3313.3.2))~~ 3307.2.2.2 Fire separation of 30 feet up to 60 feet. Where a building of Type III, IV or V construction has a fire separation distance of 30 feet (9144 mm) up to 60 feet (18 288 mm) from property lot lines, and an adjacent property has an existing structure or otherwise can be built on, the water supply shall provide a minimum of 500 gallons per minute (1893 L/m) or 50 percent of the fire flow required for the building when constructed, whichever is greater.

~~((3313.3.3))~~ 3307.2.2.3 Fire separation of 60 feet or greater. Where a building of Type III, IV or V construction has a fire separation of 60 feet (18 288 mm) or greater from a property *lot line*, a water supply of 500 gallons per minute (1893 L/m) shall be provided.

[W][S] ~~((3313.4))~~ 3307.3 Vertical construction, Type I and II construction. If combustible building materials are delivered to the construction site, water supply in accordance with Section ~~((3313.2))~~ 3307.2 shall be provided. Additional water supply for fire flow is not required prior to commencing vertical construction of Type I and II buildings.

[W] ~~((3313.5))~~ 3307.4 Standpipe supply. Regardless of the presence of combustible building materials, the construction type or the *fire separation distance*, where a standpipe is required in accordance with Section ~~((3314))~~ 3307, a water supply providing a minimum flow of 500 gallons per minute (1893 L/m) shall be provided. The fire hydrant used for this water supply shall be located within 100 feet (30 480 mm) of the fire department connection supplying the standpipe.

[W][S] ~~((3314.1 Where required))~~ 3307.5 Standpipes. In buildings required to have standpipes by Section 905.3.1, not less than one standpipe shall be provided for use during construction. Such standpipes shall be installed prior to construction exceeding 40 feet (12 192 mm) in height above the lowest level of fire department ~~((vehicle))~~ *apparatus* access. ~~((Such standpipes shall be provided with fire department hose connections at locations adjacent to stairways complying with Section 3307.1.3. As construction progresses, such standpipes shall be extended to within one floor of the highest point of construction having secured decking or flooring.))~~

**

[S] 3307.5.1. The standpipes shall be provided with conspicuously marked and readily accessible fire department connections on the outside of the building at the street level and shall have at least one standard hose outlet at each floor. The standpipes shall be securely supported and restrained at each alternate floor.

[S] 3307.5.2. At least one *approved* hose valve for attaching fire department hose shall be provided at each intermediate landing or floor level in the exit stairway, as determined by the authority having jurisdiction. Valves shall be kept closed at all times and guarded against mechanical injury.

[S] 3307.5.3. The standpipes shall be extended up with each floor and shall be securely capped at the top. Top hose outlets shall be not more than one floor below the highest forms, staging, and similar combustibles at all times.

[W][S] ~~((3307.5.1 Buildings being demolished.~~ Where a building is being demolished and a standpipe is existing within such a building, such standpipe shall be maintained in an operable condition so as to be available for use by the fire department. Such standpipe shall be demolished with the building but shall not be demolished more than one floor below the floor being demolished.))

[W][S] ~~((3314.3))~~ 3307.5.4 Detailed requirements. Standpipes shall be installed in accordance with the provisions of Section 905.

Exception: Standpipes shall be either temporary or permanent in nature, and with or without a water supply, provided that such standpipes comply with the requirements of Section 905 as to capacity, outlets and materials.

[S] 3307.6. Where underground water mains and hydrants are to be provided, they shall be installed, completed, and in service prior to commencing construction work on any structure.

[S] 3307.7. Free access from the street to fire hydrants and to outside connections for standpipes, sprinklers, or other fire extinguishing equipment, whether permanent or temporary, shall be provided and maintained at all times.

[S] 3307.8. Protective pedestrian walkways shall not be constructed so that they impede access to hydrants.

[S] 3307.9. No material or construction shall interfere with access to hydrants, fire department connections, or fire extinguishing equipment.

[W] SECTION ((3317)) 3308 MOTORIZED CONSTRUCTION EQUIPMENT

**** [W][S] ((3317.4)) 3308.1 Conditions of use.** Internal-combustion-powered construction equipment, such as air compressors, hoists, derricks, pumps, and similar devices, shall be used in accordance with all of the following conditions:

1. Equipment shall be located so that exhausts do not discharge against combustible material.
2. Exhausts shall be piped to the outside of the building. A clearance of at least 9 inches (230 mm) shall be maintained between such piping and combustible material.
- ((3. Equipment shall not be refueled while in operation.))
3. Internal-combustion-powered equipment shall be shut down and allowed to cool sufficiently prior to refueling.
4. Fuel for equipment shall be stored in an *approved* area outside of the building.

[W] SECTION ((3308)) 3309 ((EXPLOSIVE MATERIALS)) HAZARDOUS MATERIALS

[W][S] ((3306.1 Storage of flammable)) 3309.1 Flammable and combustible liquids. ((Storage of flammable and combustible liquids)) Temporary storage and dispensing of Class I and II liquids for private use at construction sites shall be in accordance with Sections 5701, 5703, 5704 and 5705 except as provided in Sections 3309.1.1 through 3309.1.8.1.

Exception: Storage and use of fuel oil and containers connected with oil-burning equipment regulated by Section 605 and the International Mechanical Code.

[W][S] ((3309.1.1 Class I and Class II liquids. The storage, use and handling of *flammable and combustible liquids* at construction sites shall be in accordance with Section 5706.2. Ventilation shall be provided for operations involving the application of materials containing flammable solvents.))

[S] 3309.1.1 Combustibles and open flames near tanks. Storage areas shall be kept free from weeds and extraneous combustible material. Open flames and smoking are prohibited in flammable or combustible liquid storage areas. “No Smoking” signs shall be posted in a conspicuous location in each structure or location in which smoking is prohibited. The content, lettering, size, color and location of required “No Smoking” signs shall be *approved*. Storage areas shall be appropriately posted with markings in accordance with NFPA 704, Standard System for the Identification of the Hazards of Materials for Emergency Response.

[S] 3309.1.2 Marking of tanks and containers. Tanks and containers for the storage of liquids above ground shall be conspicuously marked with the name of the product which they contain and the words: FLAMMABLE—KEEP FIRE AND FLAME AWAY. Tanks shall bear the additional marking: KEEP 50 FEET FROM BUILDINGS.

[S] 3309.1.3 Containers for storage and use. Metal containers used for storage of Class I or II liquids shall be in accordance with DOTn requirements or shall be of an *approved* design. Discharge devices shall be of a type that do not develop an internal pressure on the container. Pumping devices or *approved* self-closing faucets used for dispensing liquids shall not leak and shall be well-maintained. Individual containers shall not be interconnected and shall be kept closed when not in use. Containers stored outside of buildings shall be in accordance with Section 5704 and the International Building Code.

[S] 3309.1.4 Temporary tanks. The capacity of above-ground tanks containing Class I or II liquids shall not exceed 10 000 gallons (37 854 L). Tanks shall be of the single-compartment design.

[S] 3309.1.4.1 Fill-opening security. Fill openings shall be equipped with a locking closure device. Fill openings shall be separate from vent openings.

[S] 3309.1.4.2 Vents. Tanks shall be provided with a method of normal and emergency venting. Normal vents shall also be in accordance with Section 5704.2.7.3. Emergency vents shall be in accordance with Section 5704.2.7.4. Emergency vents shall be arranged to discharge in a manner which prevents localized overheating or flame impingement on any part of the tank in the event that vapors from such vents are ignited.

[S] 3309.1.4.3 Location. Tanks containing Class I or II liquids shall be kept outside and at least 50 feet (15 240 mm) from buildings and combustible storage. Additional distance shall be provided when necessary to ensure that vehicles,

equipment and containers being filled directly from such tanks will not be less than 50 feet (15 240 mm) from structures, or other combustible storage.

[S] 3309.1.4.4 Locations where above-ground tanks are prohibited. The storage of Class I and II liquids in above-ground tanks is prohibited within the limits established by law as the limits of districts in which such storage is prohibited.

[S] 3309.1.5 Type of tank. Tanks shall be provided with top openings only or shall be elevated for gravity discharge.

[S] 3309.1.5.1 Tanks with top openings only. Tanks with top openings shall be mounted as follows:

1. On well-constructed metal legs connected to shoes or runners designed so that the tank is stabilized and the entire tank and its supports can be moved as a unit; or
2. For stationary tanks, on a stable base of timbers or blocks approximately 6 inches (152 mm) in height that prevents the tank from contacting the ground.

[S] 3309.1.5.1.1 Pumps and fittings. Tanks with top openings only shall be equipped with a tightly and permanently attached, *approved* pumping device having an *approved* hose of sufficient length for filling vehicles, equipment or containers to be served from the tank. Either the pump or the hose shall be equipped with a padlock to its hanger to prevent tampering. An effective anti-siphoning device shall be included in the pump discharge unless a self-closing nozzle is provided. Siphons or internal pressure discharge devices shall not be used.

[S] 3309.1.5.2 Tanks for gravity discharge. Tanks with a connection in the bottom or the end for gravity-dispensing liquids shall be mounted and equipped as follows:

1. Supports to elevate the tank for gravity discharge shall be designed to carry all required loads and provide stability.
2. Bottom or end openings for gravity discharge shall be equipped with a valve located adjacent to the tank shell which will close automatically in the event of fire through the operation of an effective heat-activated releasing device. Where this valve cannot be operated manually, it shall be supplemented by a second, manually operated valve. The gravity discharge outlet shall be provided with an *approved* hose equipped with a self-closing valve at the discharge end of a type that can be padlocked to its hanger.

[S] 3309.1.6 Spill control drainage control and diking. Indoor storage and dispensing areas shall be provided with spill control and drainage control as set forth in Section 5703.4 when the quantity exceeds 30 gallons of Class I flammable liquids or 120 gallons of Class II combustible liquids. Outdoor storage areas shall be provided with drainage control or diking as set forth in Section 5704.2.10 when the quantity exceeds 660 gallons aggregate of Class I and II flammable and combustible liquids.

Exception: Spill control and diking is not required for listed secondary containment tanks.

[S] 3309.1.6.1 Leakage and spills. Leaking *vessels* shall be immediately repaired or taken out of service and spills shall be cleaned up and disposed of properly.

[S] 3309.1.7 Portable fire extinguishers. Portable fire extinguishers with a minimum rating of 20-B:C and complying with Section 906 shall be provided where required by the *fire code official*.

[S] 3309.1.8 Dispensing from tank vehicles. Where *approved*, liquids used as fuels are allowed to be transferred from tank vehicles into the tanks of motor vehicles or special equipment, provided all of the following are true:

1. The tank vehicle's specific function is that of supplying fuel to motor vehicle fuel tanks;
2. The dispensing hose does not exceed 100 feet (30 480 mm) in length;
3. The dispensing nozzle is an *approved* type;
4. The dispensing hose is properly placed on an *approved* reel or in a compartment provided before the tank vehicle is moved;
5. Signs prohibiting smoking or open flames within 25 feet (7620 mm) of the vehicle or the point of refueling are prominently posted on the tank vehicle;
6. Electrical devices and wiring in areas where fuel dispensing is conducted are in accordance with NFPA 70;
7. Tank vehicle-dispensing equipment is operated only by designated personnel who are trained to handle and dispense motor fuels; and
8. Provisions are made for controlling and mitigating unauthorized discharges.

[S] 3309.1.8.1 Location. Dispensing from tank vehicles shall be conducted at least 50 feet (15 240 mm) from structures or combustible storage.

[W] ((3306.3)) 3309.1.9 Housekeeping. *Flammable* and *combustible liquid* storage areas shall be maintained clear of combustible vegetation and waste materials. Such storage areas shall not be used for the storage of combustible materials.

[W] ~~((3306.4))~~ **3309.1.10 Precautions against fire.** Sources of ignition and smoking shall be prohibited in *flammable* and *combustible liquid* storage areas. Signs shall be posted in accordance with Section 310.

[W] ~~((3306.5))~~ **3309.1.11 Handling at point of final use.** Class I and II liquids shall be kept in *approved* safety containers.

[W] ~~((3306.6))~~ **3309.1.12 Leakage and spills.** Leaking vessels shall be immediately repaired or taken out of service and spills shall be cleaned up and disposed of properly.

[S] **3309.1.13 Floor surfacing and finishing operations.** Floor surfacing and finishing operations exceeding 350 square feet (33 m²) and using Class I or II liquids shall be in accordance with Section 2410.

[W] ~~((3307.1))~~ **3309.2 Storage and handling of flammable gas.** The storage, use and handling of flammable gases shall comply with Chapter 58.

[W] ~~((3307.2))~~ **3309.2.1 Cleaning with flammable gas.** Flammable gases shall not be used to clean or remove debris from piping open to the atmosphere.

[W] ~~((3307.2.1))~~ **3309.2.2 Pipe cleaning and purging.** The cleaning and purging of flammable gas piping systems, including cleaning new or existing piping systems, purging piping systems into service and purging piping systems out of service, shall comply with NFPA 56.

Exceptions:

1. Compressed gas piping systems other than fuel gas piping systems where in accordance with Chapter 53.
2. Piping systems regulated by the *International Fuel Gas Code*.
3. Liquefied petroleum gas systems in accordance with Chapter 61.

[W][S] ~~((3308.1))~~ **3309.3 Storage and handling.** Explosive materials shall be stored, used and handled in accordance with Chapter 56 and NFPA 495.

[W][S] ~~((3308.2 Supervision))~~ **3309.3.1 Blasting.** Blasting operations shall be conducted only by approved, competent operators familiar with the required safety precautions and the hazards involved and in accordance with Chapter 56 and NFPA 495.

[S] **3309.3.1.1.** Before approval to do blasting is issued, the applicant shall obtain and provide documentation of liability insurance in accordance with Section 105.3.9.

[W][S] ~~((3309.3.2 Demolition using explosives. Approved fire hoses for use by demolition personnel shall be maintained at the demolition site wherever explosives are used for demolition. Such fire hoses shall be connected to an approved water supply and shall be capable of being brought to bear on post detonation fires anywhere on the site of the demolition operation.))~~

**[W] SECTION ~~((3309))~~ 3310
(~~(PORTABLE GENERATORS)~~)**

ADDITIONAL SAFEGUARDS FOR OCCUPIED BUILDINGS

[W] ~~((3312.3))~~ **3310.1 Storage.** Combustible materials associated with construction, demolition, remodeling or *alterations* to an occupied structure shall not be stored in *exits*, enclosures for *stairways* and *ramps*, or *exit access corridors* serving an occupant load of 30 or more.

Exceptions:

1. Where the only occupants are construction workers.
2. Combustible materials that are temporarily accumulated to support work being performed when workers are present.

[S] **3310.2.** Flammable or explosive substances or equipment for repairs or alterations shall be permitted in a building while the building is occupied if the condition of use and safeguards provided do not create any additional danger or impediment to egress beyond the normally permissible conditions in the building.

**[W] SECTION ~~((3310))~~ 3311
(~~(FIRE REPORTING)~~)**

ADDITIONAL SAFEGUARDS FOR TYPE I AND II CONSTRUCTION

[W] ~~((3305.9))~~ **3311.1 Separations between construction areas.** Separations used in Type I and Type II construction to separate construction areas from occupied portions of the building shall be constructed of materials that comply with one of the following:

1. Noncombustible materials.

2. Materials that exhibit a flame spread index not exceeding 25 when tested in accordance with ASTM E84 or UL 723.
3. Materials exhibiting a peak heat release rate not exceeding 300 kW/m² when tested in accordance with ASTM E1354 at an incident heat flux of 50 kW/m² in the horizontal orientation on specimens at the thickness intended for use.

[W] SECTION ~~((3344))~~ 3312
~~((ACCESS FOR FIRE FIGHTING))~~

ADDITIONAL SAFEGUARDS FOR TYPE IV-A, IV-B, AND IV-C CONSTRUCTION

~~((3303.5))~~ 3312.1 Fire safety requirements for buildings of Types IV-A, IV-B and IV-C construction. Buildings of Types IV-A, IV-B and IV-C construction designed to be greater than six stories above *grade plane* shall comply with the following requirements during construction unless otherwise *approved* by the *fire code official*:

1. Standpipes shall be provided in accordance with Section ~~((3313))~~ 3307.
2. A water supply for fire department operations, as *approved* by the *fire code official* and the *fire chief*.
3. Where building construction exceeds six stories above *grade plane* and noncombustible protection is required by Section 602.4 of the *International Building Code*, at least one layer of noncombustible protection shall be installed on all building elements on floor levels, including mezzanines, more than four levels below active mass timber construction before additional floor levels can be erected.

Exceptions:

1. Shafts and vertical exit enclosures shall not be considered part of the active mass timber construction.
2. Noncombustible protection on the top surface of mass timber floor assemblies shall not be required before erecting additional floor levels.
4. Where building construction exceeds six stories above *grade plane*, required exterior wall coverings shall be installed on floor levels, including mezzanines, more than four levels below active mass timber construction before additional floor levels can be erected.

Exception: Shafts and vertical exit enclosures shall not be considered part of the active mass timber construction.

~~((SECTION 3342~~
~~MEANS OF EGRESS))~~

~~((SECTION 3343~~
~~WATER SUPPLY FOR FIRE PROTECTION))~~

[S] SECTION 3313
DEMOLITION

3313.1 Construction documents. Construction documents and a schedule for demolition shall be submitted where required by the building code official. Where such information is required, no work shall be done until such construction documents or schedule, or both, are *approved*.

3313.2 Pedestrian protection. The work of demolishing any building shall not be commenced until pedestrian protection is in place as required by Chapter 33 of the Seattle Building Code and the Street Use Ordinance, Seattle Municipal Code Title 15.

3313.3 Means of egress. A horizontal exit shall not be destroyed unless and until a substitute means of egress has been provided and *approved*.

3313.4 Standpipes. Where a building is being demolished and a standpipe is existing within such a building, such standpipe shall be maintained in an operable condition in conformity with the progress of demolition activity in such a manner so as to be available for use by the fire department. Such standpipe shall be demolished with the building but shall not be demolished more than one floor below the floor being demolished.

3313.5 Demolition using explosives. If explosives are used in demolition work (implosion), hose lines, at least two of 1-1/2-in. diameter or 2-1/2-in. diameter shall be provided in the immediate vicinity of the demolition site during the actual detonation for use by demolition personnel. The required hose lines shall be connected to an *approved* water supply and shall be of sufficient length to be capable of extinguishing any small fire anywhere on the demolition site after detonation.

3313.6 Underground tanks. When demolition occurs, all underground tanks on the site shall either be removed or filled, as required by this code.

■ **3313.7 Utility connections.** Service utility connections shall be discontinued and capped in accordance with requirements of the governing utility or agency including, but not limited to, Seattle Public Utilities, Seattle Department of Transportation, Seattle Department of Construction and Inspections, Seattle Fire Department, Seattle City Light, Puget Sound Energy, and CenturyLink.

■ **3313.8 Removal of hazardous and combustible materials.** All asbestos and other hazardous material shall be removed prior to demolition, in accordance with regulations of the Environmental Protection Agency, the Puget Sound Clean Air Agency and other pertinent agencies. Combustible waste shall be removed in accordance with the International Fire Code.

**~~((SECTION 3314
STANDPIPES))~~**

**~~((SECTION 3315
AUTOMATIC SPRINKLER SYSTEM))~~**

**~~((SECTION 3316
PORTABLE FIRE EXTINGUISHERS))~~**

**~~((SECTION 3318
SAFEGUARDING ROOFING OPERATIONS))~~**