

SAFEGUARDS DURING CONSTRUCTION OR DEMOLITION

SECTION BC 3301 GENERAL

3301.1 Scope. The provisions of this chapter shall govern the conduct of all construction or demolition operations with regard to the safety of the public and property. For regulations relating to the safety of persons employed in construction or demolition operations, OSHA standards shall apply.

3301.1.1 Responsibility for safety. Nothing in this chapter shall be construed to relieve persons engaged in construction or demolition operations from complying with other applicable provisions of law, nor is it intended to alter or diminish any obligation otherwise imposed by law on any party engaged in a construction or demolition operation, including but not limited to the owner, construction manager, general contractor, sub-contractors, material men, registered design professionals, or other party to engage in sound design and engineering, safe construction or demolition practices, including but not limited to debris removal, and to act in a reasonable and responsible manner to maintain a safe construction or demolition site.

3301.1.2 Fire code. In addition to the requirements of this chapter, construction or demolition operations shall also be conducted in conformance with the *New York City Fire Code*.

3301.1.3 Manufacturer specifications. All equipment shall be used in accordance with the specifications of the manufacturer, where such specifications exist, and the requirements of this code. Where there is a discrepancy, the stricter requirement shall apply.

3301.2 Safety measures and standards. Contractors, construction managers, and subcontractors engaged construction or demolition operations shall institute and maintain all safety measures required by this chapter and provide all equipment or temporary construction necessary to safeguard the public and property affected by such contractor's operations.

***3301.3 Site safety managers, coordinators and superintendent of construction.** A site safety manager or site safety coordinator must be designated and present at the construction or demolition of a major building in accordance with Section 3310. A superintendent of construction is required for the construction or demolition of such other buildings as identified in Section 3301.13.3.

**Section 3301.3 was amended by [Local Law 81 of 2017](#). This law has an effective date of November 6, 2017.*

3301.4 Inspection. Structures, temporary construction, operations, and equipment shall be inspected as required by this code. Where this code does not provide for specific inspection criteria, any equipment, except hand tools, that would affect the safety of the public and property when operated shall be inspected by a competent person designated by the contractor using the equipment before the equipment is used at the site and on a periodic basis thereafter throughout the duration of the job. A record of such inspections shall be kept at the site.

3301.5 Unsafe conditions and equipment. Any structure, temporary construction, operation, or equipment found to be defective or unsafe, and posing a risk to the public and property, shall be immediately secured and corrected, or removed from the site.

3301.6 Design, sizes, and capacity of materials, structures, temporary construction, and equipment. Design, sizes, and capacities of materials, structures, temporary construction, and equipment shall be in accordance with the requirements of Sections 3301.6.1 through 3301.6.3.

3301.6.1 Design. Whenever design is specifically required by the provisions of this chapter, such design shall be in accordance with the requirements of this code and executed by, or under, the supervision of a registered design professional who shall cause his or her seal and signature to be affixed to such documents that may be required for the work.

Exception: Where this chapter specifically indicates that the design may be executed by another individual.

3301.6.2 Sizes. All sizes and dimensions prescribed in this chapter are minimum requirements. Lumber sizes are nominal or commercial except where stated otherwise.

3301.6.3 Capacity. No structure, temporary construction, or equipment shall be loaded in excess of its capacity as specified by the code, manufacturer, and/or designer. Where there is a discrepancy, the stricter standard shall apply.

3301.7 Documents to be kept on site. Where this chapter requires construction documents, drawings, inspection reports, logs, checklists, site safety plans, fire safety and evacuation plans, tenant protection plans, occupant protection plans, or monitoring plans, copies of such shall be maintained at the site for the duration of the job and made available to the commissioner upon request. Copies of such aforementioned construction documents or drawings shall also be maintained by the permit holder and the designer. Copies of such aforementioned inspection reports, logs, or checklists shall also be maintained by the permit holder and the entity that performed the inspection. Copies of such aforementioned plans shall also be kept by the permit holder and the entity that developed the plan.

Exception: Where this chapter requires inspection reports, logs, checklists, site safety plans, fire safety and evacuation plans, tenant protection plans, occupant protection plans, or monitoring plans to be maintained by a specified entity other than the permit holder, such reports, logs, checklists, or plans shall be maintained by such specified entity.

3301.8 Accidents and damage to adjoining property. The department shall be notified immediately by the permit holder, or a duly authorized representative, of an accident at a construction or demolition site, or of any damage to adjoining property caused by construction or demolition activity at the site.

3301.8.1 Use and tampering prohibited. Following an accident, no person shall permit any of the following without the permission of the commissioner, or without a lawful order from the New York City Police or Fire Department:

1. Use or operation of any equipment or structure damaged or involved in the accident; or
2. Removal or alteration of any equipment, structure, material, or evidence related to the accident.

Exception: Immediate emergency procedures taken to secure structures, temporary construction, operations, or equipment that pose a continued imminent danger or to facilitate assistance for persons who are trapped or who have sustained bodily injury.

3301.9 Required signs. Signs shall be posted at a construction or demolition site in accordance with Sections 3301.9.1 through 3301.9.5.

3301.9.1 Fence project information panel. Where a site is enclosed with a fence in accordance with Section 3307.7, a project information panel meeting the requirements of Sections 3301.9.1.1 through 3301.9.1.6 shall be posted. Required project information panels shall be in place throughout the duration that the fence remains at the site.

Exceptions:

1. At a site where the project permit was issued or renewed prior to July 1, 2013, signs meeting the requirement of Section 3301.9.3 may be posted in lieu of a project information panel. Such signs shall be removed and a project information panel in accordance with the requirements of this section installed upon date of the first permit renewal on or after July 1, 2013.
2. Project information panels at government-owned sites or at sites with government funding, may be modified in accordance with department rule.
3. Signs posted at construction or demolition sites for one-, two- or three-family dwellings may comply with Section 3301.9.3 in lieu of this section.

3301.9.1.1 Project information panel content. Project information panels shall contain the following information:

1. A rendering, elevation drawing, or zoning diagram of the building exterior that does not contain logos or commercially recognizable symbols;
2. A title stating "Work in Progress:" and specifying the intended type(s) of zoning use(s) (e.g. Residential, Commercial, Manufacturing, Retail, Office, Hospital, School);
3. Anticipated project completion date;
4. The corporate name, address, and telephone number of the owner of the property;
5. Website address or phone number to contact for project information;
6. The corporate name and telephone number of the general contractor, or for a demolition site, the demolition contractor;
7. The statement, in both English and Spanish, "TO ANONYMOUSLY REPORT UNSAFE CONDITIONS AT THIS WORK SITE, CALL 311."; and
8. A copy of the primary project permit, with accompanying text "To see other permits issued on this property, visit: www.nyc.gov/buildings." The permit shall be laminated or encased in plastic covering to protect it from

the elements or shall be printed directly onto the project information panel.

Exception: A rendering, elevation drawing, or zoning diagram of the building exterior is not required for demolition projects.

3301.9.1.2 Posting of project information panels. A project information panel shall be posted on the fence on each perimeter fronting a public thoroughfare. Where such perimeter is more than 150 feet in length, a project information panel shall be posted at each corner. Such panels shall be posted on the fence at a height of 4 feet (1219 mm) above the ground, with such distance measured from the ground to the bottom edge of the panel.

3301.9.1.3 Project information panel material. Project information panels shall be constructed out of a durable and weatherproof material such as vinyl, plastic, or aluminum, and such material shall be flame retardant in accordance with NFPA 701 or listed under UL 214.

3301.9.1.4 Project information panel specifications. Project information panels shall be 6 feet (1829 mm) wide and 4 feet (1219 mm) high, with the content required by Section 3301.9.1.1 arranged in accordance with Figures 3301.9.1.4(1) and 3301.9.1.4(2). The content required by Section 3301.9.1.1, Items 2 through 7 shall be written in the Calibri font or similar sans serif font style, with letters a minimum of 1 inch (25 mm) high, as measured by the upper case character. Such letters shall be white, on a blue background, with such blue color of a shade matching Pantone 296, or RGB 15, 43, 84, or CMYK 100, 88, 38, 35.

Exceptions:

1. The dimensions for a project information panel posted in conjunction with a demolition project shall be 2 feet 4 inches (711 mm) wide and 4 feet (1219 mm) high, in accordance with Figure 3301.9.1.4(1).
2. For construction sites with a street frontage less than 60 feet (18 288 mm), the dimensions for a project information panel, other than that posted in conjunction with a demolition project, shall be 55 inches (1397 mm) wide and 36.5 inches (927 mm) high, in accordance with Figure 3301.9.1.4(3).

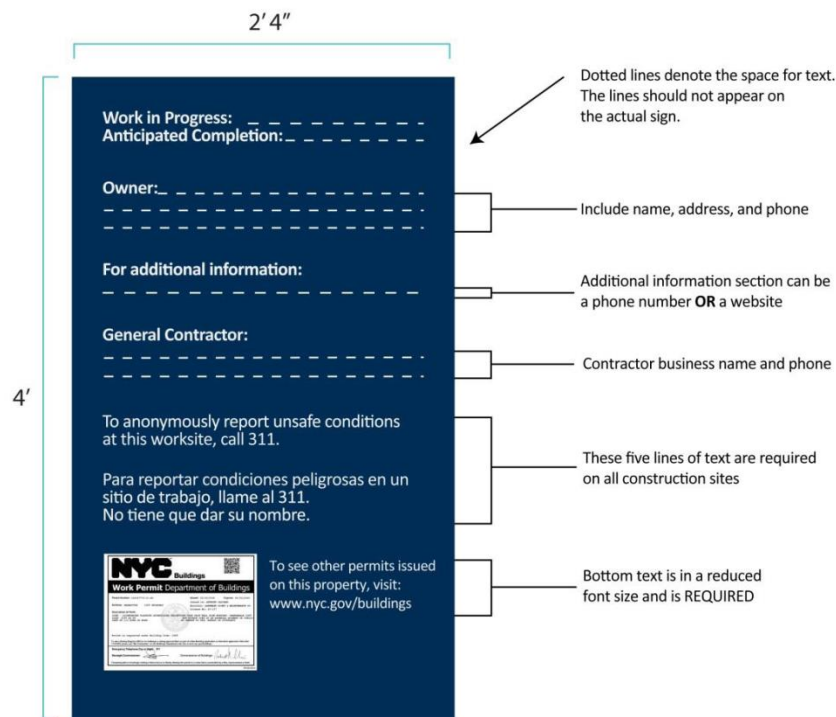


FIGURE 3301.9.1.4(1)
FENCE PROJECT INFORMATION PANEL TEXT DETAIL



FIGURE 3301.9.1.4(2)
FENCE PROJECT INFORMATION PANEL LAYOUT

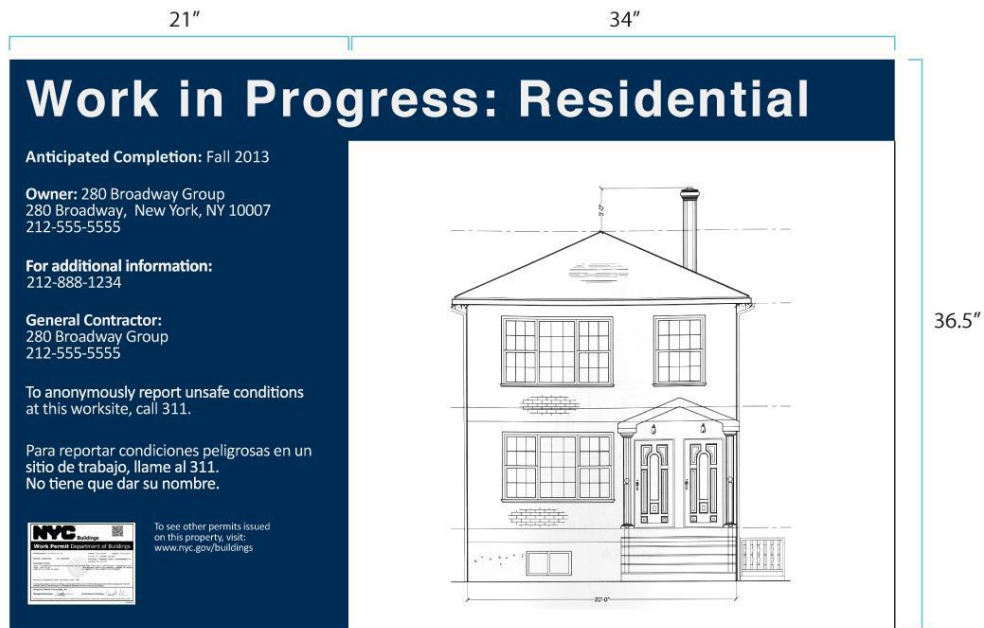


FIGURE 3301.9.1.4(3)
FENCE PROJECT INFORMATION PANEL LAYOUT FOR SMALL LOTS

3301.9.1.5 Updating content. When content required by Section 3301.9.1.1 changes, the project information panel shall be updated.

3301.9.1.6 Maintenance of project information panels. Project information panels shall be maintained so that the panel remains legible, securely attached, and free of sharp edges, protruding nails, or similar hazards. Content required by Section 3301.9.1.1 shall not be obscured by panel attachments, including but not limited to grommets or grommet holes.

3301.9.2 Sidewalk shed parapet panel. Where a sidewalk shed is installed, a sidewalk shed parapet panel meeting the requirements of Sections 3301.9.2.1 through 3301.9.2.6 shall be posted. Required sidewalk shed parapet panels shall be in place throughout the duration that the sidewalk shed remains at the site.

Exceptions:

1. At a site where the sidewalk shed permit was issued or renewed prior to July 1, 2013, signs meeting the requirement of Section 3301.9.4 may be posted in lieu of a sidewalk shed parapet panel. Such signs shall be removed and a sidewalk shed parapet panel in accordance with the requirements of this section installed upon date of the first permit renewal on or after July 1, 2013.
2. Signs posted at construction or demolition sites for one-, two- or three-family dwellings may comply with Section 3301.9.4 in lieu of this section.

3301.9.2.1 Sidewalk shed parapet panel content. Sidewalk shed parapet panels shall comply with the requirements of either section 3301.9.2.1.1 or 3301.9.2.1.2., as applicable:

3301.9.2.1.1 Sidewalk shed parapet panel content for sites not included in a best construction site management program. Sidewalk shed parapet panels not included in a best construction site management program shall contain the following information and be arranged in accordance with Figure 3301.9.2.1(1):

1. The street address of the site;
2. Name (which may incorporate a logo) of the contractor responsible for the site or where there is no contractor, the name (which may incorporate a logo) of the owner of the site; and
3. The statement “For more information, visit www.nyc.gov/buildings.”

3301.9.2.1.2 Sidewalk shed parapet panel content for sites included in a best construction site management program. In addition to the requirements of section 3301.9.2.1.1, for site maintained in accordance with a best construction site management program accepted by the commissioner as set forth in Section 3301.9.2.7, either the name or logo of such program, with the department’s program acceptance logo, may be placed on the sidewalk shed parapet panel in accordance with Figure 3301.9.2.1(2).



FIGURE 3301.9.2.1(1)
SIDEWALK SHED PARAPET PANEL LAYOUT



FIGURE 3301.9.2.1(2)
SIDEWALK SHED PARAPET PANEL LAYOUT FOR ACCEPTED SITE MANAGEMENT PROGRAMS

3301.9.2.2 Posting of sidewalk shed parapet panels. Sidewalk shed parapet panels shall be posted on the parapet that runs along the long axis of the sidewalk shed. Such sign:

1. Shall not be posted above or below the level of the parapet; and
2. Shall be posted at least 3 feet (914 mm) and no more than 6 feet (1828 mm) from the left edge of the sidewalk shed parapet, as viewed from the perspective of an individual on the sidewalk opposite the long axis of the sidewalk shed and facing the sidewalk shed; or
3. Where a project information panel in accordance with Section 3301.9.1 is posted on the fence, the horizontal center of the sidewalk shed parapet panel shall be in line with a vertical plane drawn through the horizontal center of the project information panel and the sidewalk shed parapet shall be posted in accordance with Figure 3301.9.2.2.



FIGURE 3301.9.2.2
PANEL POSTING ELEVATION DIAGRAM

3301.9.2.3 Sidewalk shed parapet panel material. Sidewalk shed parapet panels shall be constructed out of a durable and weatherproof material such as vinyl, plastic, or aluminum, and such material shall be flame retardant in accordance with NFPA 701 or listed under UL 214.

3301.9.2.4 Sidewalk shed parapet panel specifications. Sidewalk shed parapet panels shall be 3 feet (914 mm) high and 6 feet (1829 mm) wide, with the content required by Section 3301.9.2.1 arranged in accordance with Figures 3301.9.2.1(1) or 3301.9.2.1(2). The sign shall have a white background. The content required by item number 1 of Section 3301.9.2.1.1 must be written in Calibri font or similar sans serif font style, and such letters shall be blue color a shade matching Pantone 296, or RGB 15, 43, 84, or CMYK 100, 88, 38, 35.

3301.9.2.5 Updating content. When content required by Section 3301.9.2.1 changes, the sidewalk shed parapet panel shall be updated.

3301.9.2.6 Maintenance of sidewalk shed parapet panels. Sidewalk shed parapet panels shall be maintained so that the panel remains legible, securely attached, and free of sharp edges, protruding nails, or similar hazards. Content required by Section 3301.9.2.1 shall not be obscured by sign attachments, including but not limited to grommets or grommet holes.

3301.9.2.7 Best construction site management program. The department shall have the authority to create standards established by rule for the acceptance of a program that ensures best construction site management practices, and to set forth the basis and process for removal of such acceptance and for the removal of the program's name and logo from the sidewalk shed parapet panel located at a particular site.

3301.9.3 Existing fence signs and signs at construction or demolition sites for one-, two- or three-family dwellings. Where a site is enclosed with a fence in accordance with Section 3307.7, and a project information panel is not required in accordance with Section 3301.9.1, a sign or signs meeting the requirements of Section 3301.9.3.1 through 3301.9.3.3 shall be posted. Required signs shall be in place throughout the duration that the fence remains at the site.

3301.9.3.1 Sign content and posting. One or more signs needed to accommodate the following information shall be posted on the fence on each perimeter fronting a public thoroughfare at a height of no more than 12 feet (3658 mm) above the ground, with such distance measured from the ground to the top of the sign:

1. The name, address, and telephone number of the owner of the property;
2. The name, address, and telephone number of the general contractor, or for a demolition site, the demolition contractor; and
3. The statement, in both English and Spanish, "TO ANONYMOUSLY REPORT UNSAFE CONDITIONS AT THIS WORK SITE THAT ENDANGER WORKERS, CALL 311."

3301.9.3.2 Maintenance of fence signs. Fence signs shall be maintained so that the sign remains legible, securely attached, and free of sharp edges, protruding nails, or similar hazards.

3301.9.3.3 Fence sign specifications. Fence signs shall be constructed of ¾-inch (19 mm) plywood or material of equivalent strength, durability and weatherproofing, including but not limited to sheet metal, aluminum, vinyl, or plastic. The letters on such signs shall be black on a white background. Such signs shall be no larger than that needed to accommodate the information required by Section 3301.9.3.1 in letters no less than 3 inches (76 mm) high.

3301.9.4 Existing sidewalk shed signs and signs at construction or demolition sites for one-, two- or three-family dwellings. Where a sidewalk shed is installed, and a sidewalk shed parapet panel is not required in accordance with Section 3301.9.2, a sign readily visible from the street shall be posted on the parapet that runs along the long axis of the sidewalk shed. Such sidewalk shed sign shall be in place throughout the duration that the sidewalk shed remains at the site. Such sidewalk shed sign shall include:

1. The corporate name, address, and telephone number of the sidewalk shed permit holder;
2. The sidewalk shed permit number; and
3. The expiration date of the sidewalk shed permit.

3301.9.5 Other signs. Signs required by law to be displayed at a construction or demolition site shall be posted within the site, readily visible to workers, and shall not be posted in any location readily visible to the public unless otherwise required by law.

3301.10 Obscured lawful signs. When a protective structure is constructed in accordance with Section 3307, a temporary sign may be posted on such protective structure when the structure is adjacent to any building and obscures from view a lawful and existing sign. The temporary sign shall comply with the following requirements:

1. The temporary sign shall be securely fastened to the face of the protective structure at a location directly in front of such business storefront;
2. No projecting temporary signs shall be permitted, and all temporary signs shall be limited to a maximum height of 4 feet (1219 mm), and when affixed to a sidewalk shed, shall not project above the parapet;
3. No temporary signs shall be permitted on the ends of any protective structure, unless the lawful and existing sign would otherwise be obscured from view by a deck or parapet of a sidewalk shed or bridge; and
4. No temporary signs shall project below the deck of any sidewalk shed.

***3301.11 Site safety orientation and refresher.** Each permit holder at a site that requires a site safety manager, site safety coordinator, or construction superintendent shall ensure that each construction or demolition worker employed or otherwise engaged at such site by the permit holder or performing subcontracted work for or on behalf of such permit holder receives a site safety orientation and refresher in accordance with the requirements of Sections 3301.11.1 through 3301.11.5.

**Section 3301.11 was added by [Local Law 206 of 2017](#). This law has an effective date of May 16, 2017.*

***3301.11.1 Site safety orientation.** Each worker employed or otherwise engaged at such site by the permit holder or performing subcontracted work for or on behalf of such permit holder shall receive a site safety orientation before such worker commences any construction or demolition work at such site.

**Section 3301.11.1 was added by [Local Law 206 of 2017](#). This law has an effective date of May 16, 2017.*

***3301.11.2 Site safety refresher.** Each worker employed or otherwise engaged at such site by the permit holder or performing subcontracted work for or on behalf of such permit holder shall receive a site safety refresher if such worker (i) has performed construction or demolition work at such site for one year or more and (ii) one year or more has elapsed since such worker received a site safety orientation or refresher with respect to such site.

**Section 3301.11.2 was added by [Local Law 206 of 2017](#). This law has an effective date of May 16, 2017.*

***3301.11.3 Site safety orientation and refresher to be conducted by qualified person.** Site safety orientations and refreshers required by this section shall be conducted by a qualified person designated by the permit holder. Such qualified person shall have the ability to communicate with each worker who takes part in such orientation or refresher.

**Section 3301.11.3 was added by [Local Law 206 of 2017](#). This law has an effective date of May 16, 2017.*

***3301.11.4 Site safety orientation and refresher content.** Site safety orientations and refreshers required by this section shall include a review of safety procedures at such site and any hazardous activities to be performed at such site.

**Section 3301.11.4 was added by [Local Law 206 of 2017](#). This law has an effective date of May 16, 2017.*

***3301.11.5 Records.** A record of all orientations conducted for the site shall be maintained by the permit holder and kept at the site. Such record shall include for each such orientation or refresher:

1. The date and time of such orientation or refresher;
2. The name, title and company affiliations of each worker who participated; and
3. The name, title and company affiliation of the qualified person who conducted such orientation or refresher, along with such person's signature.

**Section 3301.11.5 was added by [Local Law 206 of 2017](#). This law has an effective date of May 16, 2017.*

***3301.12 Pre-shift safety meetings.** Each permit holder at a site that requires a site safety manager, site safety coordinator, or construction superintendent shall ensure that each construction or demolition worker employed or otherwise engaged at such site by the permit holder or performing subcontracted work for or on behalf of such permit holder takes part in a safety meeting at the beginning of such worker's shift, but before such worker commences any construction or demolition work in such shift, in accordance with the requirements of Sections 3301.12.1 through 3301.12.3.

Exception: Where other sections of this code or rules promulgated thereunder specify pre-task or pre-shift meetings for specific types of work, those requirements shall instead apply.

**Section 3301.12 was added by [Local Law 204 of 2017](#). This law has an effective date of May 16, 2017.*

***3301.12.1 Pre-shift safety meeting to be conducted by a competent person.** Pre-shift safety meetings shall be conducted at the beginning of each worker's shift, but before such worker commences any construction or demolition work in such shift, by a competent person designated by the permit holder, or where so authorized by the permit holder, by a competent person designated by the subcontractor. Such competent person shall have the ability to communicate with each worker who takes part in such meeting.

**Section 3301.12.1 was added by [Local Law 204 of 2017](#). This law has an effective date of May 16, 2017.*

***3301.12.2 Pre-shift safety meeting content.** The pre-shift safety meeting shall include a review of activities and tasks to be performed during the shift, including specific safety concerns or risks associated with fulfilling such work.

**Section 3301.12.2 was added by [Local Law 204 of 2017](#). This law has an effective date of May 16, 2017.*

***3301.12.3 Records.** The permit holder shall maintain, for each worker, a record of one pre-shift safety meeting per week. Such record shall include for each such meeting:

1. The date and time of each such meeting;
2. The name, title and company affiliation of each worker who participated; and
3. The name, title and company affiliation of the competent person who conducted such meeting, along with such person's signature.

**Section 3301.12.3 was added by [Local Law 204 of 2017](#). This law has an effective date of May 16, 2017.*

***3301.13 Scope.** This section sets forth requirements for construction superintendents at certain construction or demolition sites.

**Section 3301.13 was added by [Local Law 81 of 2017](#). This law has an effective date of November 6, 2017.*

***3301.13.1 Site safety plan.** For jobs that require the designation of a primary construction superintendent pursuant to Section 3301.13.3, a site safety plan that meets the applicable requirements of Article 110 of Chapter 1 of Title 28 of the *Administrative Code* shall be kept on site and made available to the department upon request.

**Section 3301.13.1 was added by [Local Law 81 of 2017](#). This law has an effective date of November 6, 2017.*

***3301.13.2 Definitions.** For the purposes of this section, the following terms shall have the following meanings:

Approved documents. For the purpose of this section, approved documents include construction documents as defined by this code, and any and all documents that set forth the location and entire nature and extent of the work proposed with sufficient clarity and detail to show that the proposed work conforms to the provisions of this code and other applicable laws and rules. In addition to construction documents, such documents include, but are not limited to, shop drawings, specifications, manufacturer's instructions and standards that have been accepted by the design professional of record or such other design professional retained by the owner for this purpose.

Construction superintendent. An individual registered with the department and responsible for all duties as defined in this section.

Job. A design and construction/demolition undertaking consisting of work at one building or structure, as well as related site improvements and work on accessory structures. A job may consist of one or more plan/work applications, and may result in the issuance of one or more permits.

Permit holder. The individual who receives the primary department-issued permit for the job.

**Section 3301.13.2 was added by [Local Law 81 of 2017](#). This law has an effective date of November 6, 2017.*

***3301.13.3 Designation of primary construction superintendent.** The permit holder shall designate a primary construction superintendent, prior to the commencement of work, in a form and manner acceptable to the department, for the following types of jobs:

1. The construction of a new building;
2. The full demolition of an existing building;
3. An alteration to an existing building that involves one or more of the following:
 - 3.1 A vertical enlargement;
 - 3.2 A horizontal enlargement;
 - 3.3 The alteration or demolition of more than 50 percent of the floor area of the building during the course of work over any 12 month period;
 - 3.4 The removal of one or more floors during the course of work over any 12 month period;
 - 3.5 Work that requires a special inspection for underpinning; or
 - 3.6 Work that requires a special inspection for the protection of sides of excavations; or
4. Other jobs that pose an enhanced risk to the public and property, as determined by the commissioner.

Exceptions: Notwithstanding the above, a construction superintendent is not required for:

1. Work listed in Section 3310.1, for which a site safety manager or coordinator must be designated.
2. Work which solely involves the construction of a new 1-, 2-, or 3-family building.

**Section 3301.13.3 was added by [Local Law 81 of 2017](#). This law has an effective date of November 6, 2017.*

***3301.13.4 Change of designation.** The permit holder must immediately notify the department, in a form and manner acceptable to the department, of any permanent change to the primary construction superintendent.

**Section 3301.13.4 was added by [Local Law 81 of 2017](#). This law has an effective date of November 6, 2017.*

***3301.13.5 Alternate construction superintendent.** In the event the primary construction superintendent is temporarily unable to perform their duties, an alternate construction superintendent, designated by the permit holder and acceptable to and acting on behalf of the primary construction superintendent, must fulfill the duties of the primary construction superintendent. In the event that an alternate construction superintendent will be acting in place of the primary construction superintendent for a period longer than two consecutive weeks, the permit holder must notify the department, in a form and manner acceptable to the department, of such change.

**Section 3301.13.5 was added by [Local Law 81 of 2017](#). This law has an effective date of November 6, 2017.*

***3301.13.6 Limitations on the designation of primary or alternate construction superintendents.** An individual may only be designated as a primary or alternate construction superintendent for that number of jobs for which he or she can adequately perform all required duties. No individual may be designated as the primary construction superintendent on more than ten jobs.

**Section 3301.13.6 was added by [Local Law 81 of 2017](#). This law has an effective date of November 6, 2017.*

***3301.13.7 Duties of construction superintendents.** The duties of a construction superintendent shall include:

1. Acting in a reasonable and responsible manner to maintain a safe job site and assure compliance with this chapter and any rules promulgated thereunder at each job site for which the construction superintendent is responsible;
2. To the extent that a registered design professional or special inspection agency is not responsible, the construction superintendent must assure compliance with the approved documents at each job site for which the construction superintendent is responsible;
3. Fulfilling the duties of a superintendent of construction assigned by Chapter 1 of Title 28 of the *Administrative Code* at each job site for which the construction superintendent is responsible; and
4. Visiting each job site for which the construction superintendent is responsible each day when active work is occurring.

Exception: The construction superintendent is not required to be present at the site during the following activities, provided no other work is in progress:

1. Surveying that does not involve the disturbance of material, structure, or earth;
2. Use of a hoist to transport personnel only;
3. Use of a material hoist that is fully enclosed within the perimeter of the building;
4. Finish trowelling of concrete floors;
5. When personnel are provided for temporary heat, light, or water; or
6. Truck deliveries to the site where the sidewalk is closed and the entrance gate is within that closed sidewalk area.

**Section 3301.13.7 was added by [Local Law 81 of 2017](#). This law has an effective date of November 6, 2017.*

***3301.13.8 Inspection.** Each time the construction superintendent visits a job site for which he or she is responsible, the construction superintendent must inspect all areas and floors where construction or demolition work, and ancillary activity, is occurring, and:

1. Verify work is being conducted in accordance with sound construction/demolition practices;
2. Verify compliance with the approved documents; and
3. Verify compliance with this section and any rules promulgated thereunder.

**Section 3301.13.8 was added by [Local Law 81 of 2017](#). This law has an effective date of November 6, 2017.*

***3301.13.9 Correcting unsafe conditions.** In the event the construction superintendent discovers work at a job site for which he or she is responsible that is not being conducted in accordance with sound construction/demolition practices, not in compliance

with approved documents, or not in compliance with this section and any rules promulgated thereunder, the construction superintendent must immediately notify the person or persons responsible for creating the unsafe condition, order the person or persons to correct the unsafe condition, and take all appropriate action to ensure the unsafe condition is corrected. Where an unsafe condition relates to an item which a registered design professional or special inspection agency is responsible for implementing or verifying, the construction superintendent must also notify the responsible registered design professional or special inspection agency of the unsafe condition. All such unsafe conditions, notices, orders, and corrective work must be recorded in the log required by Section 3301.13.13.

**Section 3301.13.9 was added by [Local Law 81 of 2017](#). This law has an effective date of November 6, 2017.*

***3301.13.10 Notification of conditions to the department.** The construction superintendent must immediately notify the department, in a form and manner acceptable to the department, when he or she discovers, at any job site for which the construction superintendent is responsible, any of the conditions listed in Section 3310.8.2.1. Notification to the department does not relieve the construction superintendent of their obligations under Section 3301.13.9.

**Section 3301.13.10 was added by [Local Law 81 of 2017](#). This law has an effective date of November 6, 2017.*

***3301.13.11 Reporting of accidents and damage to adjoining property.** The construction superintendent must immediately notify the department, in a form and manner acceptable to the department, of any accident at any job site for which the construction superintendent is responsible, or any damage to adjoining property caused by construction or demolition activity at the job site.

**Section 3301.13.11 was added by [Local Law 81 of 2017](#). This law has an effective date of November 6, 2017.*

***3301.13.12 Competent person.** The construction superintendent must designate a competent person for each job site for which the construction superintendent is responsible and ensure such competent person is present at the designated job site at all times active work occurs. The designation of a competent person does not alter or diminish any obligation imposed upon the construction superintendent. The competent person must carry out orders issued by the construction superintendent; be able to identify unsanitary, hazardous or dangerous conditions; take prompt corrective measures to eliminate such conditions; immediately report to the construction superintendent accidents at the job site or any damage to adjoining property caused by construction or demolition activity at the job site; and be able to effectively communicate workplace instructions and safety directions to all workers at the site.

**Section 3301.13.12 was added by [Local Law 81 of 2017](#). This law has an effective date of November 6, 2017.*

***3301.13.13 Log.** The construction superintendent must maintain a log at each job site for which the construction superintendent is responsible. Such log must be made available to the commissioner upon request. The construction superintendent must complete such log prior to departing the job site and shall sign and date each day's log entry. Such log must be organized and recorded in a form and manner acceptable to the department. Such log must contain, at a minimum, the following information:

1. The presence of the construction superintendent at the job site as evidenced by their printed name and signature and a notation indicating the times of arrival at, and departure from the site, which must be recorded immediately after arriving at the site and immediately prior to leaving the site, respectively;
2. The general progress of work at the site, including a summary of that day's work activity;
3. The construction superintendent's activities at the site, including areas and floors inspected;
4. Any unsafe condition(s) observed pursuant to Section 3301.13.9, and the time and location of such unsafe condition(s);
5. Orders and notice given by the construction superintendent pursuant to Section 3301.13.9, including the names of individuals issued orders or notices, any refusals to comply with orders or respond to notices given, follow up action taken by the construction superintendent, and where the condition giving rise to the order or notice is corrected, the nature of the correction;
6. Any violations, stop work orders, or summonses issued by the department, including date issued and date listed or dismissed;
7. Any accidents; and
8. The name of the competent person designated in accordance with Section 3301.13.12, along with an accompanying signature of the competent person. If the construction superintendent assigns a new competent person, the date and time of this change, along with the name of the new competent person, the date and time of this change, along with the name of the new competent person, must be recorded, accompanied by the signature of the new competent person. If the construction superintendent is not at the site when this occurs, the new competent person must instead make the log entry, which the construction superintendent must sign and date upon his or her next visit to the job site.

**Section 3301.13.13 was added by [Local Law 81 of 2017](#). This law has an effective date of November 6, 2017.*

***3301.13.14 Disciplinary actions.** Construction superintendents are subject to the provisions of Section 28-401.19 of the *Administrative Code*.

**Section 3301.13.14 was added by [Local Law 81 of 2017](#). This law has an effective date of November 6, 2017.*

***3301.13.15 Cooperation required.** Construction superintendents must comply with the provisions of Section 28-401.20 of the *Administrative Code*.

**Section 3301.13.15 was added by [Local Law 81 of 2017](#). This law has an effective date of November 6, 2017.*

***3301.13.16 Obligation of others.** Nothing in this rule is intended to alter or diminish any obligation otherwise imposed by law on others, including but not limited to, the owner, permit holder, construction manager, general contractor, contractor, materialman, architect, engineer, land surveyor, or other party involved in a construction project to engage in sound engineering, design, and construction practices, and to act in a reasonable and responsible manner to maintain a safe job site.

**Section 3301.13.16 was added by [Local Law 81 of 2017](#). This law has an effective date of November 6, 2017.*

***3301.13.17 Registration and qualifications of construction superintendents.** Construction superintendents shall register with the department, in a form and manner acceptable to the department, and shall meet any qualifications set forth in rules by the department.

**Section 3301.13.17 was added by [Local Law 81 of 2017](#). This law has an effective date of November 6, 2017.*

SECTION BC 3302 DEFINITIONS

3302.1 Definitions. The following words and terms shall, for the purposes of this chapter, have the following meanings.

***100-HOUR TRAINING PROGRAM.** A program that (i) includes 100 or more hours of training in technical subjects relating to a construction trade, including an apprenticeship program registered with the New York State Department of Labor, (ii) is approved by OSHA, the United States Department of Labor, the New York State Department of Education or the New York State Department of Labor and (iii) provides training that the department determines is equivalent to or exceeds the training required to comply with Section 3321.

**Section 3302.1 was amended by [Local Law 196 of 2017](#). This law has an effective date of October 16, 2017.*

ACCIDENT. An occurrence directly caused by construction or demolition activity or site conditions that result in one or more of the following:

1. A fatality to a member of the public; or
2. Any type of injury to a member of the public; or
3. A fatality to a worker; or
4. An injury to a worker that requires transport by emergency medical services or requires immediate emergency care at a hospital or offsite medical clinic; or
5. Any complete or partial structural collapse or material failure; or
6. Any complete or partial collapse or failure of pedestrian protection, scaffolding, hoisting equipment, or material handling equipment; or
7. Any material fall exterior to the building or structure.

***ACTIVELY PROCTORED ONLINE TRAINING.** Online training that satisfies each of the following conditions:

1. The person responsible for conducting such training confirms the identification of the person taking such training in a manner established by the department.
2. While such training is being conducted, the site of such training is actively observed by or on behalf of the person responsible for conducting such training.
3. Such training complies with any other requirements the department establishes by rule.

**Section 3302.1 was amended by [Local Law 196 of 2017](#). This law has an effective date of October 16, 2017.*

ADJUSTMENT (SCAFFOLD). The calibration or modification of a scaffold, including any part or component, that does not

meet the definition of installation, removal, repair, maintenance, or use, and does not constitute normal use or operation of the scaffold.

ALTERATION. See Section 28-101.5 of the *Administrative Code*.

ARCHITECT. See Section 28-101.5 of the *Administrative Code*.

ARTICULATING BOOM CRANE. A power-operated machine for lifting or lowering a load and moving it horizontally that utilizes a boom consisting of a series of folding pin connected structural members, typically manipulated to extend or retract by power from hydraulic cylinders, with or without a hoisting mechanism integral to the machine.

AXIS OF ROTATION. The vertical axis around which the crane superstructure rotates.

AXLE. The shaft or spindle with which or about which a wheel rotates. On truck and wheel mounted cranes, it refers to an automotive type of axle assembly, including housing, gearing, differential, bearings and mounting appurtenances.

BASE (MOUNTING). The base or carrier on which the rotating superstructure is mounted, such as a truck, crawler or platform.

BEARER (PUTLOG). A horizontal transverse scaffold member (which may be supported by legs or runners) upon which the scaffold platform rests and joins scaffold uprights, posts, poles, and similar members.

BOOM. A section or strut, of which the heel (lower end) is affixed to a base, carriage or support, and whose upper end supports a cable and sheaves where the load is lifted by means of wire rope and a hook.

BOOM POINT. The outward end of the top section of the boom, containing the hoist sheave assembly.

BRAKE. A device used for retarding or stopping motion by friction or power means.

BUCKET HOIST. A power- or manually operated suspended bucket contained by guide rails used for raising or lowering material, exclusively and is controlled from a point outside the conveyance.

CABLEWAY. A power-operated system for moving loads in a generally horizontal direction in which the loads are conveyed on an overhead cable, track or carriage.

CERTIFICATE OF APPROVAL. A certificate issued by the department upon review and approval of the engineering and testing of a specific make and model of hoisting equipment to ensure compliance with the applicable provisions of this code and its referenced standards.

CERTIFICATE OF OPERATION. A certificate issued by the department annually upon satisfactory inspection of the hoisting equipment holding a certificate of approval to ensure that the equipment continues to be in compliance with this code and its referenced standards.

CERTIFICATE OF ON-SITE INSPECTION. A certificate issued by the department based on a site-specific approval of the placement, founding and operation of hoisting equipment.

CLAMSHELL. A shovel bucket with two jaws that clamp together by their own weight when it is lifted by a closing line.

CLIMBING/JUMPING. The raising or lowering of a tower or climber crane to different floors or levels of a building or structure.

COMMERCIAL TRUCK MOUNTED CRANE (BOOM TRUCK). A crane consisting of a rotating superstructure (center post or turntable), boom, operating machinery, and one or more operator's stations mounted on a frame attached to a commercial truck chassis, usually retaining a payload hauling capability whose power source usually powers the crane. Its function is to lift, lower, and swing loads at various radii.

COMPETENT PERSON. One who is capable of identifying existing predictable hazards in the surroundings or conditions that are unsanitary, hazardous or dangerous, and who has authorization to take prompt corrective measures to eliminate such hazards.

CONCRETE WASHOUT WATER. Wastewater from the rinsing of equipment used to mix, transport, convey, and/or place concrete. Such equipment shall include, but not be limited to, concrete buckets, concrete hose lines and pumps, boots, shovels, finishing tools, wheelbarrows, motorized concrete carts, concrete pour funnels and the chute of concrete mixer trucks.

Exceptions:

1. This term shall not include wastewater from the rinsing of equipment involved in the preparation, conveyance or application of concrete that is:
 - 1.1. mixed on site if the total quantity of concrete is less than or equal to one and one half cubic yards (1.146m³), or

- 1.2. from bagged ready mix if the total quantity of concrete is less than or equal to sixty (60) eighty pound (36.287 kg) bags, or eighty (80) sixty pound (27.215 kg) bags, or the equivalent.

2. This term shall not include wastewater from the rinsing of the wheels, undercarriage or chassis of concrete mixer trucks.

CONSTRUCTION. The excavation, erection, alteration, and repair of buildings or any component parts, including all operations incidental thereto.

CORNER SCAFFOLD (ANGLE SCAFFOLD). A suspended scaffold consisting of an assembly of two or more platforms connected nonlinearly and designed and manufactured to fit around a corner or a projecting part of a building.

COUNTERWEIGHT. Weight used to supplement the weight of the machine in order to provide stability for lifting loads.

CRANE. A power-operated machine for lifting or lowering a load and moving it horizontally which utilizes wire rope and in which the hoisting mechanism is an integral part of the machine. The definition of a crane shall also include articulating boom crane, regardless of whether it has a hoisting mechanism integral to the machine.

CRAWLER CRANE. A crane consisting of a rotating superstructure with a power plant, operating machinery, and boom, mounted on a base and equipped with crawler treads for travel. Its function is to lift, lower, and swing loads at various radii.

CRITICAL PICK. The attachment and detachment of loads from the hook of hoisting equipment used to hoist or lower loads on the outside of a building that involves one or more of the following:

1. An article that is at or above 95 percent of approved rated capacity of the hoisting equipment or rigging equipment;
2. An article that is asymmetrical and is not provided with standard rigging ears;
3. An article that has a wind sail area exceeding 500 square feet (46 m²);
4. A pick that may present an added risk because of clearance, drift, or other interference;
5. An article that is fragile or of thin shell construction and is not provided with standard rigging ears;
6. A pick that requires multiple power-operated hoisting equipment (tandem pick); or
7. A pick that requires out of the ordinary rigging equipment, methods, or setup.

DEBRIS. Rubbish, waste, discarded material, or the remains of something broken down, demolished, or destroyed.

DEBRIS NET or NETTING. A netting of a fine mesh of a size and strength sufficient to catch debris, such as falling tools and materials.

DEMOLITION. Full or partial demolition.

Full demolition. The dismantling, razing, or removal of all of a building or structure, including all operations incidental thereto.

Partial demolition. The dismantling, razing, or removal of structural members, floors, interior bearing walls, and/or exterior walls or portions thereof, including all operations incidental thereto.

DERRICK. An apparatus consisting of a mast or equivalent member held at the end by guys or braces, with or without a boom, for use with a hoisting mechanism and operating ropes, for lifting or lowering a load and moving it horizontally.

DEWATERING. The removal of surface or ground water from a site by pumping or evaporation.

DIRECT AND CONTINUING SUPERVISION. See Section 28-401.3 of the *Administrative Code*.

DIRECT EMPLOY. See Section 28-401.3 of the *Administrative Code*.

DISMANTLING. The final process of taking apart, piece by piece, in a specific sequence, the components of a crane. Dismantling shall include climbing and jumping.

DRUM. The cylindrical member around which a rope is wound for raising and lowering the load or boom.

ENGINEER. See Section 28-101.5 of the *Administrative Code*.

EQUIPMENT. Implements used to facilitate construction or demolition work.

ERECTION. The assembly and placement of crane sections and components into place, including all operations incidental thereto. Erection shall include climbing and jumping.

EXCAVATION. The removal of earth from its natural position; except for any incidental removal that occurs during the course of auguring, drilling, vibrating, or driving.

GUARDRAIL SYSTEM (SCAFFOLD). A vertical barrier as described in Section 3314.8 consisting of, but not limited to, toprails, midrails and posts, erected to prevent falling from a scaffold platform or walkway to lower levels.

GUY. A rope used to steady or secure the mast or other members in the desired position.

HANDHELD DEVICE (DEMOLITION). Equipment, mechanical or nonmechanical, utilized to physically demolish a building or structure, or elements of a building or structure, that is held, lifted, moved, and operated by a single person. A handheld device shall also include any item accessory to such equipment, including but not limited to a compressor, regardless of if such accessory item is held, lifted, moved, and operated by a single person. A handheld device does not include remote controlled equipment.

HEAVY DUTY SCAFFOLD. A supported scaffold capable of supporting loads of up to 75 pounds per square foot (366.15 kg/m²), and not more than those imposed by workers and heavy material, including but not limited to stone.

HEAVY DUTY SIDEWALK SHED. A sidewalk shed designed to carry a live load of at least 300 pounds per square foot (1465 kg/m²).

HISTORIC STRUCTURE. A building or structure which is a designated New York City landmark or interior landmark, is located within a designated New York City historic district, or is listed on the New York State or National Register of Historic Places.

HOISTING EQUIPMENT. Equipment used to raise and lower personnel and/or material with intermittent motion. Hoisting equipment does not include scaffolds, mast climbers, and elevators.

HOISTING MACHINE. A power operated machine used for lifting or lowering a load, utilizing a drum and a wire rope, excluding elevators. This shall include but not be limited to a crane, derrick, cableway and hydraulic lifting system, and articulating booms.

HOISTING MECHANISM. A hoist drum and rope reeving system used for lifting and lowering loads.

INDUSTRIAL ROPE ACCESS. The use of rope access equipment in which a person descends or ascends on a rope, or traverses along a rope, and in which the ropes are used as the primary means of support and positioning. Industrial rope access does not include window washing.

INSTALLING/INSTALLATION/INSTALL (SCAFFOLD). The initial installation or reinstallation of a scaffold at a site.

Initial installation (scaffold). The initial assembly, set-up, or placement of a scaffold at a site.

Reinstallation (scaffold). The addition, relocation, or removal of any part, component, or attachment to a scaffold at a site, including but not limited to counterweights, tie-backs, anchorages, or connections to the building or structure, that occurs subsequent to the initial installation, and which does not otherwise occur in an automated, automatic fashion, as part of the normal use of the scaffold.

JIB. An extension attached to the boom point to provide added boom length for lifting specified loads. The jib may be in line with the boom or offset to various angles in the vertical plane of the boom.

JUMP (JUMPING). The process of adding or removing mast or tower sections to equipment that has already been erected.

LAY. That distance measured along a wire rope in which one strand makes one complete helical convolution about the core or center.

LIGHT DUTY SCAFFOLD. A supported scaffold capable of supporting loads of up to 25 pounds per square foot (122.05 kg/m²), and not more than those imposed by workers and lightweight material, including but not limited to wood or paint.

LIGHT DUTY SIDEWALK SHED. A sidewalk shed designed to carry a live load of at least 150 pounds per square foot (732.3 kg/m²).

***LIMITED SITE SAFETY TRAINING (SST) CARD.** A card that is issued before the SST full compliance date, in a form and manner established by the department and that satisfies each of the following conditions:

1. Such card is issued by an SST provider to a person who submits an application to such provider demonstrating, in a form and manner established by the department, that such applicant satisfies the requirements of Item 1.1, 1.2 or 1.3:

- 1.1. Such applicant has successfully completed (i) an OSHA 10-hour class and (ii) 20 additional SST credits specified by the department, including eight SST credits relating to safeguarding against the dangers posed by falling workers and objects.
- 1.2. Such applicant has successfully completed an OSHA 30-hour class.
- 1.3. Such applicant has successfully completed a 100-hour training program.
2. If such applicant completed the training to comply with Item 1.1, 1.2 or 1.3 but did not complete such training within the five years preceding the submission of such application, such applicant has, in the one-year period preceding submission of such application, completed at least eight SST credits specified by the department.
3. Such card is issued by an SST provider who does not require applicants to submit any information except for (i) the information necessary to establish that the requirements in Item 1 have been satisfied, as specified by the department, (ii) a photograph of the applicant and (iii) such additional information as the department may allow by rule.
4. Such card expires on the day before the SST full compliance date and is not renewable.

**Section 3302.1 was amended by [Local Law 196 of 2017](#). This law has an effective date of October 16, 2017.*

LOAD (WORKING). The external load, in pounds (kilograms), applied to the crane or derrick, including the weight of auxiliary load attaching equipment, such as lower load blocks, shackles and slings.

LOAD RATINGS. Crane and derrick ratings in pounds (kilograms) established by the manufacturer in accordance with standards set forth in rules promulgated by the commissioner.

LOAD RATING CHART. A full and complete range of manufacturer's crane load ratings at all stated operating radii, boom angles, work areas, boom lengths and configurations, jib lengths and angles (or offset), as well as alternative ratings for use and nonuse of optional equipment on the crane, such as outriggers and extra counterweights, that affect ratings.

LOWER LOAD BLOCK. The assembly of hook or shackle, swivel, sheaves, pins and frame suspended by the hoisting ropes.

MAINTENANCE (SCAFFOLD). Regular or periodic upkeep as specified by the manufacturer to keep the scaffold, including all parts or components, in like new condition and safe working order, and that does not otherwise meet the definition of an installation, removal, or repair.

MAJOR BUILDING. An existing or proposed building 10 or more stories or 125 feet (38 100 mm) or more in height, or an existing or proposed building with a building footprint of 100,000 square feet (30 480 m²) or more regardless of height, or an existing or proposed building so designated by the commissioner due to unique hazards associated with the construction or demolition of the structure.

***MANUFACTURE DATE (Crane).** For a particular crane, the earlier of the following dates:

1. The date the crane was originally manufactured for its intended purpose.
2. The date that the oldest major component of the crane was originally manufactured.

**Section 3302.1 was amended by [Local Law 3 of 2018](#). This law has an effective date of January 1, 2019.*

MAST CLIMBER. A powered device consisting of an elevating platform mounted on a base or chassis and mast, that when erected is capable of supporting personnel, material, equipment and tools on a deck or platform that is capable of traveling vertically in infinitely adjustable increments to reach the desired work level.

MATERIAL HANDLING EQUIPMENT. A power or manually operated platform, bucket, car or cage that moves horizontally and is mainly used for transporting material during construction, alteration, repair or demolition of a building or structure.

MATERIAL HOIST (MATERIAL HOISTING EQUIPMENT). A power or manually operated platform, bucket, car or cage that moves vertically and is used for raising or lowering material exclusively during construction, alteration, repair or demolition of a building or structure, and is controlled from a point outside the conveyance.

MECHANICAL DEMOLITION EQUIPMENT. Mechanically driven or powered equipment that is utilized to physically demolish a building or structure, or elements of a building or structure, either within or exterior to the building or structure, or that is utilized to move debris or material within the building or structure. Mechanical demolition equipment shall not include mechanically driven or powered equipment that is utilized to move debris or material outside of the building or structure.

MEDIUM DUTY SCAFFOLD. A supported scaffold capable of supporting loads of up to 50 pounds per square foot (244.1 kg/m²), and not more than those imposed by workers and moderate material, including but not limited to brick and pipe.

MINOR ALTERATIONS. See Section 105.4.2 of the *Administrative Code*.

MOBILE CRANE. A commercial truck mounted crane, crawler crane, wheel mounted crane (multiple control stations), or wheel mounted crane (single control station).

MOBILE SCAFFOLD. A powered or unpowered, portable, caster, track or wheel-mounted supported scaffold.

MULTIPOINT ADJUSTABLE SUSPENDED SCAFFOLD. A suspended scaffold consisting of a platform(s) that is suspended by more than two ropes from overhead supports and equipped with a means to raise and lower the platform to the desired work levels.

ORDINARY REPAIRS. See Section 105.4.2 of the *Administrative Code*.

***OSHA 10-HOUR CLASS.** A class that includes 10 or more hours in construction industry safety and health that is intended for workers and satisfies the following conditions:

1. Such class is (i) approved by OSHA and conducted in accordance with the OSHA outreach training program or (ii) an equivalent 10 or more hour class approved by the department.
2. Such class consists of in-person training, actively proctored online training or, if such training is conducted before the effective date of the local law that added this definition, online training.

**Section 3302.1 was amended by [Local Law 196 of 2017](#). This law has an effective date of October 16, 2017.*

***OSHA 30-HOUR CLASS.** A class that includes 30 or more hours in construction industry safety and health that is intended for supervisors and satisfies the following conditions:

1. Such class is (i) approved by OSHA and conducted in accordance with the OSHA outreach training program or (ii) an equivalent 30 or more hour class approved by the department.
2. Such class consists of in-person training, actively proctored online training or, if such training is conducted before the effective date of the local law that added this definition, online training.

**Section 3302.1 was amended by [Local Law 196 of 2017](#). This law has an effective date of October 16, 2017.*

OUTRIGGER (CRANE). Extendable or fixed members attached to the mounting base that rest on supports at the outer ends used to support the crane.

OUTRIGGER (SCAFFOLD). The structural member of a supported scaffold used to increase the base width of a scaffold in order to provide support for and increased stability of the scaffold.

OUTRIGGER BEAM (THRUSTOUT). The structural member of a suspended scaffold or outrigger scaffold that provides support for the scaffold by extending the scaffold point of attachment to a point out and away from the structure or building.

OUTRIGGER SCAFFOLD. A supported scaffold consisting of a platform resting on outrigger beams (thrustouts) projecting beyond the wall or face of the building or structure, the inboard ends of which are secured inside the building or structure.

PERSONNEL HOIST. A mechanism and its hoistway, equipped with a car that moves vertically on guide members, used for hoisting or lowering workers or workers and materials for the construction, alteration, or demolition of a building, structure, or other work.

PLATFORM. A work surface elevated above lower levels. Platforms can be constructed using individual wood planks, fabricated planks or fabricated decks.

POWER BUGGIES. An automotive vehicle designed or used for the transportation of materials on or about construction or demolition sites. It shall not include automobiles, motor trucks, general purpose tractors, or excavating or material handling machinery.

QUALIFIED PERSON. A person who by possession of a recognized degree, certificate or professional standing, or who by knowledge, training and experience, has demonstrated his or her ability to solve or resolve problems related to the subject matter, the work or the project.

REGISTERED DESIGN PROFESSIONAL. An architect or engineer.

REMOVING/REMOVAL/REMOVE (SCAFFOLD). The final process of taking apart a scaffold in a specific sequence and removing it from the site.

REPAIR (SCAFFOLD). Work performed to restore a scaffold, or any part or component, to like new condition and safe working

order following decay, wear, or damage. The definition of repair shall also include the replacement of a part or component.

REPLACEMENT (SCAFFOLD). A repair involving the exchange or substitution of one part or component with another identical or similar part or component in order to restore a scaffold, or any part or component, to like new condition and safe working order following decay, wear, or damage.

ROPE. A continuous line of material comprised of a number of twisted or braided strands of fiber (natural or synthetic) or metal wire.

RUNBACK STRUCTURE. A temporary system of hoistway landing runways, vertical supports and horizontal diaphragms designed to bridge between the hoistway and the parent structure and to transmit both vertical and horizontal loads to the supporting structure and/or foundation.

SAFETY NETTING SYSTEM. Debris or structural nets, installed vertically or horizontally, along with all supports, components, and connections.

Horizontal safety netting. A safety netting system, installed horizontally, consisting of structural netting lined with debris netting.

Vertical safety netting. A safety netting system, installed vertically, consisting of debris netting.

SCAFFOLD. Any temporary elevated platform and its supporting structure (including points of anchorage) used for supporting workers or workers and material, including but not limited to supported scaffolds, suspended scaffolds, and mobile scaffolds.

SCAFFOLD CONTROLLING ENTITY. The contractor or other entity that exercises responsibility for the site where the scaffold is located.

SINGLE-POINT ADJUSTABLE SUSPENDED SCAFFOLD. A suspended scaffold consisting of a platform suspended by one rope from an overhead support and equipped with means to permit the movement of the platform to desired work levels.

***SITE SAFETY TRAINING (SST) CARD.** A card that is issued in a form and manner established by the department and that satisfies each of the following conditions:

1. Such card is issued by an SST provider to a person who submits an application to such provider demonstrating, in a form and manner established by the department, that such applicant satisfies the requirements of Item 1.1, 1.2 or 1.3:
 - 1.1. Such applicant has successfully completed (i) an OSHA 10-hour class and (ii) 30-45 additional SST credits specified by the department, including eight SST credits relating to safeguarding against the dangers posed by falling workers and objects.
 - 1.2. Such applicant has successfully completed (i) an OSHA 30-hour class and (ii) 10-25 additional SST credits specified by the department, including eight SST credits relating to safeguarding against the dangers posed by falling workers and objects.
 - 1.3. Such applicant has successfully completed a 100-hour training program.
2. If such applicant completed the training to comply with Item 1.1, 1.2 or 1.3 but did not complete such training within the five years preceding submission of such application, such applicant has, in the one-year period preceding submission of such application, completed at least eight SST credits specified by the department.
3. Such card is issued by an SST provider who does not require applicants to submit any information except for (i) the information necessary to establish that the requirements in Item 1 have been satisfied, as specified by the department, (ii) a photograph of the applicant and (iii) such additional information as the department may allow by rule.
4. Such card expires five years after issuance and is renewable upon a showing by the applicant that such applicant has, in the one-year period preceding submission of such renewal application, successfully completed eight SST credits specified by the department.

**Section 3302.1 was amended by [Local Law 196 of 2017](#). This law has an effective date of October 16, 2017.*

***SITE SAFETY TRAINING (SST) CREDIT.** One hour of training that satisfies each of the requirements of Item 1, 2 and 3:

1. Such training relates to a topic identified by department rule.
2. If such training is conducted on or after the effective date of the local law that added this definition, such training is in-person training or actively proctored online training.

3. If such training is conducted on or after March 1, 2018, such training is conducted by an SST provider.

**Section 3302.1 was amended by [Local Law 196 of 2017](#). This law has an effective date of October 16, 2017.*

****SITE SAFETY TRAINING (SST) FULL COMPLIANCE DATE.** September 1, 2020.

**Section 3302.1 was amended by [Local Law 196 of 2017](#). This law has an effective date of October 16, 2017.*

***Section 3302.1 was amended by [Local Law 119 of 2019](#). This law has an effective date of June 8, 2019.*

***SITE SAFETY TRAINING (SST) PROVIDER.** A person who satisfies the requirements of Items 1 and 2:

1. Such person satisfies at least one of the following conditions:
 - 1.1. Such person has (i) successfully completed all applicable OSHA or department requirements for conducting OSHA 10-hour classes and OSHA 30-hour classes and is authorized to conduct such classes and (ii) if such person is conducting training for SST credits other than training that is part of an OSHA 10-hour class or OSHA 30-hour class, such person demonstrates sufficient knowledge of this chapter in a form and manner established by the department. Such person shall not be required to possess a degree, certificate, license or demonstrate any professional standing beyond showing that such person has completed all applicable OSHA or department requirements for conducting OSHA 10-hour classes and OSHA 30-hour classes and that such person is authorized to conduct such classes.
 - 1.2. Such person is providing training through a 100-hour training program.
 - 1.3. Such person has been approved by the department to conduct a 40-hour course approved by the department pursuant to Article 402 of Chapter 4 of Title 28 of the *Administrative Code*.
 - 1.4. Such person satisfies alternative requirements that the department establishes by rule.
2. On and after the SST full compliance date, such person has certified to the department that such person satisfies at least one of the following conditions:
 - 2.1. Such person has a language access plan for training that relates to SST credits such person offers and such plan complies with requirements established by an agency or office designated by the mayor.
 - 2.2. Such person satisfies each of the following conditions:
 - 2.2.1. Such person is able to provide instruction in a language that students understand.
 - 2.2.2. If a student's vocabulary is limited, such person will accommodate that limitation.
 - 2.2.3. Such person is fluent in the training language or will use translators or interpreters and any such translators or interpreters will have a background in occupational safety or health.

**Section 3302.1 was amended by [Local Law 196 of 2017](#). This law has an effective date of October 16, 2017.*

****SITE SAFETY TRAINING (SST) SECOND COMPLIANCE DATE.** December 1, 2019 or, if the department publishes a finding by September 1, 2019 that there is insufficient capacity to provide the training required by Section 3321 of the New York city building code to the workers who would need such training, a later date established by the department, provided that such date is not later than June 1, 2020.

**Section 3302.1 was amended by [Local Law 196 of 2017](#). This law has an effective date of October 16, 2017.*

***Section 3302.1 was amended by [Local Law 119 of 2019](#). This law has an effective date of June 8, 2019.*

***SITE SAFETY TRAINING (SST) SUPERVISOR CARD.** A card that satisfies each of the following conditions:

1. Such card is issued in a form and manner established by the department to a person who demonstrates that such person has an SST card and has successfully completed an OSHA 30-hour class.
2. Such card expires five years after issuance and is renewable upon a showing by the applicant that such applicant has, in the one-year period preceding such submission of such renewal application, successfully completed 16 SST credits specified by the department.

**Section 3302.1 was amended by [Local Law 196 of 2017](#). This law has an effective date of October 16, 2017.*

***SITE SAFETY TRAINING (SST) TASK FORCE.** The task force established pursuant to Section 28-103.28 of the

Administrative Code.

**Section 3302.1 was amended by [Local Law 196 of 2017](#). This law has an effective date of October 16, 2017.*

SOIL AND FOUNDATION WORK (SOIL OR FOUNDATION WORK). Excavation, fill, grading, augering, or drilling, whether in soil or rock; or the installation or removal of foundations, piles, underpinning, sheeting, shoring, or supports of excavation.

STANDARD GUARDRAIL SYSTEM (SCAFFOLD). See “Guardrail system (scaffold).”

STRIPPING OPERATIONS. Removal on the floor of any parts of the concrete formwork including shoring, bracing and other supports.

STRUCTURAL NET (STRUCTURAL NETTING). A system of nets capable of complying with the prototype test described in ANSI A10.11.

SUPERSTRUCTURE. The rotating upper frame structure of the machine and the operating machinery mounted thereon.

SUPPORTED SCAFFOLD. One or more platforms supported by outrigger beams, brackets, poles, legs, uprights, posts, frames, including prefabricated frames that are mechanized but not motorized, or any similar rigid support, including back structures connecting hoistways to buildings, and including structures where sidewalk protection is constructed as an integral part of the apparatus.

SUSPENDED SCAFFOLD. One or more platforms suspended by ropes or other means from an overhead structure.

SUSPENDED SCAFFOLD FOREMAN. An individual, male or female, designated by and working under the direct and continuing supervision of a licensed master or special rigger, or a licensed master or special sign hanger, in accordance with the rules of the department.

SUSTAINED WIND. Winds with a 1 minute average duration lasting for a 1-hour period or longer.

SWING. Rotation of the superstructure for movement of loads in a horizontal direction about the axis of rotation.

TEMPORARY CONSTRUCTION. Bracing, shoring, or other elements not part of the permanent structure and which are installed to facilitate construction or demolition work.

***TEMPORARY SITE SAFETY TRAINING (SST) CARD.** A card that is issued in a form and manner established by the department and that satisfies each of the following conditions:

1. Such card is issued by an SST provider to a person who demonstrates that such person has successfully completed an OSHA 10-hour class and who is a new entrant to the construction or demolition work force as determined by such provider pursuant to department rules.
2. Such card expires six months after issuance and is not renewable.

**Section 3302.1 was amended by [Local Law 196 of 2017](#). This law has an effective date of October 16, 2017.*

TOOL. See “Equipment.”

TOWER. A vertical structural frame consisting of columns and bracing that are capable of supporting working and dynamic loads and transmitting them to the support(s).

TOWER CRANE. A power-operated hoisting machine that utilizes a vertical tower with a rotating superstructure and includes a load boom (jib) in order to lift or lower a load and move it horizontally.

TRANSIT. The moving or transporting of a crane from one job site to another.

TRAVEL. The function of the machine moving from one location to another on a job site.

TWO-POINT SUSPENDED SCAFFOLD (SWING STAGE). A suspended scaffold consisting of a platform supported by hangers (stirrups) suspended by two ropes from overhead supports and equipped with means to permit the raising and lowering of the platform to desired working levels.

UNENCLOSED PERIMETER. Any exterior portion of a building that is not solidly enclosed with the permanent façade, including the windows; or any exterior edge of a roof that is not enclosed with its permanent parapet or guardrail.

USE/USING (SCAFFOLD). Any work or activity performed on or from the scaffold. In addition, for a suspended scaffold,

the use of the scaffold shall include the operation of the scaffold at the site, provided during such operation any vertical or horizontal relocation of the scaffold does not require a modification to the counterweight, or does not require the placement, relocation, or removal of any anchorage, attachment, outrigger beam, tie-back, or connection to the building or structure.

WALKABLE FLOOR (CONCRETE CONSTRUCTION). A floor where the concrete slab has been poured and the formwork stripped.

WALKABLE FLOOR (PRECAST CONCRETE CONSTRUCTION). A floor where the frame is erected and the precast concrete floor is fixed in place.

WALKABLE FLOOR (STEEL CONSTRUCTION). A floor where the frame is erected and the deck is tack welded or fixed in place.

WHEEL MOUNTED CRANE (MULTIPLE CONTROL STATIONS). A crane consisting of a rotating superstructure, operating machinery, and operator's station and boom, mounted on a crane carrier equipped with axles and rubber-tired wheels for travel, a power source(s), and having separate stations for driving and operating. Its function is to lift, lower, and swing loads at various radii.

WHEEL MOUNTED CRANE (SINGLE CONTROL STATION). A crane consisting of a rotating superstructure, operating machinery, and boom, mounted on a crane carrier equipped with axles and rubber-tired wheels for travel, a power source, and having a single control station for driving and operating. Its function is to lift, lower, and swing loads at various radii.

WORKING DECK (CONCRETE CONSTRUCTION). The level where the floor is being formed.

WORKING DECK (DEMOLITION). The level where the floor is being broken up.

WORKING DECK (PRECAST CONCRETE CONSTRUCTION). The level where the floor is being placed.

WORKING DECK (STEEL CONSTRUCTION). The floor where the metal decking and steel components are being placed before concrete is poured.

SECTION BC 3303 SAFEGUARDS AND MAINTENANCE OF SITE

3303.1 Scope. Sites shall be safeguarded and maintained in accordance with the provisions of this section to protect the public and property.

3303.2 Utilities. Utilities at a site shall meet the requirements of Sections 3303.2.1 through 3303.2.5.

3303.2.1 Existing services. The location of all existing utilities and service lines shall be determined and adequate measures taken, or devices provided, to safeguard the public and property before such utilities are disturbed.

3303.2.2 Maintaining essential services. See Section 3303.9.

3303.2.3 Electrical work. All temporary electrical equipment and wiring shall meet the requirements of the *New York City Electrical Code*, and shall be maintained in compliance with such requirements. Portions of permanent electrical installations may be used for temporary operations provided the requirements of the *New York City Electrical Code* are met.

3303.2.3.1 Temporary lighting for construction sites. Temporary lighting for construction sites shall use high-efficacy lamps with the following minimum efficacies:

1. 60 lumens per watt for lamps over 40 watts;
2. 50 lumens per watt for lamps over 15 watts but less than or equal to 40 watts; and
3. 40 lumens per watt for lamps 15 watts or less.

3303.2.4 Sanitary facilities. Sanitary facilities shall be provided during construction or demolition activities in accordance with the *New York City Plumbing Code*.

3303.2.5 Removing, relocating, or interrupting services. If any utility is to be removed, relocated, or have its service interrupted, the utility company or city agency affected shall be notified at least 72 hours in advance. Prior to the removal of any service, the utility connection shall be disconnected and capped, and certifications to that effect issued by the representative utility company shall be filed with the department.

3303.3 Watchperson. Where an individual building being constructed or demolished has a footprint of between 5,000 square feet (1524 m²) and 40,000 square feet (12 192 m²), a competent watchperson shall be on duty at the site during all hours when operations

are not in progress, from the time when the foundation is poured to when all work has concluded and the certificate of occupancy or temporary certificate of occupancy has been issued. Where the building has a footprint of more than 40,000 square feet (12 192 m²), at least one additional watchperson shall be on duty for each additional 40,000 square feet (12 192 m²) of building footprint, or fraction thereof. The watchperson shall be familiar with emergency notification procedures to the Fire Department, shall possess a valid security guard registration with the State of New York, shall hold a valid fire guard certificate from the Fire Department, and for a major building shall have completed the training required by Section 3310.10.

Exceptions:

1. Where the square footage of the building requires two or more watchpersons, the number of watchpersons may be reduced, subject to the approval of the commissioner, where:
 - 1.1 An alarm or video monitoring system is in place, or where the layout of the building allows a continuous line of sight across the entire building; and
 - 1.2 At least one watchperson is provided.
2. The building is being actively monitored in accordance with a fire safety and evacuation plan approved by the Fire Department in accordance with the *New York City Fire Code*.

3303.4 Housekeeping. Housekeeping at a site shall be in accordance with Sections 3303.4.1 through 3303.4.9.

3303.4.1 Slipping and tripping hazards. Slipping and tripping hazards in areas used by the public shall be minimized in accordance with Sections 3303.4.1.1 and 3303.4.1.2.

3303.4.1.1 Maintenance. All areas used by the public shall be maintained free from ice, snow, grease, debris, equipment, materials, projections, tools, or other items, substances, or conditions that may constitute a slipping, tripping, or other hazard.

3303.4.1.2 Location of hose lines, wires, ropes, pipes, chains and conduits. Hose lines, wires, ropes, pipes, chains, and conduits shall be located so that they will not constitute a tripping hazard to the public. Where it is necessary to carry such across sidewalks, or any public way, they shall either be suspended at least 8 feet (2438 mm) above ground or, if left on the ground, suitable chamfered planks or a pedestrian bridge shall be provided to cover such.

3303.4.2 Containers. Sufficient containers, including but not limited to waste dumpsters, debris boxes, and skip boxes, shall be available for the storage of all debris or waste. Such containers shall be made of metal, plastic, or other noncombustible material acceptable to the commissioner. Such containers shall also comply with the following:

1. Containers with wheels shall be secured at the end of the workday by rope, cable, or chocking at the wheels in order to prevent movement.
2. Containers shall not be placed at the edge of the building at any time, except when being moved from the floor or building.
3. Containers holding debris or waste shall be covered at the end of the workday and at any time when full to near the rim. Containers need not be covered when they are not in use or while stored in a fully enclosed space at the end of the workday.

3303.4.3 Reserved.

3303.4.4 Control of debris. Control of debris shall include the following measures:

1. All floors, roofs, and working decks shall be cleaned of debris at least daily, and a daily inspection made by a competent person to verify such has occurred. If the building is a major building, such inspection shall be noted in the site safety log.
2. Debris that cannot be removed from the site by the end of the shift shall be placed in containers meeting the requirements of this section or shall be secured overnight to protect the public and property and shall be removed from the site or placed in containers at the beginning of the next shift.

Exception: Combustible debris shall not be permitted to accumulate and shall be removed from the site in accordance with Section 3303.5.1.

3303.4.5 Storage of materials and equipment during construction or demolition. Material and equipment stored at a site during construction or demolition operations shall comply with Sections 3303.4.5.1 and 3303.4.5.2.

3303.4.5.1 Open and exposed areas. When not being used, material or equipment located on a working deck, unenclosed floor,

roof, ground area, or similar exposed area shall be secured against dislodgement by wind or accidental impact.

3303.4.5.2 Storage near unenclosed perimeters. All material or equipment not being used shall be stored at least 10 feet (3048 mm), measured along all horizontal dimensions, from all unenclosed perimeters of the building or structure. Such material or equipment shall be secured in accordance with the requirements of Section 3303.4.5.1.

Exceptions: Provided the material or equipment is secured against accidental movement, in lieu of the 10 foot (3048 mm) set back distance:

1. Material or equipment that weighs 750 pounds (340.2 kg) or more may be stored at least 5 feet (1524 mm) from the unenclosed perimeter.
2. Where the floor area is less than 1,000 square feet (304.8 m²), material or equipment, regardless of weight, may be stored at least 5 feet (1524 mm) from the unenclosed perimeter.
3. Where located on a floor or working deck that is at or above the level of the horizontal safety netting in accordance with Section 3308, material or equipment may be stored at least 2 feet (610 mm) from the unenclosed perimeter.
4. Material related to concrete operations may overhang the unenclosed perimeter of the building or structure, provided:
 - 4.1. The material is banded with a minimum of two equally spaced bands to prevent dislodgement;
 - 4.2. The material is braced and secured in place by positive means as indicated on the site safety plan, or where there is no site safety plan, in accordance with drawings prepared by a registered design professional;
 - 4.3. The material overhangs by no more than one-third of its length;
 - 4.4. The material is stored in an area designated on the site safety plan, or where there is no site safety plan, in an area designated on drawings prepared by a registered design professional;
 - 4.5. Such designated area is broom swept and cleared of all materials, equipment, and debris prior to the temporary removal of the vertical netting and placement of overhanging material in the designated area;
 - 4.6. The perimeter of such designated area, except for the perimeter along the unenclosed perimeter, is protected by vertical netting meeting the requirements of Section 3308.5 or an alternative system acceptable to the commissioner;
 - 4.7. Horizontal safety netting meeting the requirements of Section 3308.6 is provided at a level not more than two stories or 30 feet (9144 mm) below the overhanging material, with such nets in place for the full time the material is overhanging, except that the nets may be pulled in at the immediate time the material is being hoisted or lowered where such nets would conflict with the hoisting or lowering operation; and
 - 4.8. The material is relocated on the next workday.

3303.4.6 Storage of combustible material and equipment. Storage of combustible material and other material and equipment that may present a fire hazard shall comply with the *New York City Fire Code*.

3303.4.7 Storage near sidewalks, walkways, and pathways. Material stored adjacent to a sidewalk, walkway, or pathway that remains open to the public shall not be piled higher than 3 feet (914 mm), or where a solid fence or barrier is provided, to within one foot (305 mm) of the top of such fence or barrier. For the purposes of this section, the term “adjacent to” shall be any area that is within a horizontal distance that is equal to or less than the vertical height of the piled material.

Exception: Material stored within a dumpster or similar solid container, provided such material is not piled above the top of such dumpster or container.

3303.4.8 Machinery. All exposed, electrically charged, moving or otherwise dangerous parts of machines and construction or demolition equipment shall be located, guarded, shielded, or barricaded so as to prevent contact by the public.

3303.4.9 Internal combustion-powered equipment. In addition to the requirements of this chapter, the use of internal combustion-powered equipment shall comply with the *New York City Fire Code*.

3303.5 Removal of material and debris. Material and debris shall be removed in a manner that prevents injury or damage to the public or property.

3303.5.1 Removal of combustible debris. Combustible debris shall not be permitted to accumulate, and shall be removed from the site at reasonable intervals in accordance with the requirements of the *New York City Fire Code*.

3303.5.2 Dropping or throwing prohibited. No material or equipment shall be intentionally dropped or thrown from a building or structure.

3303.5.3 Clogging. Precautions shall be taken to prevent concrete or mortar washings, sand, grit, or any other material that would cause clogging from entering a sewer or drain. Concrete washout water shall also meet the requirements of Section 3303.15.

***3303.5.4 Air pollution.** The provisions of the *Air Pollution Control Code* shall apply in order to prevent dust from becoming airborne.

**Section 3303.5.4 was amended by [Local Law 38 of 2015](#). This law has an effective date of May 6, 2016.*

3303.5.5 Chutes. Chutes used in association with the removal of materials shall comply with Sections 3303.5.5.1 through 3303.5.5.5.

3303.5.5.1 Enclosures. Chute enclosures shall comply with the following requirements:

1. Material chutes that are at an angle of more than 45 degrees (0.79 rad) with the horizontal shall be entirely enclosed on all sides, except for openings at the floor levels for the receiving of materials. Such openings shall not exceed 48 inches (1219 mm) in height, measured along the wall of the chute, and all openings, except the top opening, shall be closed and secured when not in use.
2. Chutes at an angle of less than 45 degrees (0.79 rad) with the horizontal may be open on the upper side.

3303.5.5.2 Chute construction. Chute construction shall comply with the following requirements:

1. Every chute used to convey debris from a building or structure shall be rigidly supported and braced throughout its height. Chutes less than 24 inches (610 mm) in maximum dimension shall be constructed of not less than 1-inch (25.4 mm) (nominal) wood, or 1/8-inch thick (3.18 mm) steel, or a material of equivalent strength and durability acceptable to the commissioner. Chutes more than 24 inches (610 mm) in maximum dimensions shall be constructed of not less than 2-inch (51 mm) (nominal) wood, or 3/16-inch thick (4.76 mm) steel, or a material of equivalent strength and durability acceptable to the commissioner.
2. Chutes shall be provided with a metal impact plate where material is forced to change direction while falling.
3. A gate shall be provided at the lower end of every chute to control the loading of material into trucks and to close the chute at all other times. Splash-boards or baffles shall be erected to prevent materials from rebounding into the street or under the sidewalk shed.
4. A bumper or curb at least 4 inches by 4 inches (102 by 102 mm) in section shall be provided at each chute opening where such opening is level with, or below, the floor or platform. Every space between the chute and the edge of the opening in the floor or platform shall be solidly planked.

3303.5.5.3 Fire-retardant construction. When used in the following applications, all chutes constructed of combustible material shall be covered on the exterior with corrugated steel sheeting having a minimum thickness of 24 gauge through their entire height. Alternatively, chutes shall be constructed of noncombustible material:

1. Chutes exceeding 75 feet (22 860 mm) in height.
2. Alteration, repair or partial demolition of buildings where the main use or dominant occupancy is in Group I.

3303.5.5.4 Supports. All structural supports of material chutes shall be of noncombustible material.

3303.5.5.5 Design and permit. No chute shall be installed until a permit has been issued by the commissioner on the basis of drawings prepared by a registered design professional.

Exception: Design and permit is not required for a chute that is:

1. Installed on the exterior of a building or structure at a height of 40 feet (12 192 mm) or less in height above the level of the adjoining ground;

2. Has been designed by a manufacturer and is installed in accordance with the manufacturer's design; and
3. Does not attach to or impart a load on a scaffold.

3303.6 Escape hatches. Where portable fuel fired heaters or other heating equipment are used to provide temporary heating during the placing of concrete for a floor, an escape hatch shall be provided. The escape hatch shall extend from the floor where the concrete is being placed and through at least one story immediately below such floor. The escape hatch shall be located as near to the center of the building or structure as practical.

Exception: An escape hatch is not required provided at least one permanent stairway is available for use on the floor where such concrete placement is occurring and that such stairway is enclosed from the ceiling to the floor of the floor where such concrete placement is occurring and from the ceiling to the floor immediately below such floor with the permanent fire-rated enclosure for the stair or a fireproof tarp wrapped tightly around the stair shaft so that no smoke can penetrate.

3303.6.1 Required ladders and metal shields. The escape hatch shall be constructed with at least two fixed, vertical ladders enclosed in a metal shield. The ladders shall extend from a distance of 3 feet (914 mm) above the floor where concrete is being placed to either at least two stories below, or to the ground floor, whichever is less. The metal shield shall enclose the ladders on all sides from the top of the floor where the concrete is being placed to at least the top of the floor next below. The inside dimensions between faces of the shield shall be not less than 3 feet 8 inches (1118 mm).

Exception: Extension ladders may be utilized where the horizontal dimension between the faces of the shields is equal to or greater than one-quarter the height of the shaft.

3303.6.2 Shield space and decking. The space between the shield and the perimeter of the opening in the floor under construction and also between the shield and the perimeter of the opening in the floor next below shall be decked over with 2-inch (51 mm) or heavier planking covered with plywood or sheet metal so as to make the decking smoke tight. At the termination of the ladders, the opening in the floor shall be covered completely with 2-inch (51 mm) planking or other material of equivalent strength.

3303.7 Fire prevention and fire protection. Firefighting equipment, fire fighting access at the construction or demolition site, and the conduct of all construction or demolition operations affecting fire prevention and fire fighting shall comply with the *New York City Fire Code* and the provisions of Sections 3303.7.1 through 3303.7.5.

3303.7.1 Water supply. A water supply for fire protection shall be provided in accordance with the *New York City Fire Code*.

3303.7.1.1 Large footprint construction. For a building that has a footprint of 100,000 square feet (30 480 m²) or more, regardless of the height of the building, and the building is substantially enclosed, permanent or temporary fire hydrants available for fire department use shall be provided during the course of construction:

1. Within 50 feet (15 240 mm) of the main entrance; and
2. Along the perimeter of the building, with the hydrants located so that there is at least one hydrant along every 250 feet (76 200 mm) of building perimeter, and with no hydrant more than 50 feet (15 240 mm) from the exterior wall.

3303.7.2 Fire extinguishers. Fire extinguishers shall be provided in accordance with the *New York City Fire Code*.

3303.7.3 Smoking. Smoking shall be prohibited at all construction and demolition sites. No smoking signs shall be posted at the site in accordance with the provisions of the *New York City Fire Code*.

3303.7.4 Sprinkler systems. Existing sprinkler systems in buildings undergoing an alteration or demolition shall comply with the requirements of Section 3303.7.4.1 through 3303.7.4.3.

3303.7.4.1 Sprinklers during alteration. Existing sprinkler systems in buildings undergoing an alteration shall be maintained in accordance with Section 3303.9, except as provided in Section 3303.7.4.3. The red paint required pursuant to Section 903.6 of this code shall be maintained during any alteration operation.

3303.7.4.2 Sprinklers during demolition. When existing sprinkler systems with fire department hose connections are present in buildings undergoing full or partial demolition, such systems shall be maintained as a nonautomatic sprinkler system, except as provided in Section 3303.7.4.3. When demolition starts, the sprinkler risers shall be capped immediately below the floor being demolished so as to maintain the sprinkler system on all lower floors for Fire Department use. Cutting and capping of sprinklers during demolition work shall be performed only by a licensed master plumber or licensed master fire suppression piping contractor who has obtained a permit for such work. Fire department hose connections shall be kept free from obstruction and shall be marked by a metal sign reading "Sprinkler Connection" and by a red light at night. The red paint required pursuant to Section 903.6 of this code shall be maintained during any demolition operations.

3303.7.4.3 Removal of damaged sprinklers. Requests for a variance from the sprinkler requirements of this section shall be

limited to requests to remove a damaged or inoperable sprinkler system or a portion of such system in connection with demolitions or gut rehabilitations. Applications for construction document approvals for such requests shall be filed with the department by a registered design professional in accordance with the following procedure:

1. The filed application shall include a complete report prepared by the professional describing the extent of the damage and attesting as to why the system cannot be restored; and
2. The variance shall not be approved by the department without the concurrence of the Fire Department as follows:
 - 2.1. The applicant shall file the request for variance with the Fire Department;
 - 2.2. The Fire Department shall review and recommend any necessary safety measures required as a condition of granting the variance; and
 - 2.3. The applicant shall submit the Fire Department's recommendation to the department along with proof of satisfactory implementation of such safety measures.

3303.7.5 Standpipe systems. Standpipe systems shall meet the requirements of Section 3303.8.

3303.8 Standpipe systems during construction, alteration or demolition. During construction, alteration or demolition operations, standpipe systems shall comply with the following:

1. When, during the course of the construction of a new building the working deck reaches a height of 75 feet (22 860 mm) or greater above the ground in a building for which a standpipe system will be required, a permanent or temporary standpipe system meeting the requirements of Section 905 shall be kept in a state of readiness at all times for use by fire-fighting personnel. The standpipe system shall serve all floors where the permanent stairs are required per Section 3303.11. No standpipe shall be considered to be in a state of readiness unless it is painted red in accordance with the provisions of Section 905.11 of this code. When freezing conditions may be encountered, the system in whole, or the part of the system subject to freezing conditions, shall be maintained as a dry system.
2. Existing standpipe systems in structures undergoing a full demolition shall be maintained as dry standpipes. At the commencement of demolition, the standpipe risers shall be capped above the outlet on the floor immediately below the floor being demolished so as to maintain the standpipe system on all lower floors for Fire Department use. Cutting and capping of standpipes during demolition work shall be performed only by a licensed master plumber or licensed master fire suppression piping contractor who has obtained a permit for such work. Standpipe hose, nozzles and spanners are not required to be maintained and may be removed at any time. The red paint required pursuant to Section 905.11 of this code shall be maintained during any demolition operations. All existing house check valves shall remain in place until completion of the demolition work.
3. When, during the course of the construction of a new building which will have a occupiable space at a depth of 75 feet (22 860 mm) or greater below the level of the ground in a building for which a standpipe system will be required, a permanent or temporary standpipe system meeting the requirements of Section 905 shall be installed and shall be kept in a state of readiness at all times for use by fire-fighting personnel. The standpipe system shall serve all stories below grade and shall be installed as soon as a temporary or permanent stair is installed below grade. No standpipe shall be considered to be in a state of readiness unless it is painted red in accordance with the provisions of Section 905.11 of this code. When freezing conditions may be encountered, the system in whole, or the part of the system subject to freezing conditions, shall be maintained as a dry system.
4. When, during the course of alteration or partial demolition operations in a building for which a standpipe system is required, the standpipe system shall be maintained in accordance with Section 3303.9. In an unoccupied building, an existing wet standpipe system may be maintained as a dry system subject to the approval of the commissioner and the commissioner of the fire department, and also provided the standpipe system is equipped with an air pressurized alarm system meeting the requirements of Section 3303.8.1. No standpipe shall be considered to be in a state of readiness unless it is painted red in accordance with the provisions of Section 905.11 of this code.
 - 4.1. If the alteration work results in the addition of new stories to the structure at a height of 75 feet (22 860 mm) or greater above the level of the ground, the requirements of Item 1 of this section shall apply to such new stories during the course of the alteration operation.
 - 4.2. If the alteration work results in the addition of new occupiable space at a depth of 75 feet (22 860 mm) or greater below the level of the ground, the requirements of Item 3 of this section shall apply to such new occupiable space below grade during the course of the alteration operation.

3303.8.1 Air pressurized alarm system for dry standpipe systems during construction or demolition operations. Dry

standpipe systems utilized during construction or demolition operations shall be provided with an air pressurized alarm system as set forth in Items 1 through 5 below. The provisions of NFPA 14, Chapter 12, as modified in Appendix Q, shall also apply.

1. Full demolitions. In buildings and structures undergoing a full demolition, all existing standpipes shall be maintained in a state of readiness as a dry system in accordance with Item 2 of Section 3303.8 and shall be provided with an air pressurized alarm system.
2. New construction, alteration, and partial demolition. Where a dry standpipe system is utilized during new construction, alteration, or partial demolition operations, such standpipe system shall be provided with an air pressurized alarm system.
3. Submission of application. An application to install an air pressurized alarm system shall be filed by a registered design professional and a permit obtained by a licensed master plumber or licensed master fire suppression piping contractor. A licensed electrician shall obtain all required electrical permits in accordance with Chapter 3 of Title 27 of the *Administrative Code*.
4. Specifications. The following provisions shall apply to the air pressurized alarm system:
 - 4.1. Pressure. Pressure shall be maintained in the standpipe and cross connections at all times and shall not exceed 25 psig (172 kPag) by utilizing nitrogen or an air compressor with an air dryer. The supervisory pressure shall be as determined by a registered design professional.
 - 4.2. Automatic air pressurized alarm activation. The alarm shall be automatically activated when the pressure drops below the supervisory pressure or rises above the maximum pressure of 25 psig (172 kPag). When the alarm is activated, notification shall be made to the Fire Department in accordance with the *New York City Fire Code*, all work at the site shall cease, except as provided in Item 4.2.1, and an investigation of the entire standpipe system and air compressor shall be immediately performed to determine the cause of the alarm. Unless authorized by the Fire Department, no construction or demolition work shall resume until the standpipe system is repaired and the appropriate pressure is restored, except that any repairs to the standpipe system needed to restore the required pressure shall be undertaken immediately and the standpipe system restored as soon as possible. There shall be compliance with the requirements of the *New York City Fire Code* while the standpipe system is out of service. Upon completion of repairs to the standpipe system a full inspection of such system shall be performed, which shall include, among other things, visually tracing the standpipe, including risers, cross connections and fire department connections to verify that no breach exists and checking all gauges of the standpipe system to ensure the standpipe system has been restored to a state of readiness.
 - 4.2.1. Notwithstanding the provisions of Item 4.2, the activation of the alarm shall not require the cessation of work necessary for the completion of concrete pouring operations in progress at the time of alarm activation, where such cessation would cause a cold joint that would impair the structural integrity of the finished construction. The continuation of such operations shall be permitted only until an orderly termination of such operations can be effectuated. The site safety manager or coordinator shall record the names and locations of any employees necessary for the completion of the concrete pouring operations and provide them to the Fire Department personnel who arrive on the scene.
 - 4.3. Air compressor. The air compressor shall be designed to automatically cut in and cut out at the supervisory pressure and shall be tied into the standpipe system between the fire department connections and the house check valves. The air compressor shall utilize an air dryer during times when freezing conditions exist to condition the air entering the dry standpipe system.
 - 4.4. Alarm. The standpipe alarm system shall utilize pressure switches and control equipment to annunciate a local audible alarm on site that can be heard during working and non-working hours. The audible signal of the horn shall be at least 15 dBA above the ambient noise level but no more than 110 dBA.
 - 4.5. Power supply. The standpipe alarm system shall be connected to an active, dedicated power supply at all times.
 - 4.6. Check valves. Check valves shall be installed to prevent water from entering the air compressor.
 - 4.7. Locks and caps. All control valves shall be chained and locked in the appropriate position and shall be provided with capped outlets. All hose valves shall also be provided with capped outlets.
 - 4.8. Fire Department connections. Three inch (76 mm) iron hose plugs with gaskets in Fire Department connection swivels shall be provided.
 - 4.9. Drainage. Provisions shall be made to drain water in any trapped sections of the dry standpipe system that are subject to freezing.

- 4.10. Manual air release connection. A minimum 2.5-inch (64 mm) connection located immediately downstream of the fire department connection check valve shall be provided and piped to a location immediately adjacent to the fire department connections. This line shall be fitted with a 2.5-inch (64 mm) hose valve and shall allow for release of the pressurized air from the dry standpipe system. The number of air release valves provided shall be such that the air pressure shall be released in no more than 3 minutes, which shall be verifiable by an actual air release test performed at the time of the initial installation.
- 4.11. Construction documents. Plans shall identify all standpipe risers, cross connections, fire department connections, any intermediate check valves that have to be removed, proposed location of the air release connections, designation of the supervisory pressure, complete information regarding the alarm system, and procedures for the safe pressurization and depressurization of the system.
- 4.12. Signage. Signage shall be provided at all fire department connections indicating that the dry standpipe system is pressurized and showing the location of the manual air release.
- 4.13. Pressure gauges. A system of pressure gauges shall be installed at the compressor and at the most remote points of the system from the compressor.
5. Planned removal from service of standpipe system and standpipe air pressurized alarm. Whenever the standpipe system is to be placed out of service for the addition of a new section to the system, removal of an existing section as demolition operations progress, or other planned event, the standpipe alarm may be temporarily deactivated subject to compliance with the requirements of the *New York City Fire Code*. Where a site safety manager or coordinator is required by this code, all alarm activations, inspections, and repairs shall be logged into the log book maintained by such site safety manager or coordinator. If the standpipe system is not returned to a state of readiness and the alarm reactivated within 2 hours of such planned removal from service, all construction or demolition work at the site shall cease, unless otherwise approved by the Fire Department.

3303.8.2 Free from obstruction. Fire department hose connections shall be kept free from obstruction and shall be marked by a metal sign reading, "Standpipe Connection" and by a red light at night.

3303.8.3 Use of standpipes for purposes other than supplying water for firefighting. Standpipes may be used for a purpose other than to supply water for firefighting operations, including but not limited to supplying water or compressed air for construction or demolition operations, subject to the approval of the Fire Department and provided at least one standpipe riser is maintained at all times for firefighting operations. Where the standpipe is used to supply water for construction or demolition operations and freezing conditions may occur, the standpipe shall be completely drained after use to prevent freezing.

3303.9 Elements to be maintained in existing buildings. Required means of egress, existing structural elements, fire protection devices, and sanitary safeguards shall be maintained at all times during construction or demolition operations in existing buildings. Required means of egress shall not be obstructed in any manner that would destroy the full effectiveness of such means of egress.

Exception: Where adequate alternate provisions are provided in accordance with the requirements of this code, or where the element is temporarily or permanently disconnected, removed, or demolished in accordance with the requirements of this code and of the agency or authority having jurisdiction to temporarily or permanently disconnect, remove, or demolish such element. Such alternative means, disconnection, removal, or demolition shall be shown on the approved plans. Fire protection systems, including but not limited to sprinklers, standpipes, and fire alarms, shall only be taken out of service in accordance with the requirements of the *New York City Fire Code*.

3303.10 Operations in occupied buildings. When construction or demolition activity occurs in an occupied building, barricades, signs, drop cloths, and other protective means shall be installed and maintained as necessary to provide reasonable protection for the occupants against hazard and nuisance. Such protective means shall be indicated on an occupant protection plan, or where a tenant protection plan is required by Section 3303.10.1, on a tenant protection plan.

3303.10.1 Tenant protection plan. In buildings containing occupied dwelling units, including newly constructed buildings that are partially occupied where work is still ongoing within the building, all construction or demolition work shall be performed in accordance with a tenant protection plan as required by Chapter 1 of Title 28 of the *Administrative Code*.

***3303.10.2 Inspections of tenant protection plan.** The owner shall notify the department in writing at least 72 hours prior to the commencement of any work requiring a tenant protection plan. The department shall conduct an inspection of five percent of such sites within seven days after the commencement of such work to verify compliance with the tenant protection plan. Thereafter, the department shall conduct an inspection upon the receipt of a complaint concerning such work.

**Section 3303.10.2 was added by [Local Law 154 of 2017](#). This law has an effective date of December 28, 2017.*

***3303.10.3 Enforcement of tenant protection plan.** If work is not being performed in accordance with the tenant protection plan, the commissioner may issue a stop work order pursuant to section 28-207.2 of the administrative code.

**Section 3303.10.3 was added by [Local Law 154 of 2017](#). This law has an effective date of December 28, 2017.*

3303.11 Stairs during construction or demolition. During construction and demolition stairs shall comply with the following:

1. During the course of construction of a new building, or in spaces being added to an existing building, at least one permanent stair shall be brought to within a distance of 40 feet (12 192 mm) or 4 floors below the working deck at all times. In all other locations where permanent stairs will be required, a temporary or permanent stair shall be brought to within a distance of 40 feet (12 192 mm) or 4 floors below the working deck at all times.
2. Stairs in an existing building undergoing alteration or a partial demolition shall be maintained in accordance with Section 3303.9. Stairs in a building undergoing a full demolition shall comply with Section 3306.9.9.
3. All stairs in a building undergoing construction or demolition shall be lighted at all times and kept free of equipment, debris, and material.

3303.12 Elevators and hoists during construction or demolition. Elevators and hoists during construction or demolition work shall meet the requirements of Sections 3303.12.1 through 3303.12.5.

3303.12.1 Publicly accessible floors. Existing elevators serving publicly accessible floors in a building undergoing construction or demolition work shall be maintained in accordance with Section 3303.9.

3303.12.2 Floors closed to the public. All floors closed to the public in a new or existing building undergoing construction or demolition work shall be served by, at least, either:

1. An elevator meeting the requirements of Chapter 30, which shall be kept in readiness at all times for Fire Department use; or
2. A hoist meeting the requirements of Section 3318, which shall be available at all times for fire department use.

Exceptions: An elevator or hoist is not required during the course of construction or demolition for:

1. A building that does not require a permanent elevator.
2. Floors that are located within a vertical distance of seven stories or 75 feet (22 860 mm) or less from the working deck.

3303.12.3 Deep excavations. Where the proposed lowest level of a building with a footprint of 10,000 square feet (3048 m) or greater is constructed at a depth greater than 75 feet (22 860 mm), a hoist meeting the requirements of Section 3318 shall be available at all times for Fire Department use once such floor has been poured and set. The hoist shall serve the level at grade and all stories below grade.

Exception: Subject to the approval of the commissioner, alternate means available at all times for Fire Department use, including but not limited to a vehicular ramp, shall be provided.

3303.12.4 Converting elevators. Where an existing elevator is converted from passenger or freight use the department shall be notified in accordance with the requirements of Chapter 30.

3303.12.5 Hoist travel. If the travel of the hoist cannot be increased or decreased to fulfill the requirements of this section due to inclement weather, it shall be increased by the end of the next working day.

3303.13 Interrupted or abandoned and discontinued operations. Sites where construction or demolition work has been interrupted or abandoned and discontinued shall be protected in accordance with the requirements of Sections 3303.13.1 through 3303.13.3.

3303.13.1 Fencing. A fence meeting the requirements of Section 3307 shall be maintained throughout the duration of time that operations at the site are interrupted or abandoned and discontinued.

3303.13.2 Safety monitoring plan. Where work has been interrupted or abandoned and discontinued for a period of at least three months, a safety monitoring plan shall be prepared and submitted to the department. Such safety monitoring plan shall be specific to the site, shall identify safeguards to be instituted and maintained to secure the site, and shall specify monitoring to be performed during the duration of suspension of work. The site shall be monitored in accordance with such plan.

3303.13.3 Filling and grading. Where work has been interrupted or abandoned and discontinued for a period of at least three

months, all open excavations shall be filled and graded to eliminate all steep slopes, holes, obstructions or similar sources of hazard. Fill shall consist of clean, noncombustible material. The final surface shall be graded in such a manner as to drain the lot, eliminate pockets in the fill, and prevent the accumulation of water without damaging any foundations on the premises or on adjoining property.

Exception: Filling and grading is not required for abandoned, discontinued, or interrupted excavations that are:

1. Secured in accordance with Section 3303.13.2, and
2. Inspected periodically by an engineer to verify continued stability of the excavation, with a record of such inspections signed, sealed, and dated by the engineer.

3303.14 Drainage. No condition shall be created as a result of construction or demolition operations that will interfere with natural surface drainage. Water courses, drainage ditches, etc., shall not be obstructed by refuse, waste building materials, earth, stones, tree stumps, branches, or other debris that may interfere with surface drainage or cause the impoundment of surface waters.

3303.14.1 Protection of foundations. Provision shall be made to prevent the accumulation of water or water damage to any foundations on the premises or to adjoining property.

3303.14.2 Drainage of excavations. All excavations shall be drained, and the drainage shall be maintained as long as the excavation continues or remains. Where necessary, pumping shall be used, provided proper permits are obtained from the New York City Department of Environmental Protection.

3303.14.3 Clogging. The requirements of Section 3303.5.3 shall apply.

3303.15 Concrete washout water. Concrete washout water shall not be allowed to enter any sewer, catch basin, drain, or body of water or to leach into the ground.

3303.15.1 Collection and containment. All concrete washout water shall be collected and contained in or on the concrete mixer truck or in pre-manufactured watertight containers specifically designed and fabricated for the purpose of collecting and containing concrete washout water on-site. Such containers shall be of sufficient quantity and size to accommodate all rinsing operations required on-site so as not to delay the timely return of concrete ready mix trucks to the concrete plant and shall be protected from breach or overflow at all times.

3303.15.2 Location. Rinsing operations and concrete washout water containers shall not be located less than 30 feet from any sewer, drain, catch basin, or body of water without the written approval of the commissioner.

3303.15.3 Disposal. Collected concrete washout water shall be transported off site for treatment and disposal or contained on site until completely evaporated. Any hardened concrete remaining after evaporation shall be disposed of, reused or recycled.

3303.16 Contractors sheds and offices. Contractors sheds and offices located within 30 feet (9144 mm) of new construction, existing buildings, or another contractor shed or office shall be made of metal or other noncombustible material.

Exception: Contractor sheds and offices located within a building and protected from weather may use fire-retardant treated wood, provided the shed does not exceed one story in height and 120 square feet (36.58 m²) in area and is at least 30 feet (9144 mm) from another shed.

SECTION BC 3304 SOIL AND FOUNDATION WORK

3304.1 Scope. The provisions of this section shall apply to all soil and foundation work, including but not limited to excavations made for the purposes of taking earth, sand, gravel, or other material, as well as to soil and foundation work related to accessory uses such as garages, pools, and decks, and also to the underpinning or bracing of buildings or structures, in order to safeguard the public and property from such work.

Exceptions:

1. Soil or foundation work not related to the underpinning or bracing of an existing building or structure, and which is performed in connection with utility or infrastructure work occurring within a public right of way, including but not limited to the construction, alteration, maintenance, repair, or demolition of bridges, streets, sidewalks, highways, railroads, subways, water tunnels, or utility lines.
2. Soil or foundation work on cemetery grounds for burials.
3. Soil or foundation work performed within an industrial or commercial quarry, plant, or yard and not related to the construction or demolition of a building or structure on the property of such quarry, plant, or yard.

3304.1.1 Measurements. The depth of all soil and foundation work shall be measured from the level of the adjacent ground surface to the lowest point of the soil and foundation work. The height of all soil and foundation work shall be measured from the level of the adjacent ground surface to the highest point of the soil and foundation work. Where soil and foundation work occurs within a basement or cellar, the soil and foundation work shall be measured from the level of the adjacent slab.

3304.2 Support of excavation drawings. The sides of all excavations, including related or resulting embankments, shall be supported as specified on drawings. Such drawings shall be site specific and shall clearly illustrate all related protection and support of the excavation, including but not limited to sloping, stepping, sheeting, shoring, bracing, guardrail systems, and fences as required by Section 3304.4, with all dimensions indicated. Such drawings shall also indicate any utilities or public infrastructure impacted by the excavation. The drawings shall be prepared by a registered design professional who has demonstrated knowledge or experience in the design of retaining structures or bracing systems for the support of excavation.

Exceptions:

1. Drawings for the support of excavation are not required for an excavation:
 - 1.1. That occurs 5 feet (1524 mm) or less in depth, provided:
 - 1.1.1. The excavation also occurs more than 5 feet (1524 mm) from all footings and foundations; or
 - 1.1.2. Where the excavation occurs within five feet (1524 mm) or less from a footing or foundation, such excavation does not occur below the level of the footing or foundation.
 - 1.2. Where the sides of the excavation are sloped not steeper than 45 degrees (0.79 rad) or stepped so that the average slope is not steeper than 45 degrees (0.79 rad) with no step more than 5 feet (1524 mm) high, provided such slope or step begins at least five feet (1524 mm) from all footings and foundations.
 - 1.3. Where a trench box is utilized in accordance with the manufacturer's specifications, provided the manufacturer specifications are available onsite.
2. Support of excavation drawings can be prepared by a qualified person for an excavation occurring in conjunction with the construction or demolition of an exterior in-ground pool, provided such pool is an accessory to a one- two- or three-family home, is limited to 400 square feet (121.92 square meters) in area, and provided that the distance from the edge of the pool to any building, structure, or lot line is greater than the depth of the deepest portion of the pool.
3. Where demolition drawings are required by Section 3306.5, separate support of excavation drawings for the removal of the foundation are not required, provided such detail is shown on the demolition drawings.

3304.3 Notification. Prior to the commencement of soil or foundation work, notification shall be provided as follows.

3304.3.1 Notification of the department. No soil or foundation work within the property line shall commence unless the permit holder, or where there is no permit holder the person causing the soil or foundation work to be made, notifies the department, via phone or electronically, at least 24 hours, but no more than 48 hours prior to the commencement of such work. The notification shall state the date that such soil or foundation work is to commence. Should the notification date fall on a weekend or official holiday, the permit holder shall notify the department on the last business day before the commencement date.

In the event that the soil or foundation work does not begin on the date provided in the notification to the department, the permit holder, or where there is no permit holder the person causing the soil or foundation work to be made, shall notify the department of its cancellation not more than 24 hours prior to but no later than the date for which the soil or foundation work was scheduled. Should the cancellation date fall on a weekend or an official holiday, the permit holder, or where there is no permit holder the person causing the soil or foundation work to be made, shall notify the department on the next business day after the intended commencement date. The permit holder, or where there is no permit holder the person causing the soil or foundation work to be made, shall notify the department of a new intended commencement date pursuant to the provisions above.

The commissioner may issue a stop work order if there is a failure to provide notice as required in this section and if the work is found to violate any of the provisions of this code, the *New York City Zoning Resolution*, or other applicable laws or rules. Upon the issuance of such stop work order, the work shall be stopped for a minimum of three business days to enable the department to take any other appropriate action to ensure that the earthwork is being performed in a safe manner. The earthwork shall not recommence until the stop work order has been lifted.

Exceptions: Notification to the department is not required for the following:

1. Hand excavation work that extends 5 feet (1524 mm) or less in depth and is 2 feet (610 mm) or more from an existing footing or foundation. This exception shall not apply to any hand excavation work performed anywhere in existing or demolished basements or cellars that adjoin existing foundations.

2. Excavations for a geotechnical investigation that do not exceed 10 feet (3048 mm) in length, width, or diameter, and that are conducted under the supervision of a registered design professional.
3. Emergency work performed by the Department of Housing Preservation and Development (HPD) or other agency as directed by the commissioner or work on unsafe buildings performed by HPD or other agency pursuant to a precept.
4. Soil or foundation work related to gardening or landscaping work, provided no excavation occurs to a depth greater than 5 feet (1524 mm); and either:
 - 4.1. The excavation occurs more than 5 feet (1524 mm) from all footings and foundations; or
 - 4.2. Where the excavation occurs within 5 feet (1524 mm) or less from a footing or foundation, such excavation does not occur below the level of the footing or foundation.
5. Soil or foundation work related to the pouring of a slab or pavement, provided no excavation to a depth greater than 2 feet (610 mm) occurs in conjunction with such work.
6. Where notification is required by Section 3306.3, separate notification for the removal of a foundation is not required.

3304.3.2 Notification of adjoining property owners. When an excavation to a depth of 5 feet to 10 feet (1524 mm to 3048 mm) is to be made within 10 feet (3048 mm) of an adjacent footing or foundation, or when any excavation over 10 feet (3048 mm) is to be made anywhere on a site, the person causing the excavation to be made shall provide written notice to the owners of the adjoining property not less than 10 days prior to the scheduled starting date of the excavation. The written notice shall provide a description of the work to be performed, the timeframe and schedule, and the contact information of the person causing the excavation and of the department.

Exception: Notification is not required where the excavation is set back from the edge of the adjacent footing or foundation or adjoining property by a ratio of 2 horizontal to 1 vertical, as measured from the deepest point of the excavation.

3304.3.3 Notification to the Department of Environmental Protection. Whenever soil or foundation work, for any purpose, is proposed to a depth greater than 50 feet (15 240 mm) in the borough of the Bronx or on or north of 135th Street in the borough of Manhattan, or greater than 100 feet (30 480 mm) in the borough of Brooklyn, Queens, or Staten Island or south of 135th Street in the borough of Manhattan, the owner of the premises, engineer, architect or contractor shall notify the New York City Department of Environmental Protection prior to commencement of such activity in accordance with Section 24-367 of the Administrative Code and any rules promulgated thereunder. The issuance of any permit or approval by the department shall not relieve the applicant, owner, engineer, architect or contractor of the obligation to comply with any notification or permitting requirements of the New York City Department of Environmental Protection.

**Section 3304.3.3 was amended by [Local Law 65 of 2018](#). This law has an effective date of January 19, 2019.*

3304.3.4 Excavations requiring permit from the New York State Department of Environmental Conservation. Whenever drilling or excavation is planned deeper than 500 feet (152 m) below grade, a permit may be required from the New York State Department of Environmental Conservation. The issuance of any permit or approval by the department shall not relieve the applicant of the obligation to comply with any approval or permitting requirements of the New York State Department of Environmental Conservation. Whenever any drilling for borings or geothermal wells is planned, the owner of the premises or the contractor shall notify the New York State Department of Environmental Conservation prior to commencement of such activity to determine if a permit is necessary.

3304.3.5 Notification and permit requirements of the New York City Transit Authority, the Metropolitan Transportation Authority, and the Port Authority of New York and New Jersey. Whenever an excavation of any depth is proposed within 200 feet (60 960 mm) of any subway or tunnel under the jurisdiction of the New York City Transit Authority, the Metropolitan Transportation Authority, or the Port Authority of New York and New Jersey, an approval and permit shall be obtained from such authority having jurisdiction. The owner of the premises or the contractor shall notify the authority having jurisdiction prior to commencement of any such activity. The issuance of any permit or approval by the department shall not relieve the applicant of the obligation to comply with any approval or permitting requirements of the New York City Transit Authority, the Metropolitan Transportation Authority, or the Port Authority of New York and New Jersey.

3304.3.6 Notification and permit requirements of the New York City Fire Department. Soil or foundation work that is to be done with the use of explosives shall also be subject to the notification and permit requirements set forth in the *New York City Fire Code*.

3304.4 Protection of sides of excavations. The sides of excavations shall be protected in accordance with the requirements of Sections 3304.4.1 through 3304.4.6.

3304.4.1 Support of excavation. The sides of all excavations, including related or resulting embankments, that are 5 feet (1524 mm) or greater in depth or height shall be supported in accordance with one or more of the following means. Where required by Section 3304.2, such means shall be indicated on drawings:

1. Sheet piling, shoring, bracing, or by other retaining structures as may be necessary to prevent the sides of the excavation from caving in before permanent supports are provided. Such methods of protection shall be subject to special inspection in accordance with the provisions of Chapter 17; or
2. Excavation sides sloped not steeper than 45 degrees (0.79 rad) or stepped so that the average slope is not steeper than 45 degrees (0.79 rad) with no step more than 5 feet (1524 mm) high, provided such slope or step does not endanger any structure or temporary construction, including subsurface structures. Slopes or steps steeper than 45 degrees (0.79 rad), or steps more than 5 feet (1524 mm) high shall be permitted only where the registered design professional preparing the drawings required by Section 3304.2 determines, based upon the completion of a geotechnical investigation report acceptable to the commissioner, that the slopes or steps will be stable.

Exception: For a rock cut excavation, no protection is required, provided a registered design professional determines the rock cut will not be subject to shearing and will not otherwise be unstable before permanent supports are provided. Otherwise, the rock cut shall be stabilized in accordance with drawings prepared by the registered design professional.

3304.4.2 Rainstorms. See Section 3304.5.1.

3304.4.3 Fence. Every site with an excavation shall be enclosed with a fence that meets the requirements of Section 3307.7.

3304.4.4 Guardrail system. All open edges of an excavation that are 6 feet (1829 mm) or greater in depth shall be protected by a guardrail system meeting the requirements of Sections 3308.7.1 through 3308.7.5, or by a solid enclosure at least 3 feet 6 inches (1067 mm) high. For the purpose of a guardrail system installed in accordance with this section to protect the open edge of an excavation, the term “floor” in Sections 3308.7.1 through 3308.7.5 shall mean “ground.”

Exceptions:

1. The toeboard, when installed in conjunction with such excavation guardrail system, shall consist, at a minimum, of 1-inch × 6 inches (25 mm by 152 mm) lumber or metal plank and shall be at least 5½ inches (140 mm) high.
2. A toeboard is not required where the sheet piling, shoring, bracing, or any other support of excavation extends at least 5½ inches (140 mm) above the top of the excavation.
3. A guardrail system or a solid enclosure is not required where access to the adjoining area is precluded.
4. A guardrail system or a solid enclosure is not required where side slopes are three horizontal by one vertical (33-percent slope) or flatter.

3304.4.4.1 Openings. To provide necessary openings for intermittent operations, one or more sections of the guardrail system or solid enclosure may be hinged or supported in sockets. When supported in sockets, rails shall be so constructed that they cannot be jolted out. A button or hook may be used to hold the guardrail system or solid enclosure in a fixed position. Substantial chains or ropes may be used to guard such openings in such guardrail system or solid enclosure. Where so used, the chains or ropes shall be taut at the same height as the rails of the standard guardrail system.

3304.4.5 Placing of soil or foundation work equipment and excavated material. Excavated material and superimposed loads, including but not limited to equipment and trucks used for soil or foundation work, shall not be placed closer to the edge of the excavation than a distance equal to one and one-half times the depth of such excavation unless the sides of the excavation have been sloped or sheet piled (or sheeted) and shored to withstand the lateral force imposed by such superimposed loads, or a registered design professional has determined the side of the excavation can adequately support the load imposed, with such support or determination shown on drawings required by Section 3304.2. In the case of open excavations with side slopes, the edge of excavation shall be taken as the toe of the slope.

3304.4.6 Installation of protection. Required protection for the sides of the excavation shall be installed as the excavation advances. The placement of permanent structures or fill in areas requiring support of excavation shall not begin until the support of excavation has been completed for such areas.

3304.5 Inspections. Soil and foundation work shall be inspected in accordance with the requirements of Sections 3304.5.1 through 3304.5.3.

3304.5.1 Rainstorms. All sides or slopes of excavations or embankments shall be inspected after rainstorms, or any other hazard-increasing event, and safe conditions shall be restored.

3304.5.2 Support of excavation. Methods employed to protect the sides of excavations meeting the requirements of Item 1 of Section 3304.4.1 shall be subject to special inspections in accordance with Chapter 17.

3304.5.3 Slurry. The requirements of Section 3304.12 shall apply.

3304.6 Retaining walls. The requirements of Section 305 of Title 28 of the *Administrative Code*, as well as Sections 1806 and 3309 of the building code shall apply as applicable.

3304.7 Access. Every excavation shall be provided with at least one safe means of ingress and egress that is kept available at all times.

3304.8 Drainage. The requirements of Section 3303.14 shall apply.

3304.9 Utilities. The requirements of Section 3303.2 shall apply.

3304.10 Dewatering. The person causing the soil or foundation work to be performed shall dewater the site, as needed, for the progress of the work. Measures shall be taken to prevent settlement, slope failure, and damage to adjacent buildings, structures, and property affected by dewatering operations.

3304.11 Underpinning requirements. The requirements of Section 1814 and Section 3309 shall apply.

3304.12 Slurry. Where slurry is utilized to support an excavation, trench, or drill or bore hold, slurry mix proportions and installation procedures shall be provided by a registered design professional on signed and sealed design and installation procedures. The installation procedures shall account for all imposed loads, including those from the earth, adjacent structures, and adjacent equipment. The use of slurry to support excavations shall be subject to special inspection in accordance with Section 1704.20. Where such construction methods are used to install foundation elements, the new foundation elements installed as part of such operations shall be subject to special inspection as a permanent installation in accordance with the applicable sections of this chapter, including but not limited to special inspection for concrete, and welding.

SECTION BC 3305 MATERIAL PLACEMENT AND INSTALLATION

3305.1 Scope. The placement and installation of structural steel, concrete formwork, aluminum, and masonry shall be in accordance with the requirements of this section.

3305.2 Structural steel assembly. Structural steel assembly shall be in accordance with the requirements of AISC 360 and the requirements of Sections 3305.2.1 through 3305.2.8.

3305.2.1 Shop drawings. Shop drawings shall include the location of oversized, short slotted, and long slotted holes.

3305.2.2 Field connections. The requirements of Section 2205.6.2 shall apply.

3305.2.3 Handling and storing materials. Structural steel members shall not be dropped, thrown, or dragged. All structural steel members shall be shipped and handled in a manner to avoid injury to protective coatings or permanent deformations of the members. Materials shall be protected against damage and corrosion that results in a loss of section. Any injury to protective coatings shall be repaired prior to the application of fireproofing, the placement of concrete around the steel, or any other action that would otherwise conceal the steel. Any loss of section, bends, crimps or other evidence of permanent deformations shall be straightened by methods approved by the registered design professional of record or the piece shall be rejected.

3305.2.4 Placing of structural members. During the placing of a structural member, the load shall not be released from the hoisting rope until the member is securely supported.

3305.2.4.1 Open web steel joists. Open web steel joists that are hoisted singly shall be transferred from their place of storage directly to their permanent location and safely secured. No load shall be placed on open web steel joists until they are permanently fastened in place or otherwise secured in accordance with methods approved by the registered design professional of record.

3305.2.5 Tag lines. While structural members or assemblies are being hoisted, a tag line or tag lines shall be used, as needed, to prevent uncontrolled movement.

3305.2.6 Erection of trusses. Trusses shall be braced or guyed, as necessary, for the safety of the structure.

3305.2.7 Erection of frames. Structural frames shall be properly braced with shores, guyed cables, turnbuckles, or other devices, as necessary, for the safety of the structure.

3305.2.8 Permanent flooring and steel erection in tiered buildings. The permanent floors of such buildings or other structures

shall be installed as soon as possible as the erection of structural steel members progresses. In no case shall there be more than eight stories, floors or equivalent levels or 120 feet (36 576 mm), whichever is less, between the working deck and the uppermost permanent floor.

Exception: Where otherwise designed, in accordance with the approved construction documents, by the registered design professional of record.

3305.3 Concrete formwork. Concrete formwork shall be in accordance with the requirements of Sections 3305.3.1 through 3305.3.7.

3305.3.1 General requirements. The design, fabrication and erection of forms shall comply with the requirements of Sections 3305.3.1.1 through 3305.3.1.6.

3305.3.1.1 Safe support of loads. Formwork, including all related braces, shoring, framing, and auxiliary construction, shall be proportioned, erected, supported, braced, and maintained so that it will safely support all vertical and lateral loads that might be applied until such loads can be supported by the permanent construction.

3305.3.1.2 Vertical and lateral loads. Vertical and lateral loads shall be carried to the ground by the formwork system, by the new construction after it has attained adequate strength for that purpose, or by existing structures. Forms and their supports shall be designed so as not to damage previously placed structures.

3305.3.1.2.1 Use of existing structures to support vertical or lateral loads. The use of existing structures to support vertical or lateral loads imposed by concrete construction operations shall require an evaluation of the existing structure for the loads imposed by a registered design professional. The registered design professional shall prepare design drawings documenting the findings of the evaluation, indicate the location of formwork elements, and the interface between the formwork and the existing structure.

3305.3.1.3 Bracing. Forms shall be properly braced or tied together so as to maintain position and shape, and shall conform to the sizes and shapes of members as shown on the design drawings.

3305.3.1.4 Ramps, runways and platforms. Ramps, runways, and platforms utilized in connection with concrete placement shall comply with Section 3315.

3305.3.1.5 Design. Concrete formwork shall be designed in accordance with Section 3305.3.2.

3305.3.1.6 Forms for prestressed and post-tensioned concrete. Forms for prestressed and post-tensioned concrete members shall be designed and constructed to permit movement of the member without damage during application of the prestressing or post-tensioned force.

3305.3.2 Design of concrete formwork. Design of formwork, including but not limited to forms, shores, and shoring foundations, shall comply with ACI 318, Section 6.1.5, and the requirements of Sections 3305.3.2.1 through 3305.3.2.8 of this code.

3305.3.2.1 Design drawings. Site-specific formwork design drawings prepared by a registered design professional shall be required in the following cases:

1. For concrete formwork in a structure classified as a major building; or
2. Wherever the shore or form height exceeds 14 feet (4267 mm); or
3. Wherever the total vertical load on the forms exceeds 150 pounds per square foot (732 kg/m²); or
4. Wherever power buggies are used; or
5. Wherever multi-stage shores are used; or
6. Wherever the slab thicknesses or beam heights equal or exceed 10 inches; or
7. Wherever there are concentrated loads exceeding 2000 pounds () imposed on the formwork; or
8. Wherever there are loads imposed on existing structures in accordance with Section 3305.3.1.2.1.

Exception: Design drawings prepared by a registered design professional are not required for formwork installed in conjunction with slabs supported directly on grade or footings where such slab or footing does not impart any load on an adjacent structure.

3305.3.2.2 Vertical loads. Vertical loads shall include the total dead and live loads. Dead load shall include the weight of the formwork plus the weight of the reinforcement and fresh concrete. Live load shall allow for the weight of the workers and equipment, with allowance for impact, but in no case shall be less than 20 pounds per square foot (98 kg/m²).

3305.3.2.3 Lateral concrete pressure. Design of forms, ties and bracing shall satisfy the minimum lateral pressures of fresh concrete specified in Table 3305.3.2.3.

3305.3.2.4 External lateral loads. Braces and shores shall be designed to resist all external lateral loads, including, but not limited to, wind, cable tensions, inclined supports, dumping of concrete, and starting and stopping of equipment. In no case shall the assumed value of lateral load due to wind, dumping of concrete, and equipment acting in any direction at each floorline be less than 100 plf applied along the edge or 2 percent of total dead load of the floor, whichever is greater. Except for foundation walls that are poured against a rigid backing, wall forms shall be designed for a minimum lateral load of 10 pounds per square foot (49 kg/m²), and bracing for wall forms shall be designed for a lateral load of at least 100 pounds per linear foot (148.8 kilograms per linear meter) of wall, applied at the top. The lateral load acting on walls greater than 14 feet (4267 mm) high shall be determined by analysis of conditions applicable to the site and building.

TABLE 3305.3.2.3
MINIMUM LATERAL PRESSURES TO BE ASSUMED FOR FRESH CONCRETE WEIGHING 150 POUNDS PER CUBIC FOOT ^{a, b, c}

Type of Work	Minimum Lateral Pressure Assumed (psf)	Limitations
Columns: Ordinary work with normal internal vibration	$p = 150 + (9000R/T)$	Maximum 3,000 psf or 150h, whichever is less
Walls: Rate of placement at 7 feet per hour or less	$p = 150 + (9000R/T)$	Maximum 2,000 psf or 150h, whichever is less
Walls: Rate of placement at greater than 7 feet per hour	$p = 150 + (43400/T) + (2800R/T)$	Maximum 2,000 psf or 150h, whichever is less
Slabs	$p = 150h$	None

For SI: 1 inch = 25.4 mm, 1 foot per second = 0.305 m/s, 1 pound per cubic foot = 16.02 kg/m³, 1 pound per square foot = 4.882 kg/m², °C = (°F-32)/1.8.

where:

R = rate of placement, feet per hour.

T = temperature of concrete in the forms, °F.

h = height of fresh concrete above point considered, feet.

- Allowances for change in lateral pressure shall be made for concrete weighing other than 150 pcf; for concrete containing pozzolanic additions or cements other than Type I, for concrete having slumps greater than 6 inches, or for concrete consolidated by revibration or external vibration of forms.
- Where retarding admixtures are employed under hot weather conditions, an effective value of temperature less than that of the concrete in the forms shall be used in the above formula.
- If retarding admixtures are used in cold weather, the lateral pressure may be assumed as that exerted by a fluid weighing 150 pcf.

3305.3.2.5 Special loads. The formwork shall be designed for any special conditions of construction likely to occur, such as asymmetrical placement of concrete, impact of machine-delivered concrete, uplift and concentrated loads.

3305.3.2.6 Shoring and bracing. Shoring and bracing shall comply with Sections 3305.3.2.6.1 through 3305.3.2.6.4.

3305.3.2.6.1 Approval. When patented or commercial devices that are not susceptible to design are used for shoring, bracing, or splicing, they shall be approved by the commissioner.

3305.3.2.6.2 Splices. Splices shall develop the full strength of the spliced members.

3305.3.2.6.3 Bracing. Where shore height exceeds 10 feet (3048 mm), or when necessary to provide structural stability, diagonal bracing shall be provided. Struts, anchored into masonry or to panel joints of adjacent braced bays may be used to prevent buckling of individual members not supported by the diagonal bracing, but bracing an entire tier of shores with struts without diagonal bracing shall be prohibited unless the system can be demonstrated to be braced by other rigid construction.

3305.3.2.6.4 Unbraced length of shores. The unbraced length of shores shall not exceed the maximum length determined in accordance with the requirements of this code for the structural material used.

3305.3.2.7 Foundations. Foundations for shores more than 10 feet (3048 mm) high and supported on the ground shall be designed by a registered design professional.

3305.3.2.8 Settlement. Formwork shall be so constructed that vertical adjustments can be made to compensate for take-up and settlements. Wedges, jacks or other positive means shall be provided for this purpose.

3305.3.3 Formwork inspection and observation. Formwork shall be inspected and observed in accordance with the requirements of Sections 3305.3.3.1 and 3305.3.3.2.

3305.3.3.1 Inspection. Formwork, including shores, reshores, braces and other supports, shall be inspected prior to placement of reinforcing steel to verify that they conform to the construction documents and form design drawings. Such inspections shall be performed by a qualified person designated by the contractor; nothing shall prohibit the concrete safety manager from performing such inspection where so designated. Subsequently, inspections shall be performed by such person periodically during the placement of concrete. During and after concreting, the elevations, camber, and vertical alignment of formwork systems shall be inspected using tell-tale devices. A record of all such inspections shall be kept at the site available to the commissioner. The names of the persons responsible for such inspections and the foreman in charge of the formwork shall be posted in the field office.

3305.3.3.2 Formwork observation. In addition to the inspections by the contractor required pursuant to Section 3305.3.3.1, visual observations of the formwork for the general conformance with the design intent shall be performed by:

1. The formwork designer;
2. An employee of the formwork designer under his or her direct supervision;
3. A registered design professional retained by the formwork designer; or
4. An employee of such retained registered design professional under the direct supervision of such retained registered design professional.

Exceptions: Formwork observation pursuant to Section 3305.3.3.2 shall not be required for:

1. Formwork that does not require design drawings pursuant to Section 3305.3.2.1; and
2. One- two- and three-family dwellings and accessory uses to such buildings.

3305.3.3.2.1 Intervals. Formwork shall be observed at intervals permitting observation of representative configurations throughout the project duration. The formwork designer shall maintain a log of such observations at the construction site. At a minimum, observations shall be made:

1. Immediately after formwork related incidents or violations are issued; and
2. When concrete construction operations are significantly modified such as changes to form materials, concrete placement cycle, or form and support layout prior to use of the change.

3305.3.3.2.2 Discrepancies from the formwork design. Where the individual performing the formwork observation pursuant to Section 3305.3.3.2 discovers a discrepancy from the formwork design, such discrepancy shall be immediately brought to the attention of the concrete contractor. The concrete contractor shall be responsible for correcting the discrepancy. In addition, the site safety manager, site safety coordinator, and concrete safety manager, as applicable, shall be notified of discrepancies from the formwork design that relate to site safety. Follow-up observations to confirm corrective action has been taken shall be made by the formwork designer or his or her qualified designee pursuant to Section 3305.3.3.2.

3305.3.3.2.3 Hazardous formwork conditions. Where an observed formwork condition hazardous to life, safety, or health is not immediately corrected by the responsible contractor, the formwork designer or his or her qualified designee pursuant to Section 3305.3.3.2 shall immediately report such hazardous formwork condition and such failure to correct the hazardous formwork condition to the commissioner.

3305.3.4 Construction. Concrete formwork, including but not limited to forms, shores, and shoring foundations, shall be constructed in conformance with the design drawings, where such drawings are required by Section 3305.3.2.1, and shall also be constructed to comply with the requirements of Sections 3305.3.4.1 through 3305.3.4.5.

3305.3.4.1 Field-constructed lap splices. Field-constructed lap splices, other than approved devices, shall not be used more often than for every other shore under slabs or for every third shore under beams and shall develop the full strength of the members. Such spliced shores shall be uniformly distributed throughout the work. Splices shall not be located near the midheight of the shores unless lateral support is provided, nor midway between points of lateral support.

3305.3.4.2 Vertical shores. Vertical shores incorporated in multi-stage shores shall be set plumb and in alignment with lower tiers so that loads from upper tiers are transferred directly to the lower tiers, or adequate transfer members shall be provided. Provision shall be made to transfer the lateral loads to the ground or to completed construction of adequate strength. Vertical shores shall be so erected that they cannot tilt, and shall have firm bearing. Inclined shores and the bearing ends of all shores shall be braced against slipping or sliding. The bearing surfaces shall be cut square and have a tight fit at splices.

3305.3.4.3 Runways. Runways for moving equipment shall be provided with struts or legs as required and shall be sup-

ported directly on the formwork or structural member and not on the reinforcement.

3305.3.4.4 Unsafe conditions. Any unsafe condition or necessary adjustment revealed by inspection shall be remedied immediately. If, during construction, any weakness develops and the formwork shows any undue settlement or distortion, the work shall be stopped, the affected construction removed if permanently damaged, and the formwork strengthened.

3305.3.4.5 Perimeter formwork. Horizontal formwork deck panels and beam formwork located within 16 feet (4877 mm) from the building perimeter shall be positively attached to all formwork support systems at a minimum.

3305.3.5 Removal of forms and shoring. The removal of forms and shoring shall comply with the requirements of Sections 3305.3.5.1 through 3305.3.5.6.

3305.3.5.1 Removal schedule. Before starting construction, the contractor shall develop a procedure and schedule for removal of shores and installation of reshores and for calculating the loads transferred to the structure during the process.

3305.3.5.1.1 Data and analysis. The structural analysis and concrete strength data used in planning and implementing form removal and reshoring shall be furnished by the registered design professional responsible for the removal schedule to the commissioner when so requested.

3305.3.5.1.2 Support and removal. No construction loads shall be supported on, nor any shoring removed from, any part of the structure under construction except when that portion of the structure in combination with the remaining forming and shoring system has sufficient strength to support safely its weight and the loads placed thereon.

3305.3.5.1.3 Concrete strength. Sufficient strength shall be demonstrated by structural analysis of the proposed loads, the strength of the forming and shoring system, and concrete strength data. Concrete strength data shall be based on tests of field-cured cylinders or, when approved by the commissioner, on other procedures for evaluating concrete strength.

3305.3.5.2 Construction loads. No construction loads exceeding the combination of superimposed dead load plus specified live load shall be supported on any unshored portion of the structure under construction, unless analysis indicates adequate strength to support such additional loads.

3305.3.5.3 Prestressed members. Form supports for prestressed concrete members shall not be removed until sufficient prestressing has been applied to prestressed members to carry their dead load and anticipated construction loads.

3305.3.5.4 Manner of removal. Forms shall be removed in such a manner as to assure the complete safety of the public and property.

3305.3.5.5 Shores support. Where the structure as a whole is supported on shores, beam and girder sides, columns and similar vertical forms may be removed after the concrete is sufficiently hard to withstand damage from the removal. In no case shall the supporting forms or shoring be removed until the members have acquired sufficient strength to support safely their weight and the load thereon.

3305.3.5.6 Control tests. The results of control tests, including concrete cylinder specimens prepared in accordance with ASTM C 31, cast-in-place cores, or other device that will produce test specimens representative of the condition of the concrete in place, of suitable size and proportions, and approved by the registered design professional of record shall be evidence that the concrete has attained sufficient strength or the strength as may be specified on the drawings.

3305.3.6 Reshoring. Reshoring shall be provided to support the construction where forms and shores are stripped before the concrete has attained sufficient strength to support the superimposed loads due to construction above. Reshoring shall comply with Sections 3305.3.6.1 through 3305.3.6.8.

3305.3.6.1 Reshores limitations. Reshores shall comply with the requirements of Sections 3305.3.6.1.1 through 3305.3.6.1.7.

3305.3.6.1.1 Secureness of reshores. Reshores of wood or metal shall be screw adjusted or jacked and locked and wedged to make them secure. Reshores shall not be jacked or screwed so tightly that they preload the floor below or remove the normal deflection of the slab above.

3305.3.6.1.2 Reshores in proximity to unenclosed perimeters. Reshores within 10 feet (3048 mm) of an unenclosed perimeter of a building shall be secured to prevent them from falling off the building.

3305.3.6.1.3 Wedges. Wedges shall not be used within 10 feet (3048 mm) of the façade or at such other locations as determined by the commissioner.

3305.3.6.1.4 Stresses. In no case shall shores be so located as to alter the pattern of stresses determined in the original

structural analysis or to induce tensile stresses where reinforcing bars are not provided.

3305.3.6.1.5 Angle to surface. Reshores shall be perpendicular to the surface that they are supporting.

3305.3.6.1.6 Adjusting devices. Adjusting devices shall not be used if heavily rusted, bent, dented, rewelded or having broken weldments or other defects.

3305.3.6.1.7 Metal shoring and accessory parts. Metal shoring and accessory parts shall be fully operative when in use.

3305.3.6.2 Site safety provisions. Reshoring shall comply with the requirements of Sections 3305.3.6.2.1 through 3305.3.6.2.3.

3305.3.6.2.1 Emergency. Extra shores or material and equipment that might be needed in an emergency shall be furnished.

3305.3.6.2.2 Stripping. Care shall be taken while stripping is underway to insure that material does not fall off the building.

3305.3.6.2.3 Building materials. Building materials shall be properly piled and tied or contained.

3305.3.6.3 Bracing. Lateral bracing shall be provided during reshoring operations, and reshores shall be located as close as practical to the same position on each floor to provide continuous support from floor to floor.

3305.3.6.4 Reshoring beam and girder construction. Where reshoring of beam and girder construction is required, the forms shall not be removed from more than one girder at a time, and the girder shall be reshored before any other supports are removed. After the supporting girders are reshored, the form shall be removed from one beam with its adjacent slabs and the beam shall be reshored before any other supports are removed. Slabs spanning 10 feet (3048 mm) or more shall be reshored along the centerline of the span.

3305.3.6.5 Reshoring flat slabs. Where reshoring of flat-slab construction is required, the formwork cannot be stripped until the concrete has acquired sufficient strength to safely support its weight and the load thereon, or temporary preshores are provided supporting the slab at intervals of no more than 8 feet (2438 mm) on center to be replaced by reshores prior to placing concrete on the floor above. Reshores must be installed and remain in place until the concrete reaches full or sufficient strength to sustain the superimposed loads to which the concrete will be subjected.

3305.3.6.6 Stripping operation. Debris generated as a result of stripping operations shall be immediately contained and removed at reasonable intervals. Stripping operations on concrete structures shall not be performed more than three stories below the story being formed.

3305.3.6.7 Prestressed construction. Solid safety shields shall be provided at end anchorages of prestressing beds, or where necessary, for protection against breakage of prestressing strands, cables, or other assemblies during prestressing or casting operations.

3305.3.6.8 Reshoring schedule. A signed and sealed reshoring schedule shall be provided and maintained at the construction site whenever reshoring is employed.

Exception: A separate reshoring schedule is not required when the required reshoring information is covered on the approved construction documents prepared by the applicant of record.

3305.3.7 Alternate methods. The contractor may submit alternate methods of stripping, shoring, reshoring, and strength control for approval by the registered design professional of record, subject to review by the commissioner.

3305.4 Aluminum erection. In addition to the requirements of Section 2002, the erection of aluminum used for structural purposes shall comply with the requirements of Sections 3305.4.1 through 3305.4.4.

3305.4.1 Plumb. All framework shall be carried up true and plumb.

3305.4.2 Temporary bracing. Temporary bracing shall be provided to support all loads imposed upon the framework during construction that are in excess of those for which the framework was designed.

3305.4.3 Temporary connections. As erection progresses, the work shall be securely bolted or welded to resist all dead loads, wind, and erection stresses.

3305.4.4 Alignment. The structure shall be properly aligned before riveting, permanent bolting, or welding is performed.

3305.5 Masonry erection. The requirements of Section 2104.6 shall apply.

SECTION BC 3306 DEMOLITION

3306.1 Scope. All full demolition and partial demolition operations shall be performed in accordance with the requirements of this section.

3306.2 Protection of pedestrians and adjoining property. Demolition operations shall not commence until the applicable pedestrian and adjoining property protection is in place as required by Sections 3307, 3308 and 3309.

3306.2.1 Safety zone. A safety zone shall be provided around all demolition areas to prevent persons other than workers from entering such zone. Where demolition occurs on the exterior of a building, such zone shall be approved by the commissioner prior to the commencement of demolition. Where mechanical demolition equipment, other than handheld devices, is to be used for the full demolition of a building, the safety zone shall be equal to or greater than half the height of the building to be demolished; such safety zone may be reduced by the same ratio as the building is being demolished.

Exception: Approval of the commissioner is not required for a safety zone established for demolition on the exterior of a building, provided the work is a minor alteration or ordinary repair and is accomplished without any mechanical demolition equipment, other than handheld devices.

3306.3 Notification. The permit holder shall notify the department and adjoining building owners prior to the commencement of full and partial demolition operations in accordance with Sections 3306.3.1 and 3306.3.2.

Exceptions:

1. Notification to the department or adjoining owners is not required for partial demolition operations limited to the interior components of a building provided no mechanical demolition equipment, other than handheld devices, are used.
2. Notification to the department or adjoining owners is not required for partial demolition that occurs on the exterior of a building, provided such work is a minor alteration or ordinary repair, and is accomplished without any mechanical demolition equipment, other than handheld devices.

3306.3.1 Notification of the department. The permit holder shall notify the department via phone or electronically at least 24 hours, but no more than 48 hours prior to the commencement of such work.

3306.3.2 Notification of adjoining property owners. Adjoining property owners shall be notified of upcoming demolition operations in writing not less than 10 days prior to the scheduled starting date of the demolition. The written notice shall provide a description of the work to be performed, the timeframe and schedule, and contact information of the person causing the demolition and of the department. Demolition or removal work that is to be done with the use of explosives shall also be subject to the notification requirements set forth in the *New York City Fire Code*.

3306.4 Mechanical demolition equipment. Where mechanical demolition equipment, other than handheld devices, is to be used in the full or partial demolition of a building or structure, or is to be used to remove debris or move material, approval of the commissioner for the use of the mechanical demolition equipment must be obtained prior to the commencement of demolition operations.

3306.5 Submittal documents for demolition. Full and partial demolition operations shall be conducted in accordance with submittal documents. Such submittal documents shall comply with Sections 3306.5.1 through 3306.5.3.

Exceptions: Section 3306.5 shall not apply to:

1. Demolitions performed as emergency work pursuant to Section 28-215.1 of the *Administrative Code* when such work is monitored by a qualified person with experience in demolition operations who is employed by the city agency that has been directed to perform or arrange for the performance of such work. If the department or such city agency determines that there is a need for supervision of the work by a registered design professional, such city agency shall retain a registered design professional or cause a registered design professional to be retained to supervise the demolition operations.
2. The full demolition of a detached one-, two-, or three-family dwelling, or both halves of a semi-detached one-, two-, or three-family dwelling, or a detached accessory use to a one-, two-, or three-family dwelling, provided such dwelling or accessory use is three stories or fewer in height, and also provided that the demolition is to be accomplished without any mechanical demolition equipment, other than handheld devices.
3. The removal, with mechanical demolition equipment, of foundations and landscaping elements, including but not limited to foundation walls, slabs, stoops, driveways, or pools supporting or accessory to a detached or semi-detached one-, two-,

or three-family dwelling.

4. The full demolition of a fully detached building that is three stories or fewer and with a floor area of 5,000 square feet (464.5 m²) or less per story, provided such demolition is to be accomplished without any mechanical demolition equipment, other than handheld devices.
5. Partial demolition operations accomplished without any mechanical demolition equipment, other than handheld devices, provided such work is a minor alteration or ordinary repair.

3306.5.1 Required documents. Submittal documents shall be approved by the department before demolition work begins. Such submittal documents shall be signed, sealed, and submitted by a registered design professional and shall contain, at a minimum, the following:

1. Plans, sections, and details of the building or portion thereof, to be demolished clearly showing the extent and sequence of the demolition;
2. Bracing and shoring necessary to support all demolition operations, and adjoining ground or structures as needed, through all sequences of the demolition;
3. Where mechanical demolition equipment, other than handheld devices, is to be used, a listing and description of all such proposed equipment to be used in the demolition, including the scope of equipment work and positioning of equipment on the existing structure. The description of the equipment shall include calculations showing the adequacy of the existing structure to support loads imposed by such equipment. If more than one piece of demolition equipment is proposed to be used at the same time, the effect of the simultaneous loads imposed on the existing structure shall be described and investigated; and
4. A description of compliance with the applicable provisions of Section 3306.9 of this code.

Exception: For a partial demolition using mechanical demolition equipment, the bracing and shoring details required by Item 2 above may be included on signed and sealed shop drawings to be kept on site, separate and apart from the submittal documents, provided the allowance for shop drawings is designated on the submittal documents.

3306.5.1.1 Submittal documents for full or partial demolition using mechanical equipment other than handheld. Submittal documents for full or partial demolition using mechanical equipment other than handheld shall be signed, sealed and submitted by a registered design professional.

3306.5.2 Maintenance of submittal documents. The approved set of submittal documents shall be kept at the site at all times and be accessible for inspection in accordance with Section 3301.7. It shall be a violation of this code to use mechanical equipment, whether handheld or other than handheld, to perform full or partial demolitions unless the approved submittal documents required by Section 3306.5.1 are available for inspection. Failure to make submittal documents available on site may result in the issuance of a stop work order.

3306.5.3 Filing requirements. Where submittal documents are required in connection with full or partial demolition in accordance with Section 3306.5, applications shall be filed by the registered design professional in accordance with Article 104 of Chapter 1 of Title 28 of the *Administrative Code* and shall be approved prior to issuance of the work permit.

3306.6 Special inspection. Demolition shall be subject to special inspection in accordance with Chapter 17.

3306.7 Demolition of weakened structures. Where a structure to be demolished has been partially wrecked or weakened by fire, flood, explosion, age, or other causes, it shall be shored or braced to the extent necessary to permit orderly full demolition or partial demolition without collapse. The necessary measures to ensure a safe demolition shall be determined by the owner's registered design professional and shall be approved by the commissioner.

Exception: Shoring or bracing are not required for the full demolition of a building, subject to the approval of the commissioner, provided:

1. The demolition is conducted with mechanical demolition equipment, other than handheld devices; and
2. No demolition operation occurs, or equipment is located, within the structure of the building.

3306.8 Demolition sequence. Any structural member that is being dismembered shall not support any load other than its own weight. No wall, chimney, or other structural part shall be left in such condition that it may collapse or be toppled by wind, vibration or any other cause. The method of removal of any structural member shall not destabilize remaining members. All handling and movement of material or debris shall be controlled such that it will not develop unaccounted impact loads on the structure.

3306.8.1 Structural steel, reinforced concrete, and heavy timber buildings. Structural steel, reinforced concrete, and heavy

timber buildings, or portions thereof, shall be demolished column length-by-column length and tier-by-tier. Structural members shall be chained or lashed in place to prevent any uncontrolled swing or drop.

Exception: Where the design applicant has demonstrated the adequacy of alternate means of demolition through plans, calculations, or the establishment of safety zones, as appropriate, the commissioner may accept such alternative means of demolition.

3306.8.2 Masonry buildings with wooden floors. Demolition of masonry buildings with wooden floors shall comply with the following requirements:

1. Demolition of walls and partitions shall proceed in a systematic manner, and all work above each tier of floor beams shall be completed before any of the supporting structural members are disturbed.
2. Sections of masonry walls shall not be loosened or permitted to fall in such masses as to affect the carrying capacity of floors or the stability of structural supports.
3. No section of wall with a height more than 22 times its thickness shall be permitted to stand without bracing designed by a registered design professional.

3306.9 Safeguards. Demolition shall be conducted in accordance with the requirements of Sections 3306.9.1 through 3306.9.14.

3306.9.1 Utilities and service lines. The requirements of Section 3303.2 shall apply.

3306.9.2 Party wall exits, fire exits. The requirements of Section 3303.9 shall apply.

3306.9.3 Dust. Dust producing operations shall be wetted down to the extent necessary to control the dust.

3306.9.4 Water accumulation. The requirements of Section 3303.14 shall apply.

3306.9.5 Temporary elevators and standpipe systems. The requirements of Sections 3303.8 and 3303.12 shall apply.

3306.9.6 Sprinkler systems. The requirements of Section 3303.7.4 shall apply.

3306.9.7 Use of explosives. The use of explosives in demolition operations shall conform to the requirements and limitations imposed by the *New York City Fire Code* and Section 3312.

3306.9.8 Hazards to be removed. Prior to the commencement of demolition operations, hazards shall be removed in accordance with Sections 3306.9.8.1 through 3306.9.8.4.

3306.9.8.1 Combustible content. Prior to the commencement of demolition operations, the area authorized to be demolished by the work permit shall be thoroughly cleaned of combustible content and debris, including but not limited to building contents and exterior finishes, down to the structural elements.

3306.9.8.2 Asbestos. Prior to the commencement of demolition operations, all asbestos shall be removed from the area authorized to be demolished by the department work permit, and certification to that effect shall be filed with the department and the Department of Environmental Protection. Such asbestos removal shall be in accordance with Section 28-106 of the *Administrative Code* and rules promulgated by the commissioner of the Department of Environmental Protection.

3306.9.8.3 Glass. Prior to the commencement of demolition operations, all glass located in the area authorized to be demolished by the work permit, including but not limited to glass in windows, doors, skylights, and fixtures, shall be removed.

Exception: Demolition operations relating to the alteration, maintenance, or repair of a façade.

3306.9.8.4 Steam and fuel. Prior to the commencement of demolition operations, all pipes, tanks, boilers, or similar devices containing steam or fuel and located in the area authorized to be demolished by the work permit shall be purged of such steam or fuel.

Exception: Pipes, tanks, boilers, or similar devices containing steam or fuel located in the area authorized to be demolished by the work permit and which will not be disturbed during the course of the demolition operation may, in lieu of being purged, be safeguarded so as to prevent their being damaged during the course of demolition operations.

3306.9.9 Stairs. All enclosed vertical shafts and stairs shall be maintained enclosed at all floors except the uppermost floor being demolished, and all work on the uppermost floor shall be completed before stair and shaft enclosures on the floor below are disturbed. All hand rails and banisters shall be left in place until actual demolition of such floor is in progress.

3306.9.10 Floors. The safeguards of Sections 3306.9.10.1 through 3306.9.10.3 shall apply to demolition operations involving floors.

3306.9.10.1 Bearing partitions and headers. No bearing partition shall be removed from any floor until the floor framing system on the floor above has been removed and lowered. All header beams and headers at stair openings and chimneys shall be carefully examined and, where required, shall be shored from the cellar floor through successive floors. All operations shall be continually monitored by a qualified person designated by the permit holder as the work progresses to detect any hazards that may develop.

3306.9.10.2 Floor openings. Openings in any floor shall not aggregate more than 25 percent of the area of that floor unless it can be shown by submission from a registered design professional to the satisfaction of the commissioner that larger openings will not impair the stability of the structure.

3306.9.10.3 Protection of floor openings. Floor openings used for the removal of debris shall comply with Section 3306.9.12.1. Every opening not used for the removal of debris in any floor shall be solidly planked over by planking not less than 2 inches (51 mm) in thickness, or equivalent solid material, and laid close.

3306.9.11 Storage of material. Material shall not be stored on catch platforms, working platforms, floors, or stairways of any structure, except that any one floor of a building to be demolished may be used for the temporary storage of material when such floor can be evaluated by a registered design professional and proven to be of adequate strength to support one and one-half times the load to be superimposed. Such evaluation by the registered design professional shall be maintained by the permit holder and made available to the department upon request.

Storage spaces shall not interfere with access to any stairway or passageway, and suitable barricades shall be provided so as to prevent material from sliding or rebounding into any space accessible to the public. All material shall be safely stored or piled in such storage locations in a manner that will not overload any part of the structure or create any hazard.

3306.9.11.1 Examination of connections. Before any material is stored on any floor, the existing flooring adjacent to bearing walls, shear walls, beams and columns shall be removed and the connections of the floor framing system to the bearing walls, shear walls, beams and columns shall be carefully examined by a competent person designated by the permit holder to ascertain their condition and adequacy to support such material. If the connections are found to be in poor condition or inadequate to support the stored material, no material shall be deposited on the floor until these connections are shored from the cellar floor through each successive floor or otherwise strengthened to safely support such material.

3306.9.11.2 Removal of floor slabs for storage. In buildings of noncombustible construction, floor slabs to an elevation of not more than 25 feet (7620 mm) above the legally established curb level may be removed to provide temporary storage for debris, provided that:

1. The stored debris is piled with sufficient uniformity to prevent lateral displacement of interior walls or columns as determined by a registered design professional.
2. The height of the piled material will not burst the exterior walls due to horizontal loading as determined by a registered design professional.
3. The operation does not otherwise endanger the stability of the structure.

3306.9.11.3 Cellar or basement storage. Debris stored in the cellar or basement shall not be piled above the level of the adjacent exterior grade unless the demolition contractor provides sheet-piling, shoring, bracing, or such other means necessary to insure the stability of the walls and to prevent any wall from collapsing due to horizontal loading created by the debris as determined by a registered design professional. Where debris is stored against a party wall, the requirements of Section 3306.9.11.4 shall also apply.

3306.9.11.4 Examination of party walls. Party walls shall be carefully examined by a competent person designated by the permit holder to ascertain the condition and adequacy of the party wall prior to the placement of any material that will impose a load upon such party wall. If the party wall is to be found to be in poor condition or inadequate to support the stored material, no material shall be deposited on the floor until the party wall is shored or otherwise strengthened as determined by a registered design professional to safely support such material.

3306.9.12 Removal of material. Debris, bricks, and similar material shall be removed through openings in the floors of the structure, or by means of chutes, buckets, or hoists that comply with the provisions of this chapter.

3306.9.12.1 Protection of floor openings. Every opening in a floor used for the removal of debris shall be tightly enclosed with a shaftway, extending from floor to floor, with such shaftway enclosed with:

1. Planking not less than 2 inches (51 mm) in thickness, or equivalent solid material; or
2. Where the opening is used for the removal of noncombustible material, wire mesh may be utilized in lieu of

planking, provided such mesh is not less than number 18 gage wire mesh, with openings in the wire no longer than ½ inch (13 mm), and also provided that the wire mesh is securely attached, in accordance with drawings developed by a registered design professional, to the shaftway so that the wire mesh enclosure in any location does not deflect more than 2 inches (51 mm) when a force of at least 200 pounds (890 n) is applied along any horizontal portion of such wire mesh enclosure.

Exceptions:

1. In buildings not more than six stories in height, a shaftway is not required. Instead openings in the floor shall be solidly planked over while not in use by planking not less than 2 inches (51 mm) in thickness, or equivalent solid material, and laid close.
2. A shaftway is not required at the working deck. Instead, openings in the working deck shall be solidly planked over while not in use by planking not less than 2 inches (51 mm) in thickness, or equivalent solid material, and laid close.

3306.9.12.1 Temporary removal of protection. Wherever such protection required by Section 3306.9.12.1 has been temporarily removed to permit debris removal, the floor opening shall be protected by a guardrail system that meets the requirements of Sections 3308.7.1 through 3308.7.5. Such protection required by Section 3306.9.12.1 shall be promptly replaced in position upon the ceasing of such work at the end of each workday.

3306.9.12.2 Protection of wall openings. In any buildings more than 25 feet high (7620 mm), any window or other exterior wall opening that is within 20 feet (6096 mm) of a floor opening used for the passage of debris from levels above shall be solidly boarded up or otherwise substantially covered, unless such window or opening is so located as to preclude the possibility of any person being injured by material that may fall from such window or opening.

3306.9.13 Rodent extermination. A licensed exterminator shall effectively treat the premises for rodent extermination as per the requirements of the Department of Health and Mental Hygiene.

Exception: Partial demolition operations.

3306.9.14 Chimneys. Where brick or masonry chimneys cannot be safely toppled or dropped, all materials shall be dropped down on the inside of such chimneys.

3306.10 Removal of foundations and slabs. Where a building, or any portion, has been demolished to grade, the floor slab or foundation of such building, or portion, shall be removed and the site backfilled to grade.

Exceptions:

1. Cellar floors may remain provided the cellar floor slab is broken up to the extent necessary to provide ground drainage and prevent accumulation of water, and also provided that all fixtures or equipment that would cause voids in the fill are removed.
2. Where portions, other than a cellar floor, are to remain and covered with backfill, a waiver approved by the commissioner shall be obtained. Drawings prepared by a registered design professional depicting the remaining buried structure shall be submitted with the waiver request.
3. Where a floor slab or foundation is to remain and not be backfilled, a waiver approved by the commissioner shall be obtained. Such request for waiver shall be accompanied by a statement and drawings prepared by a registered design professional demonstrating the necessity for retaining the existing floor slab or foundation for future construction or site remediation, as well as demonstrating positive cellar drainage to an approved place of disposal.

3306.11 Completion of demolition operations. All work required for structural stability and permanent waterproofing of adjacent buildings must be completed prior to demolition sign-off.

**SECTION BC 3307
PROTECTION OF PEDESTRIANS**

3307.1 Scope. Pedestrians shall be protected during construction or demolition activities as required by this section and by the Department of Transportation.

3307.2 Streets, including sidewalks, walkways, and pathways. Streets, including sidewalks, as well as walkways and pathways, either within the public way or within a site, shall meet the requirements of Sections 3307.2.1 through 3307.2.6, and the requirements of the Department of Transportation.

3307.2.1 Obstruction of streets or sidewalks. The requirements of the Department of Transportation shall apply with regard to

the closing of streets or sidewalks, or to the obstruction of any part thereof.

3307.2.2 Temporary public walkway in the street. Where authorized by the Department of Transportation, a temporary walkway open to the public may be provided in the street in front of the site. Such temporary walkway shall be protected in accordance with the requirements of the Department of Transportation.

3307.2.3 Temporary public walkway within the site. Where authorized by the commissioner, a temporary walkway open to the public may be provided through a site that is otherwise fenced and closed to the public. Such temporary walkway shall be:

1. Protected by a sidewalk shed, or where acceptable to the commissioner, provided with overhead protection and lighting equivalent to that afforded by a sidewalk shed;
2. Enclosed along the side facing the site with a solid fence that meets the requirements of Section 3307.7. Where the sidewalk shed or equivalent overhead protection extends beyond the height of the fence, the gap shall be enclosed with a wire screen comprised of not less than number 18 gage wire mesh, or equivalent synthetic netting, with openings in the wire or synthetic mesh no larger than ½ inch (13 mm); and
3. Enclosed along the side facing the street with a wire screen comprised of not less than number 18 gage wire mesh, or equivalent synthetic netting, with openings in the wire or synthetic mesh no larger than ½ inch (13 mm), or where a special hazard exists, protected in accordance with Section 3307.4.7.

3307.2.4 Pathways. Where a means of ingress/egress to the property remains open to the public during the course of construction or demolition, walkways, pathways, and similar areas within the property line that provide a path of travel between the required means of ingress/egress and the public sidewalk or temporary walkway shall remain open.

3307.2.5 Foot bridges. Where foot bridges are utilized as part of a sidewalk, walkway, or pathway, they shall be provided with guardrails for the entire length, and shall have cleats to prevent slipping. Where planks are used to pave the walkway of the foot bridge, the planks shall be laid close and securely fastened to prevent displacement. Planks shall be of uniform thickness, and all exposed ends of ramps shall be provided with beveled fillers to eliminate tripping hazards.

3307.2.6 Requirements for sidewalks, temporary walkways, foot bridges, and pathways. Sidewalks, walkways, foot bridges, and pathways that remain open to the public shall be accessible and shall be provided with:

1. A clear path, free of obstruction, at least 5 feet (1524 mm) in width;
2. A durable walking surface capable of supporting all imposed loads and in no case shall the design live loads be less than 150 pounds per square foot (732.3 kg/m²);
3. Mirrors at all blind corners;
4. For a temporary walkway or foot bridge where there is a change in elevation along the walkway or footbridge, a ramp with a running slope not steeper than one unit vertical in 12 units horizontal (8-percent slope) with a level landing at least 5 feet long at the top and bottom of each run; and
5. For a temporary walkway or foot bridge where the running slope of such walkway or foot bridge is steeper than one unit vertical in 20 units horizontal (5-percent slope) and there is a total rise greater than 6 inches (152 mm), handrails.

Exception: Where it is not possible to provide the clear path to the extent required by item number 1 above, the sidewalk, or pathway shall be kept open to the extent required by the Department of Transportation as well as comply with applicable provisions of the *ADA Accessibility Guidelines for Buildings and Facilities* and/or the *ADA Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way*, as applicable.

3307.3 Sidewalk sheds and fences. Sidewalk sheds shall be provided as required by Section 3307.6. Fences shall be provided as required by Section 3307.7.

3307.4 Warning signs, personnel, and barriers. Warning signs, personnel, or barriers shall be provided to protect the public from hazards generated by construction or demolition activity in or adjacent to a public way as set forth in Sections 3307.4.1 through 3307.4.7.

3307.4.1 Obstructions and openings. Obstructions or openings located in a public way shall be marked and guarded by barriers, flags, or signs in accordance with the requirements of the Department of Transportation.

3307.4.2 Dangerous areas. In areas where special danger to the public exists, including but not limited to vehicle entrances and exits, hoisting areas, points of storage of explosives or highly flammable material, blasting areas, or discharge ends of chutes,

descriptive warning signs shall be provided in accordance with the requirements of the Department of Transportation.

3307.4.3 Vehicular traffic. Whenever any work is being performed over, on, or in close proximity to a highway, street, or similar public way, control and protection of traffic shall be provided by barriers, signals, signs, flagperson, or other devices, equipment, and personnel in accordance with the requirements of the Department of Transportation.

3307.4.4 Areas open to persons other than workers. A flagperson shall be provided whenever intermittent operations are conducted on, or adjacent to, areas open to use by persons other than workers, or when dangerous operations, such as blasting, may affect such areas. Where required by the Department of Transportation, designated personnel shall also be provided in addition to flag persons.

3307.4.5 Additional signs. In addition to the requirements of this section, information panels and signs shall also be provided as required by Sections 3301.9 and 3301.10.

3307.4.6 Prohibited signs. No illuminated business or advertising sign shall be permitted on any protective structure required by this section. Other than as specified in Sections 3301.9 or 3301.10 there shall be no sign, information, pictorial representation, or any business or advertising messages posted on a sidewalk shed, bridge, fence, or other protective structure listed in this section that is erected at the construction or demolition site.

3307.4.7 Work or storage zones. Where work or storage related to the construction or demolition of a building or structure is occurring adjacent to a sidewalk shed or equivalent overhead protection, and such area is not closed with a fence in accordance with Section 3307.7 or a permanent façade, a solid barrier extending at least 4 feet (1219 mm) in height from the level of the ground shall be provided. The space between the top of the barrier and the deck of the overhead protection shall be enclosed with a wire screen comprised of not less than number 18 gage wire mesh, or equivalent synthetic netting, with openings in the wire or synthetic mesh no larger than ½ inch (13 mm).

Exception: In the area where a material hoist, personnel hoist, hoistway, or chute is located, the solid barrier shall extend from level of the ground to the deck of the overhead protection.

3307.5 Watchperson and flagperson. Watchpersons shall be provided as required by Section 3303.3. Flagpersons shall be provided as required by Section 3307.4.

3307.6 Sidewalk sheds. Sidewalk sheds shall be provided as required by this section to protect pedestrians from construction or demolition operations.

3307.6.1 Permit. No sidewalk shed shall be installed without a permit in accordance with the requirements of Chapter 1 of Title 28 of the *Administrative Code*.

3307.6.2 Where required. A sidewalk shed shall be installed and maintained to protect all sidewalks, walkways, and pathways within the property line of a site, and all public sidewalks that abut the property, as follows:

1. When such sidewalk, walkway, or pathway is to be located immediately below a scaffold, mast climber, or chute. The sidewalk shed shall be installed prior to the installation of such equipment and shall not be removed until such equipment has been dismantled and/or removed from the area being protected;
2. When a structure higher than 40 feet (12 192 mm) or greater is to be constructed, and the sidewalk, walkway, or pathway is within a perpendicular distance from the new structure that is equal to or less than half the height of the new structure. The sidewalk shed shall be installed when the structure reaches the planned height of the shed. Such shed shall not be removed until the structure is enclosed, all exterior work has been completed and the sash is glazed above the second story, the façade has been cleaned down, and all exterior chutes, scaffolds, mast climbers, and hoisting equipment have been dismantled and removed from the site;
3. When a portion of a façade over 40 feet (12 192 mm) above curb level is to be constructed, altered, maintained, or repaired, or a vertical or horizontal enlargement is to occur at a height over 40 feet (12 192 mm) above curb level, and the sidewalk, walkway, or pathway is within a perpendicular distance from the structure that is equal to or less than half the height of such façade work or vertical or horizontal enlargement. The sidewalk shed shall be installed prior to the commencement of work at a height greater than 40 feet (12 192 mm) above curb level. Such shed shall not be removed until the building is enclosed, all exterior work has been completed and the sash is glazed above the second story, the façade has been cleaned down, and all exterior chutes, scaffolds, mast climbers, and hoisting equipment have been dismantled and removed from the site; or
4. When a structure higher than 25 feet (7620 mm) is to undergo a full demolition, or when exterior partial demolition, other than that performed in conjunction with the construction, alteration, maintenance, or repair of a façade, is to occur at a height greater than 25 feet (7620 mm) above curb level. The sidewalk shed shall be installed prior to the

commencement of demolition work. Such shed shall remain in place until the building has been razed to the height of the shed, or where the building is not being fully demolished, until all demolition work has been completed and all exterior chutes, scaffolds, mast climbers, and hoisting equipment have been dismantled and removed from the site.

Exceptions: Except where specifically required by the commissioner to protect the public from unique hazards at the site, sidewalk sheds are not required for:

1. Sidewalks, walkways, and pathways that are closed, for their full width, to the public;
2. Temporary walkways in accordance with Section 3307.2.3 that are provided with lighting and overhead protection equivalent to that afforded by a sidewalk shed;
3. Inspections, including a façade inspection, provided no work occurs during the inspection;
4. Sign hanging occurring by or under the direct and continuing supervision of a licensed sign hanger;
5. Window washing;
6. Work confined to the roof of an existing building, provided the edge of the roof is enclosed to a height of 42 inches (1067 mm) with a solid parapet or vertical safety netting meeting the requirements of Section 3308.5; or
7. Subject to the approval of the commissioner, work of limited scope and duration provided that:
 - 7.1 During the course of the work the area immediately under the work zone is temporarily closed to the public by means of barriers, cones, or caution tape, and flagpersons are provided to direct pedestrian traffic;
 - 7.2 At the end of the day the façade of the building is left in a safe condition and fully enclosed; and
 - 7.3 There is compliance with Section 3307.2.1.

3307.6.3 Area to be protected. The decking of the sidewalk shed shall extend the full length of the area that falls within the zone specified in Section 3307.6.2, plus an additional 5 feet (1524 mm) beyond such length, or to within 18 inches (457 mm) of curb line, whichever is less. The decking of the sidewalk shed shall also extend the full width of the sidewalk, walkway, or pathway that remains open to the public, except for a clearance to avoid existing obstructions, not to exceed 18 inches (457 mm) along the curb and not to exceed 1 inch (25 mm) along the face of the building or structure.

Exceptions:

1. Where the sidewalk shed is installed to protect against an unenclosed façade, work, or equipment that is greater than 100 feet (30 480 mm) above the ground, the shed shall protect the full length of the area specified in Section 3307.6.2 plus an additional 20 feet (6096 mm) on both sides beyond such length, or to the curb line, whichever is less.
2. Openings in the deck to avoid tree trunks and branches, provided such opening is brought as close to the tree as practical without damaging the tree.

3307.6.4 Design and construction of sidewalk sheds. Sidewalk sheds shall be designed and constructed in accordance with the requirements of Section 3307.6.4.1 through Section 3307.6.4.11.

3307.6.4.1 Designer. All sidewalk sheds shall be designed by a registered design professional.

Exception: Sidewalk sheds that conform to a design approved by the commissioner or the Board of Standards and Appeals, provided the shed is installed at the site in accordance with the standard design.

3307.6.4.2 Design loads. All sidewalk sheds shall be designed as a heavy duty sidewalk shed to carry a live load of at least 300 pounds per square foot (1464.6 kg/m). However, where the shed is installed to protect from work performed at a height of less than 100 feet (30 480 mm) above the ground, the sidewalk shed may be designed as a light duty sidewalk shed to carry a live load of at least 150 pounds per square foot (732.3 kg/m²), provided that no item is stored or placed upon the shed.

3307.6.4.2.1 Wind and other loads. The effect of wind and other loads on the sidewalk shed, and any item placed or attached on or to the shed, shall be considered in the design in accordance with Chapter 16.

3307.6.4.2.2 Storage. Storage on sidewalk sheds shall be as follows:

1. No item shall be stored or placed upon a sidewalk shed designed as a light duty sidewalk shed under Section 3307.6.4.2.

2. No material shall be stored or placed upon a sidewalk shed designed as a heavy duty sidewalk shed under Section 3307.6.4.2 unless the shed is designed for such storage, with such areas of storage or placement clearly designated on the drawings. Where an item is to be stored or placed upon a heavy duty sidewalk shed, and such storage or placement is not in excess of 150 pounds per square foot (732.3 kg/m²) on any square foot area of the sidewalk shed, the design live load of 300 pounds per square foot (1464.6 kg/m²) need not be increased. Where an item is to be stored or placed upon a heavy duty sidewalk shed, and such storage or placement is in excess of 150 pounds per square foot (732.3 kg/m²) on any square foot area of the sidewalk shed, such shed shall be designed to carry:
 - 2.1 The live load of 300 pounds per square foot (1464.6 kg/m²) required of a heavy duty sidewalk shed; and
 - 2.2 The load of the item to be placed or stored upon the shed, minus 150 pounds per square foot (732.3 kg/m²).

3307.6.4.3 Materials. Sidewalk sheds shall be constructed out of wood, steel, or other material possessing equivalent strength and suitability.

3307.6.4.4 Vertical members and beams. Vertical members and beams of the sidewalk shed shall conform with the following:

1. Vertical members and beams shall be adequately braced and connected to prevent displacement or distortion of the framework.
2. The vertical members of the sidewalk shed shall be plumb, with a tolerance of L/100, with “L” measured as the distance from the ground to the first X-brace or bottom of the beam.
3. Vertical members shall not be placed into the street unless approved by the Department of Transportation and protected in accordance with Department of Transportation requirements.
4. Vertical members placed on the sidewalk shall not be placed closer than 18 inches (455 mm) from the face of the curbline.
5. Vertical members shall be placed at least 7 feet (2134 mm) from the edge of a curb cut or vehicular access point, or where placed closer, the vertical members nearest the curb cut or vehicular access point shall be protected against displacement by vehicles, or shall be identified with high visibility marking.

3307.6.4.5 Deck. The deck of the sidewalk shed shall consist of 2-inch (51 mm) thick wood plank or equivalent material and shall be capable of sustaining the loads required by Section 3307.6.4.2. The deck shall be solid, or shall consist of planking laid close and made tight. Where the edge of the sidewalk shed abuts a building or structure, the decking shall be brought tight to the face of the building or structure.

Exception: Where it is not possible to bring the deck tightly against the face of the building or structure, the deck shall be brought to within 1 inch (25 mm) of the face of the building or structure, with the resulting gap sealed or covered by material of sufficient manner and strength capable of trapping falling debris.

3307.6.4.6 Parapet. A vertical parapet at least 3 feet 6 inches (1067 mm) high, as measured from the deck of the sidewalk shed, shall be constructed along all edges of the sidewalk shed. Such parapet shall consist of solid plywood, corrugated metal, a galvanized wire screen consisting of not less than No. 16 steel wire gage with a ½ inch (13 mm) debris mesh, or other equivalent material, and shall be securely attached to the shed with braced uprights. Temporary removal of a portion of the parapet is permitted for the handling of material, provided the parapet is immediately restored at the end of the handling operation.

Exceptions:

1. A parapet is not required along the edge of the sidewalk shed that abuts a building or structure.
2. A parapet is not required along the edge of a sidewalk shed that abuts an area that is closed to the public.
3. In lieu of a vertical parapet, angled protection of identical construction to a parapet that inclines outward at an angle of 45 degrees (0.79 rad) may be utilized provided such protection is securely attached to the deck, and provided the angled protection extends to a point that intersects a line drawn 3 feet 6 inches (1067 mm) above the level of the deck.

3307.6.4.7 Height. The passageway under the shed shall have a minimum clear ceiling height of 8 feet (2438 mm).

Exception: Lights that extend no more than 8 inches (203 mm) below the level of the deck shall be excluded from the

clear ceiling height measurement.

3307.6.4.8 Lighting. Sidewalk shed lighting shall be in conformance with the following:

1. The underside of sidewalk sheds shall be illuminated at all times either by daylight or electric light. The level of illumination shall be uniformly distributed along the entire length of the shed with a minimum of 1 foot-candle (11 lux) measured at the level of the walking surface with a minimum luminous efficacy of 45 lumens per watt or greater and be rated to operate at temperatures of 5°F (-15°C) and higher.
2. All lamps shall be enclosed in water-resistant and vandal-resistant fixtures, and all lamps, wiring, and accessory components shall conform to the requirements of the *New York City Electrical Code*.
3. Photosensors may be used to control electric lighting according to the amount of daylight available. All photosensors shall be equipped for fail-safe operation ensuring that if the sensor or control fails, the lamps will provide the lighting levels required by this section.

3307.6.4.9 Avoid interference. Sidewalk sheds shall be installed and located so to not unreasonably obstruct, either visually or physically, traffic, curb cuts, vehicular access points, street lighting poles, traffic lights or signs, fire hydrants, fire department connections, water sampling stations, bus shelters, or other street furniture, trees, adjacent show windows, or means of ingress/egress.

3307.6.4.10 Founding. The surface upon which the shed rests shall be capable of supporting the design loads of the sidewalk shed, including any item placed or stored upon the shed.

3307.6.4.11 Color. Sidewalk sheds erected on or after July 1, 2013, shall be painted the color of hunter green.

3307.6.5 Installation, adjustment, maintenance, repair, use, inspection, and removal of sidewalk sheds. Sidewalk sheds shall be installed, adjusted, maintained, repaired, used, inspected, and removed in accordance with the following requirements.

3307.6.5.1 Safe condition. Sidewalk sheds shall be maintained in a safe condition and used in a manner that eliminates hazards to the public. Any hazardous conditions or defects discovered with the sidewalk shed shall immediately be brought to the attention of the permit holder for the shed.

3307.6.5.2 Supervision of installation, adjustment, repair, and removal. The installation, adjustment, repair, or removal of a sidewalk shed shall be performed under the supervision of a competent person designated by the permit holder for the sidewalk shed.

3307.6.5.3 Responsibility for maintenance and use. Sidewalk sheds shall be maintained and used by the general contractor, or where there is no general contractor, the contractor causing the work to be performed, or where there is no active work, the building owner.

3307.6.5.4 Storage or placement of items. No item shall be stored or placed upon a sidewalk shed unless such shed has been designed for such storage or placement in accordance with Section 3307.6.4.2.2. Where such shed has been so designed items shall be stored or placed only in the area designated on the drawings for storage. Any item placed or stored upon a sidewalk shed shall be secured in a manner to prevent dislodgement, displacement by wind, and shall be distributed so as not to exceed the design limits of the sidewalk shed.

3307.6.5.5 Cleaning. The decks of sidewalk sheds shall be broom swept and cleaned of material daily while active work is occurring at the site.

3307.6.5.6 Sharp edges. Where located in an area that could pose a danger to the public, bolts and screws without a cap, and sharp edges, shall be protected to prevent injury to the public.

3307.6.5.7 Installation inspection. Upon completion of the installation of a sidewalk shed, the shed shall be inspected by a qualified person designated by the designer, the permit holder for the shed, or a third party acceptable to both the designer and the permit holder to verify that the sidewalk shed is in a safe condition and has been installed in accordance with drawings and the requirements of this chapter. Following the inspection, the qualified person who inspected the sidewalk shed shall prepare, sign, and date an installation inspection report. A new installation inspection report shall be prepared each time the sidewalk shed is reinstalled at the site.

3307.6.5.8 Periodic inspection. Six months following the initial installation inspection, and every six months thereafter, the sidewalk shed shall be inspected by a qualified person designated by the designer, the permit holder for the shed, or a third party acceptable to both the designer and the permit holder to verify that the sidewalk shed is in a safe condition and is in compliance with drawings and the requirements of this chapter. Following the inspection, the qualified person who inspected the sidewalk shed shall prepare, sign, and date an inspection report.

3307.6.5.9 Inspection following an adjustment or repair. Following a repair or adjustment at a site, the sidewalk shed shall be inspected by a qualified person designated by the designer, the permit holder for the shed, or a third party acceptable to both the designer and the permit holder to verify the adequacy of the repair or adjustment. The results of the inspection shall be recorded, signed, and dated by the person who performed the inspection.

3307.6.5.10 Daily inspection. Sidewalk sheds shall be visually inspected daily by a person designated by the general contractor, or where there is no general contractor, the contractor causing the work to be performed, or where there is no active work, by the building owner to verify:

1. The lights are functioning;
2. No brace or rail is hanging unattached at one or more ends;
3. No portions of the support structure are disconnected;
4. No section of parapet is missing; and
5. All legs remain on their support and are supported to the ground.

Exception: The inspections for a scaffold suspended or supported above a sidewalk shed shall be in accordance with Section 3314.

3307.6.5.10.1 Daily inspection report. A written record of such inspections shall be maintained by the contractor or owner, with such record signed and dated by the person who performed the inspection. Defects discovered as a result of the inspection shall immediately be brought to the attention of the permit holder for the shed.

3307.6.5.11 Notification of removal. The permit holder for the shed shall notify the department no more than two business days following the complete removal of a sidewalk shed.

3307.7 Fences. All sites where a new building is being constructed, or a building is being demolished to grade, shall be enclosed with a fence. Fences shall also be installed to fully or partially enclosed sites, as necessary, where there exists an open excavation, an unenclosed portion of a building accessible at grade, or other hazard to the public. Such fences shall be at least 8 feet (2438 mm) high, built solid for their entire length, out of wood or other suitable material, and shall be returned at the ends to the extent necessary to effectively close off the site.

Exceptions: The commissioner may approve the use of a chain link fence to:

1. Secure a site where work has been interrupted or abandoned and discontinued, and a registered design professional has certified that all construction or demolition equipment and material that pose a hazard to the safety of the public and property have been removed from the site or safely secured. Prior to the resumption of work, the chain link fence shall be replaced by a solid fence meeting the requirements of this section.
2. Secure portions of a site where a one-, two-, or three-family building, or a commercial building 40 feet (12 192 mm) or less in height, is being constructed or demolished and such building is setback at least 15 feet (4572 mm) from sidewalks or spaces accessible to the public and 5 feet (1524 mm) from adjoining buildings or structures.

3307.7.1 Location of fence. Where the fence is installed to fully enclose a site, the fence shall be constructed along the inside edge of the sidewalk or walkway and along the edges of the property line. Where a fence is installed to partially enclose a site, the fence shall be installed as necessary to prevent public access to any excavation or unenclosed portion of the building accessible at grade. Fences shall be installed and located so to not unreasonably obstruct, either visually or physically, traffic, curb cuts, vehicular access points, street lighting poles, traffic lights or signs, fire hydrants, fire department connections, water sampling stations, bus shelters, or other street furniture, trees, or means of ingress/egress.

Exceptions:

1. Fences may encroach onto the sidewalk in accordance with Department of Transportation requirements.
2. A fence is not required to be installed along the party wall of an adjoining property, provided no material is stored along such wall during the course of work.

3307.7.2 Gates. Gates shall be sliding or shall swing into areas not accessible to the public, and shall be provided only where required for access to the site or to facilitate the work. Gates shall consist of the same material and construction as the rest of the fence. Gates shall be kept closed at all times except during actual loading and unloading operations, when individuals or vehicles are actively entering or leaving the site, or as needed to facilitate active work around the gate.

Exception: Where approved by the commissioner, chain link gates may be utilized in a solid fence.

3307.7.3 Viewing panels. Viewing panels shall be provided in solid fences erected on or after July 1, 2013, at a rate one for every 25 linear feet (7.6 m) per frontage, with a minimum of one per frontage. Viewing panels shall be 12 inches by 12 inches (305 by 305 mm) in size and shall be blocked with plexiglass or an equivalent nonfrangible material. The top of the viewing panel shall be located no more than 6 feet (1829 mm) above the level of the ground, and the bottom of the viewing panel shall be located no less than 3 feet (914 mm) above the level of the ground.

3307.7.4 Chain link fences or gates. Where a chain link fence or gate is utilized, the following requirements shall apply:

1. The fence or gate shall be made of new materials or, where salvaged, the fence shall be in good condition;
2. The fence posts shall be of galvanized steel pipe of a diameter that provides rigidity. Posts shall be suitable for setting in concrete footings, for driving into the ground, or for inserting in precast concrete blocks. Such posts shall be spaced in a manner that maintains the required rigidity to form a safe exterior fence;
3. The fence or gate shall be constructed of woven, galvanized steel wire mesh and shall be of sufficient strength and rigidity to prevent access to the site; and
4. The fence or gate shall be covered with an opaque sturdy cloth “windscreen” fabric at all locations. Fabric shall be securely attached to the fence or gate in accordance with manufacturer specifications. The fabric and fence shall be maintained in a neat, rigid and taut appearance.

3307.7.5 Design of fences. Fence installations shall be designed by a registered design professional. The effect of wind on the fence shall be considered in the design in accordance with Chapter 16.

Exceptions:

1. Fences installed in connection with the construction or demolition of a one-, two-, or three-family building.
2. Fences that conform to a standard design approved by the commissioner provided the fence is installed at the site in accordance with the standard design.

3307.7.6 Installation and removal of fences. Fences required by this section shall be installed prior to the commencement of work. Such required fences shall not be removed until:

1. The site has been filled and graded and all hazards to the public removed; or
2. The façade has been enclosed, with all doors and windows installed, and all exterior work, except for incidental work including but not limited to landscaping, painting, weatherproofing, or installation of signs or fixtures, has been completed.

3307.7.7 Condition of fences. All fences shall be installed, adjusted, repaired, and maintained in a sound condition, free of protruding or loose nails, wood, or metal, and with posts in an upright position restrained to prevent the fence from leaning or overturning.

3307.7.8 Color. Fences erected on or after July 1, 2013, shall be painted hunter green.

3307.8 Maintaining Department of Transportation pedestrian protection in place. Notwithstanding other provisions of law, pedestrian protection required by the Department of Transportation shall be maintained in place and kept in good order for the entire length of time pedestrians may be endangered.

3307.9 Removing protection at conclusion of work. Public property shall be left in as good a condition following the completion of the construction or demolition work as it was before such work was commenced. Except where otherwise required by this code, the owner or the owner’s agent shall, upon the completion of the construction or demolition work, immediately remove all sidewalk sheds, fences, guard rails, temporary walkways, material, and other obstructions in or adjacent to the public way.

3307.10 Facilitating city work. In the event a duly authorized city agency must repair, maintain, or install city property, including but not limited to intersection control signs, electrical equipment, traffic signals, lane markings, bus shelters, street lighting, other street furniture, or fire hydrants, at a location where pedestrian protection required by this chapter is located; such pedestrian protection shall be removed as directed by the department of buildings as long as the removal is deemed to be safe and, if necessary, suitable appropriate pedestrian protection that does not interfere with the work of such city agency is installed.

**SECTION BC 3308
PROTECTION OF UNENCLOSED PERIMETERS**

3308.1 Scope. Safety netting systems and guardrail systems shall be provided as required by this section to protect unenclosed perimeters. Except where this section authorizes the temporary removal of unenclosed perimeter protection, no work shall occur, nor

shall materials be stored on any level where required unenclosed perimeter protection is not installed.

3308.2 Permit. A permit is not required for the installation of safety netting systems and guardrail systems that are in accordance with this section. A permit is required for alternative methods granted under Section 3308.8, including but not limited to cocoon systems, climbing formwork, and enclosure panels.

3308.3 Safety netting design and documentation. Safety netting shall be designed and provided with documentation in accordance with Sections 3308.3.1 through 3308.3.5.

3308.3.1 Design. Safety netting systems shall be designed by a registered design professional to meet temporary loads, including but not limited to wind, as prescribed in Chapter 16. The registered design professional shall take the supporting structure into account when designing the installation and shall include details of connections, anchorages, and supports. The minimum loads for vertical net cables required by Section 3308.5.3 need not be added to wind loads in determining the maximum lateral force, but in no event shall the maximum design load for the cables be less than that required by Section 3308.5.3. A reduction in the surface area due to the openings in vertical or horizontal net fabric or partially enclosed perimeter panel is permitted provided that the force at design wind speed is derived from manufacturers' test data or other testing or methods acceptable to the commissioner.

3308.3.2 Site safety plans. Details of the safety netting system shall also be shown on the site safety plan, where such plan is required by Section 3310.

3308.3.3 Make and model. The make and model of vertical and horizontal netting, along with the connections and supports, shall be acceptable to the registered design professional responsible for the design of the safety netting systems in accordance with Section 3308.3.1. The make and model, along with acceptance of the make and model by such registered design professional, shall be indicated as a note on the drawings, or in the form of a signed, sealed, and dated letter from such registered design professional that is kept with the drawings.

3308.3.4 Flame retardant. Vertical and horizontal safety netting shall be flame retardant in accordance with NFPA 701. Documentation of such shall be provided by the manufacturer and shall be noted on the drawings by the registered design professional responsible for the design of the safety netting systems in accordance with Section 3308.3.1, or shall be recorded by such registered design professional in the form of a signed, sealed, and dated letter from such registered design professional, with such letter kept with the drawings.

3308.3.5 Tensile strength. The tensile strength for the structural net utilized in connection with the horizontal safety netting system shall be noted on the drawings by the registered design professional responsible for the design of the safety netting systems in accordance with Section 3308.3.1, or shall be recorded by such registered design professional in the form of a signed, sealed, and dated letter from such registered design professional, with such letter kept with the drawings. Where required by Section 3308.6.3, the strength shall be confirmed by testing; the results of the test shall be documented in the form of a signed, sealed, and dated letter from the registered design professional responsible for the design of the safety netting systems in accordance with Section 3308.3.1. Such letter shall be kept with the drawings.

3308.4 Responsibility and supervision. The permit holder for the project, or where a permit is required by Section 3308.2, the permit holder of such, shall be responsible for complying with the requirements of Section 3308. A competent person designated by such responsible permit holder shall supervise the installation, inspection, adjustment, maintenance, repair, and removal of all safety netting systems and guardrail systems, along with any support, connection, or component, or alternative methods granted under Section 3308.8.

Exception: Where this section requires another entity to perform an inspection.

3308.5 Vertical safety netting systems. Vertical safety netting shall be installed and maintained to cover all unenclosed perimeters.

Exceptions:

1. Vertical safety netting is not required at the:
 - 1.1 Story at grade; or
 - 1.2 The working deck; or
 - 1.3 Any story in concrete construction where the formwork has not been stripped, provided such floor is no more than four stories or 40 feet (12 192 mm) below the working deck; or
 - 1.4 Any story in steel construction where the slab has not been poured.
2. Vertical safety netting is not required at a level where a supported scaffold covers the full width of the unenclosed perimeter, provided the scaffold is decked and flush against the building at such level where the unenclosed perimeter

exists, with no gap between the scaffold and the building greater than 3 inches (76 mm), and also provided that the scaffold is provided with netting and guardrails in accordance with Section 3314.8.

3. Vertical safety netting is not required to protect an unenclosed window opening, provided such window opening is enclosed with a sill not less than 2 feet 6 inches (762 mm) in height and protected with vertical mullions or piers with a maximum opening of 5 feet (1524 mm) and a noncorrosive wire cable capable of withstanding a load of at least 200 pounds (890 n) applied in any direction except upward.
4. Vertical safety netting is not required for a building whose final height will be 4 stories or 40 feet (12 192 mm) or less in height.
5. Vertical safety netting is not required for a minor alteration or ordinary repair.

3308.5.1 Openings. The largest opening area for debris netting when used vertically shall not be larger than 1 square inch (25.4 mm²).

3308.5.2 Height. Where required, vertical safety netting shall extend to cover all openings in the unenclosed perimeter to a height of at least 60 inches (1524 mm) above the floor or, where installed at the roof level, the roof.

3308.5.3 Cables. Vertical safety netting shall be secured to noncorrosive wire cable capable of withstanding a load of at least 200 pounds (90.7 kg) applied in any direction except upward. The cables shall be located at a height of 60 inches (1524 mm), 42 inches (1067 mm), 21 inches (533 mm), and 0 inches (0 mm) above the level of the floor or, where installed at the roof level, the roof. Where the vertical safety netting extends above 60 inches (1524 mm) in height, a cable shall also be placed at the top of the netting, with intermediate cables between the 60 inch (1524 mm) cable and the top cable as needed to satisfy the design requirements of Section 3308.3.

Exceptions: In lieu of a cable:

1. At 60 inches (1524 mm) or above, a toprail made of wood, pipe, or structural angle meeting the requirements of Section 3308.7.3.
2. At 42 inches (1067 mm) and 21 inches (533 mm), midrails made of wood, pipe, or structural angle meeting the requirements of Section 3308.7.3.
3. At 0 inches (0 mm), a toeboard meeting the requirements of Sections 3308.7.2 and 3308.7.3, provided the net is secured to the toeboard.

3308.5.4 Taut systems. Where the vertical safety netting relies upon a taut system, the net and cables shall be maintained taut. A positive tensioning system such as a turnbuckle shall be provided to keep the cable taut.

3308.5.5 Friction connections. Wood installations that utilize a friction connection are not permitted.

3308.5.6 Temporary removal. Vertical safety netting may be temporarily removed in the immediate area where active loading or unloading operations are occurring, or where perimeter work is occurring, provided that:

1. A controlled access zone is established to prevent unauthorized personnel from entering the area where the nets are removed; and
2. Immediately prior to the removal of the nets the floor is broom swept and cleared of all material, equipment, and debris to a distance of at least 10 feet (3048 mm), in all directions, from the area where the vertical nets will be removed.

Exceptions: The following material does not have to be removed to a distance of at least 10 feet (3048 mm), in all directions:

1. Material and equipment related to the loading or unloading operation or perimeter work.
2. Stored materials in accordance with Section 3303.4.5.2.

3308.5.6.1 Restoring nets. The vertical safety nets shall be reinstalled immediately following the end of active loading or unloading operations, or active work, or at the end of the workday, whichever occurs sooner.

3308.5.7 Permanent removal. Vertical safety netting systems may be removed from floors where the façade has been installed and all such openings in the façade, including for windows, have been permanently enclosed to a height of at least 60 inches (1524 mm) above the floor. Vertical safety netting systems may be removed from the roof where the final parapet or guardrail has been installed.

3308.6 Horizontal safety netting systems. Horizontal safety netting shall meet the requirements of Sections 3308.6.1 through

3308.6.4.

3308.6.1 Where required. Horizontal safety netting shall be installed and maintained as follows.

3308.6.1.1 During construction. When, during the course of new building construction, or during the vertical or horizontal enlargement of an existing building, the uppermost walkable floor reaches a height of six stories or 75 feet (22 860 mm) above the level of the ground or an adjoining roof, horizontal safety netting shall be provided at a level not more than two stories or 30 feet (9144 mm) below:

1. In concrete structures: the stripping floor; or
2. In steel structures: at the uppermost story where the concrete floor slab has been poured.

Exception: When tarpaulins encase one or more floors immediately below the finished concrete floor in order to maintain temporary heat, the horizontal netting may be located no more than three floors below the finished concrete floor.

3308.6.1.2 During demolition. When the demolition of the exterior walls or the roof of a building occurs at a height greater than 6 stories or 75 feet (22 860 mm), horizontal safety netting shall be provided at a level not more than two stories or 30 feet (9144 mm) below the story from which the exterior walls and roof are being removed.

Exception: Demolition of exterior walls only for the purposes of the alteration, maintenance, or repair of a façade shall be in accordance with Section 3308.6.1.3.

3308.6.1.3 During façade construction, alteration, maintenance, or repair. Where unique hazards associated with the construction, alteration, maintenance, or repair of a façade exist to the public and property, horizontal safety netting shall be provided as required by the commissioner.

3308.6.1.4 Supported scaffold alternative. In lieu of horizontal safety netting in accordance with Sections 3308.6.1.1 through 3308.6.1.3, a supported scaffold may be utilized provided such supported scaffold covers the full width of the unenclosed perimeter, the scaffold is decked and flush against the building at the level where work is occurring, with no gap between the scaffold and the building greater than 3 inches (76 mm), and also provided that the scaffold is provided with netting and guardrails in accordance with Section 3314.8.

3308.6.1.5 Hoisting area. Where approved by the commissioner, horizontal safety netting may be omitted in designated crane, derrick, or hoisting areas.

3308.6.1.6 Temporary removal. Horizontal safety netting may be temporarily removed in the immediate area where active loading or unloading operations are occurring, or where perimeter work is occurring, or to relocate the nets to a higher level, provided that no concrete work, including formwork placement or stripping, no structural steel placement or assembly, and no work within 10 feet (3048 mm) from an unenclosed perimeter of the building occurs on levels above the horizontal safety netting. Horizontal safety nets shall be reinstalled immediately following the end of active loading or unloading operations, or active work, or at the end of the workday, whichever occurs sooner.

3308.6.1.7 Permanent removal. Horizontal safety netting systems may be permanently removed as follows:

1. Horizontal safety netting systems installed for the construction of a building in accordance with Section 3308.6.1.1 may be removed after all concrete has been poured at the highest level and all concrete stripping work at the highest level has been completed.
2. Horizontal safety netting systems installed for the demolition of a building in accordance with Section 3308.6.1.2 may be removed after the demolition has progressed to within six stories or 75 feet (22 860 mm) above the ground or adjoining roof level.
3. Horizontal safety netting systems installed for façade work in accordance with Section 3308.6.1.3 may be removed after all façade work above the level of the nets has been completed.

3308.6.2 Horizontal safety netting systems requirements. Horizontal safety netting systems shall meet the requirements of Sections 5, 6.3, 6.4, 6.5, 6.6, 7, 8, 10.1, 10.4, 10.5, 10.6, 10.7, 11, and 13 of ANSI/ASSE A10.11, as modified as follows.

3308.6.2.1 Personnel net. Throughout the standard, the term “personnel net” shall be amended to read “structural net.”

3308.6.2.2 Should and shall. Throughout the standard, the term “should” shall be amended to read “shall.”

3308.6.2.3 Entanglement. The phrase, “and to minimize entanglement of the persons head, arms, and legs when arresting the fall,” shall be deleted from Section 6.3 of ANSI/ASSE A10.11.

3308.6.2.4 Arresting a fall. The phrase “when arresting a fall,” shall be deleted from Section 6.4 of ANSI/ASSE A10.11.

3308.6.2.5 Size of debris net openings. Section 6.6 of ANSI/ASSE A10.11 shall be amended by adding a new sentence at the end of the section, as follows, “However, in no case shall the largest opening area for debris netting when used horizontally be larger than ½ square inch (12.7 mm²).”

3308.6.2.6 Projection of nets. The phrase, “as to capture falling personnel” in Section 10.6 of ANSI/ASSE A10.11 shall be amended to read “as to capture falling material.”

3308.6.2.7 Supports. The phrase, “or personnel” in Section 10.7 of ANSI/ASSE A10.11 shall be amended to read, “or material.”

3308.6.2.8 Inspection. Section 11.1 of ANSI/ASSE A10.11 shall be deleted in its entirety and replaced with the following, “Horizontal safety netting systems shall be inspected in accordance with Section 3308.9.3.”

3308.6.2.9 Dates tested. The phrase “Dates inspected” in Item 5 of Section 11.4 of ANSI/ASSE A10.11 shall be amended to read “Dates tested”.

3308.6.2.10 Moving. Section 11.4 of ANSI/ASSE A10.11 shall be amended to add a new Item 9, which shall read, “Dates nets were moved to a higher or lower level.”

3308.6.2.11 Cleaning. Section 13.2 of ANSI/ASSE A10.11 shall be deleted and replaced with the following: “Horizontal safety netting shall not be used for storing material. Horizontal netting shall be cleaned, at least daily, to remove any items that fall into the nets.”

3308.6.3 Tensile strength test. The tensile strength of netting mesh and/or twine of a structural net utilized in conjunction with a horizontal safety netting system shall be confirmed by testing in accordance with ASTM D 5034 or ASTM D 5035. The testing criteria shall be developed by the registered design professional who designed the safety netting system in accordance with Section 3308.3. Such testing shall occur prior to the installation of the net at the site for any net that has previously been used, and for any net that has been installed at the site for two years and every two years thereafter. Nets that do not meet the specified tensile strength as required by Section 3308.3.5 shall not be utilized or shall be replaced.

3308.6.4 Identification of nets. Structural netting shall be identified in accordance with Section 7 of ANSI/ASSE A10.11. Debris netting shall be identified by a letter or other documentation from the manufacturer stating the description and model. The identification for structural netting and debris netting shall be kept at the site until the netting is removed.

3308.7 Guardrail system. A guardrail system shall be installed and maintained to protect all unenclosed perimeters.

Exceptions: A guardrail system is not required at:

1. The story at grade.
2. Levels where vertical safety netting is installed in accordance with Section 3308.5.
3. Levels where a supported scaffold covers the full width of the unenclosed perimeter, provided the scaffold is decked and flush against the building at such level where the unenclosed perimeter exists, with no gap between the scaffold and the building greater than 3 inches (76 mm), and also provided that the scaffold is provided with netting and guardrails in accordance with Section 3314.8.

3308.7.1 Components. Guardrail systems shall include a toprail, midrail, toeboard, and posts.

3308.7.2 Height of railings and toeboard. Toprails, midrails, and toeboards shall be located as follows:

1. The top of the toprail shall be located at a height of 39 to 45 inches (991 and 1143 mm) above the floor.
2. The midrail shall be located at a height approximately midway between the toprail and the floor, or where more than one midrail is utilized, each shall be located equidistant from each other, the floor, and the toprail.
3. The toeboard shall be at least 3 ½ inches (89 mm) high and shall be installed so that there is not more than a ¼ inch (6 mm) gap between the floor and the bottom of the toeboard.

Exception: When conditions warrant, the height of the toprail may exceed the 45-inch (1143 mm) height provided additional midrails are installed so that there is no vertical gap larger than 24 inches (610 mm) between any toeboard, midrail, or toprail.

3308.7.3 Dimensions and materials. Toprails, midrails, toeboards, and posts shall have the following dimensions and be constructed out of the following materials:

1. Toprails shall, at a minimum, consist of:
 - 1.1. 2 inch by 4 inch (51 mm by 102 mm) 1500 foot pounds per square inch (1.05 kgf/mm²) fiber (stress grade) construction grade lumber;
 - 1.2. 1½ inch (38 mm) nominal diameter (Schedule 40) pipe;
 - 1.3. 2 inch by 2 inch by ¾ inch (51 x 51 x 10 mm) structural angle; or
 - 1.4. ¼ inch (6 mm) diameter noncorrosive wire cable made of mild plow steel.
2. Midrails shall, at a minimum, consist of:
 - 2.1. 1 inch by 6 inch (25mm by 152mm) 1500 lb-ft/in² (1.05 kgf/mm²) fiber (stress grade) construction grade lumber;
 - 2.2. 1 ½ inch (38mm) nominal diameter (schedule 40) pipe;
 - 2.3. 2 inch by 2 inch by ¾ inch (51 x 51 x 10 mm) structural angle; or
 - 2.4. ¼ inch (6 mm) diameter noncorrosive wire cable made of mild plow steel.
3. Toeboards shall, at a minimum, consist of:
 - 3.1. 1 inch by 6 inch (25mm by 152mm) lumber; or
 - 3.2. Metal plank at least 3½ inches (89 mm) high.
4. Toprails, midrails, and toeboards shall be securely fastened to upright posts spaced not more than 8 feet (2438 mm) apart. Such posts shall, at a minimum, consist of:
 - 4.1. 2 inch by 4 inch (51 mm by 102 mm) 1500 foot pounds per square inch (1.05 kgf/mm²) fiber (stress grade) construction grade lumber;
 - 4.2. 1½ inch (38mm) nominal diameter (schedule 40) pipe;
 - 4.3. 2 inch by 2 inch by ¾ inch (51 x 51 x 10 mm) structural angle; or
 - 4.4. A building column.

Exceptions:

1. Guardrail systems designed by a registered design professional capable of withstanding, without failure:
 - 1.1. A force of at least 200 pounds (890 n) applied within 2 inches (51 mm) of the top edge, in any outward or downward direction, at any point along the top edge. Where the force is applied in a downward direction, the top edge shall not deflect more than 6 inches (152 mm) and in no case to a height less than 39 inches (991 mm) above the floor; and
 - 1.2. A load of at least 50 pounds (222 n) applied in any downward or horizontal direction at any point along the toeboard.
2. Posts supporting wire cable toprails and midrails, as well as the toeboards utilized in connection with such wire cable toprails and midrails, may be spaced more than 8 feet (2438 mm) apart provided that the posts are spaced such that where a force of 200 pounds (890 n) is applied in a downward direction along the top edge, the top edge shall not deflect more than 6 inches (152 mm) and in no case to a height less than 39 inches (991 mm) above the floor.

3308.7.4 Horizontal gap. The guardrail system shall be installed so that there exists no horizontal gap larger than 1 inch (25 mm) as measured along the perimeter of the building from the edge of the guardrail system to any building column or façade.

3308.7.5 Tensioning system. When made of wire cable, toprails and midrails shall be provided with a positive tensioning system, such as a turnbuckle, to keep the cable taut.

3308.7.6 Dislodgement. Guardrail systems shall be secured to prevent dislodgement by impact or wind.

3308.7.7 Temporary removal. Guardrail systems may be temporarily removed in the immediate area where active loading or unloading operations are occurring, or where perimeter work is occurring, provided that:

1. A controlled access zone is established to prevent unauthorized personnel from entering the area where the guardrail system is removed; and

2. Immediately prior to the removal of the guardrail system the floor is broom swept and cleared of all materials and equipment to a distance of at least 10 feet (3048 mm), in all directions, from the area where the guardrail system will be removed, except for material and equipment related to the loading or unloading operation or perimeter work or stored in accordance with Section 3303.4.5.2.

3308.7.7.1 Restoring guardrails. The guardrail system shall be reinstalled immediately following the end of active loading or unloading operations, or active work, or at the end of the workday, whichever occurs sooner.

Exception: Where material overhangs overnight in accordance with Section 3303.4.5.2.

3308.7.8 Permanent removal. Guardrail systems installed to protect unenclosed perimeters may be removed where vertical safety netting systems meeting the requirements of Section 3308.5 have been installed.

3308.8 Modifications and alternative systems. The commissioner may, based upon a written request from a registered design professional, modify the requirements for safety netting systems and guardrail systems required by this section, including but not limited to the installation of alternative systems, provided such modification or alternative system meets or exceeds the level of safety afforded to the public and property by safety netting systems and guardrail systems installed in accordance with this section.

3308.8.1 Request content. A request submitted under Section 3308.8 shall include:

1. Details of the modification or alternative system to be utilized;
2. Any stipulations;
3. Demonstration that the request meets or exceeds the level of safety afforded to the public and property by safety netting systems and guardrail systems installed in accordance with this section;
4. Where applicable, a description of the practical difficulty of complying with code requirements;
5. Where applicable, a reference to the site safety monitoring program; and
6. Where an alternative system is proposed, a minimum level of inspection in accordance with the recommendations of the manufacturer of the alternative system.

3308.9 Unenclosed perimeter protection inspection, use, adjustment, maintenance, and repair. Safety net systems, guardrail systems, and alternative systems authorized under Section 3308.8 shall be inspected, used, adjusted, maintained, repaired, and replaced in accordance with the design drawings, manufacturer recommendations, and the requirements of this code.

3308.9.1 Safe condition. Safety net systems, guardrail systems, and alternative systems authorized under Section 3308.8 shall be maintained in a safe condition and used in a manner that eliminates hazards to the public and property. Any hazardous conditions or defects discovered with such shall immediately be brought to the attention of the responsible permit holder under Section 3308.4.

3308.9.2 Precautions. Precautions shall be taken to prevent safety net systems, guardrail systems, and alternative systems authorized under Section 3308.8 from being damaged by sunlight, abrasion, sand, rust, welding, cutting operations, chemicals, and airborne contaminants, where such systems are susceptible to damage by such.

3308.9.3 Inspections. Safety net systems, guardrail systems, and alternative systems authorized under Section 3308.8 shall be inspected for compliance with this code and required drawings daily, as well as after each impact loading event, installation, reinstallation, adjustment, maintenance, or repair of such, or any part or component of such. Where the job requires a site safety manager or coordinator in accordance with Section 3310, the inspection shall be performed by the site safety manager or coordinator, and a written record of such inspection maintained as part of the site safety log. Where the job does not require a site safety manager or coordinator, the inspection shall be performed by a competent person designated by the permit holder in accordance with Section 3308.4, with a record of such inspection prepared, initialed, and dated by such competent person.

3308.9.4 Removing from service. Safety net systems, guardrail systems, and alternative systems authorized under Section 3308.8 showing signs of mildew, corrosion, wear, tears, breaks, frays, damage, or deterioration that may substantially affect the strength of such shall be immediately removed from service.

3308.9.5 Repair. Repairs to safety net systems, guardrail systems, and alternative systems authorized under Section 3308.8 shall be in accordance with the specifications of the manufacturer of such and shall provide the original manufacturer factor of safety, or where none exists, shall be repaired in accordance with specifications developed by the registered design professional responsible for the design of the safety netting systems in accordance with Section 3308.3.1.

Exception: Structural nets and debris nets shall not be repaired.

SECTION BC 3309
PROTECTION OF ADJOINING PROPERTY

3309.1 Protection required. Adjoining public and private property, including persons thereon, shall be protected from damage and injury during construction or demolition work in accordance with the requirements of this section. Protection must be provided for footings, foundations, party walls, chimneys, skylights and roofs. Provisions shall be made to control water run-off and erosion during construction or demolition activities.

3309.1.1 Notification. Where a construction or demolition project will require access to adjoining property in accordance with this section, written notification shall be provided to the adjoining property owner at least 60 calendar days prior to the commencement of work. Such notification shall describe the nature of work, estimated schedule and duration, details of inspections or monitoring to be performed on the adjoining property, protection to be installed on the adjoining property, and contact information for the project. Where no response is received, a second written notification shall be made no more than 45 calendar days, and not less than 30 calendar days, prior to the commencement of work.

3309.2 License to enter adjoining property. The responsibility of affording any license to enter adjoining property shall rest upon the owner of the adjoining property involved; and in case any tenant of such owner fails or refuses to permit the owner to afford such license, such failure or refusal shall be a cause for the owner to dispossess such tenant through appropriate legal proceedings for recovering possession of real property. Nothing in this chapter shall be construed to prohibit the owner of the property undertaking construction or demolition work from petitioning for a special proceeding pursuant to Section 881 of the *Real Property Actions and Proceedings Law*.

3309.3 Physical examination. When permission to enter upon adjoining property has been obtained, a physical examination of such property shall be conducted by the person causing the construction or demolition operations prior to the commencement of the operations and at reasonable periods during the progress of the work. Observed conditions shall be recorded by the person causing the construction or demolition operations, and such records shall be made available to the department upon request.

3309.4 Soil or foundation work affecting adjoining property. Whenever soil or foundation work occurs, regardless of the depth of such, the person who causes such to be made shall, at all times during the course of such work and at his or her own expense, preserve and protect from damage any adjoining structures, including but not limited to footings and foundations, provided such person is afforded a license in accordance with the requirements of Section 3309.2 to enter and inspect the adjoining buildings and property, and to perform such work thereon as may be necessary for such purpose. If the person who causes the soil or foundation work is not afforded a license, such duty to preserve and protect the adjacent property shall devolve to the owner of such adjoining property, who shall be afforded a similar license with respect to the property where the soil or foundation work is to be made.

3309.4.1 Additional safeguards during excavation. The following additional requirements shall apply during excavation:

1. The person causing the excavation shall support the vertical and lateral load of the adjoining structure by proper foundations, underpinning, or other equivalent means where the level of the foundations of the adjoining structure is at or above the level of the bottom of the new excavation.
2. Where the existing adjoining structure is below the level of the construction or demolition, provision shall be made to support any increased vertical or lateral load on the existing adjoining structure caused by the construction or demolition.
3. Where the construction or demolition will result in a decrease in the frost protection for an existing foundation below the minimums established in Section 1805.3.1, the existing foundation shall be modified as necessary to restore the required frost protection.

3309.4.2 Support of party walls. Where a party wall will be affected by excavation, regardless of the depth, the person who causes the excavation to be made shall preserve such party wall at his or her own expense so that it shall be, and shall remain, in a safe condition. Where an adjoining party wall is intended to be used by the person causing an excavation to be made, and such party wall is in good condition and sufficient for the uses of the existing and proposed buildings, it shall be the duty of such person to protect such party wall and support it by proper foundations, so that it shall be and remain practically as safe as it was before the excavation was commenced.

3309.4.3 Preconstruction survey. No excavation work to a depth of 5 feet to 10 feet (1524 mm to 3048 mm) within 10 feet (3048 mm) of an adjacent building, or an excavation over 10 feet (3048 mm) anywhere on the site shall commence until the person causing an excavation to be made has documented the existing conditions of all adjacent buildings in a preconstruction survey.

3309.4.4 Monitoring. During the course of excavation work the following shall be monitored in accordance with Section 3309.16:

1. Buildings that are within a distance from the edge of the excavation that is equal to or less than the maximum depth of the excavation.

2. Historic structures that are contiguous to or within a lateral distance of 90 feet (27 432 mm) from the edge of the lot where an excavation is occurring.

Exception: Monitoring is not required for excavations to a depth of five feet (1523 mm) or less, provided:

1. The excavation occurs more than 5 feet (1524 mm) from all footings and foundations; or
2. Where the excavation occurs within five feet (1524 mm) or less from a footing or foundation, such excavation does not occur below the level of the footing or foundation.

3309.4.5 Potential hazard. When, in the opinion of the commissioner, a potential hazard exists as a result of soil or foundation work, elevations of the adjacent buildings shall be recorded or other monitoring procedures shall be implemented by a registered design professional at intervals of 24 hours or less as determined by the commissioner to ascertain if movement has occurred.

3309.5 Underpinning. Whenever underpinning is required to preserve and protect an adjacent property from construction, demolition, or excavation work, the person who causes such work shall, at his or her own expense, underpin the adjacent building provided such person is afforded a license in accordance with the requirements of Section 3309.2 to enter and inspect the adjoining buildings and property, and to perform such work thereon as may be necessary for such purpose. If the person who causes the construction, demolition, or excavation work is not afforded a license, such duty to preserve and protect the adjacent property shall devolve to the owner of the adjoining property, who shall be afforded a similar license with respect to the property where the construction, demolition, or excavation is to be performed.

3309.6 Subsurface operations affecting adjacent properties. Whenever subsurface operations, other than excavation or fill, are conducted that may impose loads or movements on adjoining property, including but not limited to the driving of piles, compaction of soils, or soil solidification, the effects of such operations on adjoining property and structures shall be monitored in accordance with Section 3309.16.

Exception: Monitoring during underpinning shall be in accordance with Section 1814.

3309.6.1 Change in ground water level. Where placement of a foundation will cause changes in the ground water level under adjacent buildings, the effects of such changes on the stability and settlement of the adjacent foundations shall be investigated and provision shall be made to prevent damage to such buildings.

3309.6.2 Potential hazard. When, in the opinion of the commissioner, a potential hazard exists as a result of subsurface operations, elevations of the adjacent buildings shall be recorded by a registered design professional at intervals of 24 hours or less as determined by the commissioner to ascertain if movement has occurred.

3309.7 Retaining structures. When the regulation of a lot requires the ground on such lot to be raised or lowered and kept higher than the ground of the adjoining lot, provided the ground of such adjoining lot is not maintained at a grade lower than in conformity with the street or streets on which it is situated; or where an excavation has been made or a fill placed on any lot meeting the curb level requirements; and the adjoining land is maintained at a grade in conformity with or lower than the streets or streets on which it is situated; and is without permanent structures other than frame sheds or similar structures, a retaining structure shall be constructed for the safe support of adjoining ground, unless the bank between the adjoining properties is maintained at a safe angle of repose. Any necessary retaining wall shall be built and maintained jointly by the owners on each side, unless otherwise agreed to by both owners.

3309.7.1 Surplus retaining structures. Where any owner maintains his or her ground either higher or lower than the legal regulation prescribed in the *Administrative Code*, the surplus retaining structure that may be necessary to support such height or provide for such excavation shall be made at the sole expense of such owner, and any additional thickness that may be required shall be built on the land of such owner.

3309.7.2 Removal of retaining structures. Any retaining structure erected as provided above, standing partly on the land of each owner, may be removed by either owner when the original reason for the erection of such retaining structure ceases to exist.

3309.8 Adjoining walls. When any construction or demolition operation exposes or breaches an adjoining wall, including load bearing and nonload-bearing walls as well as party walls and non party walls, the person causing the construction or demolition operation shall, at his or her own expense, perform the following:

1. Maintain the structural integrity of such walls and adjoining structure, and have a registered design professional investigate the stability and condition of the wall and adjoining structure, and take all necessary steps to protect such wall and structure.
2. Maintain all required fire exits and passageways or provide substitutions meeting the requirements of this code.

3. Cut off close to the walls all beams in party walls, remove stub ends without weakening existing masonry, clean beam pockets of loose mortar, bend over all wall anchors at the beam ends in the standing wall, and brick-up all open beam holes with sound brick and cement mortar.
4. During demolition operations, where the floor beams of the adjacent building bear on the party wall, the person causing the demolition shall ascertain that such beams are anchored into the wall and, where such anchorage is lacking, shall provide anchorage or otherwise brace the standing wall.
5. During demolition operations, all nonload-bearing chimney breasts, projections and any other debris exposed on party walls shall be examined and monitored by the person causing the demolition. Removal of such items shall be made under the supervision of a registered design professional only if the stability of the adjacent building or structure will not be affected. All openings shall be bricked up flush on the exterior side of the party wall. All masonry that is in poor condition shall be pointed and patched.

3309.9 Weatherproof integrity of adjoining buildings. Where the waterproof integrity of an adjoining wall or building has been impaired due to construction or demolition operations, the person causing the construction or demolition operations shall, at his or her own expense, provide all necessary measures to permanently waterproof the adjoining wall or building in order to establish or restore the weatherproof integrity of such adjoining wall or building. This shall include, but is not limited to:

1. Bending over and flashing all roofing material of adjoining buildings;
2. Sealing and permanently waterproofing all doors or other openings in party walls;
3. Properly sealing all cornices, where cut;
4. Pointing up and making waterproof any walls and parapets and any walls that have been disturbed;
5. Removing all exposed furring, lath, and plaster on party walls; and
6. Removing, replacing, and firmly anchoring any loose wall material.

3309.10 Protection of roofs. Whenever any building is to be constructed or demolished above the roof of an adjoining building, it shall be the duty of the person causing such work to protect from damage at all times during the course of such work and at his or her own expense the roof, skylights, other roof outlets, and equipment located on the roof of the adjoining building, and to use every reasonable means to avoid interference with the use of the adjoining building during the course of such work, provided such person causing such work is afforded a license in accordance with the requirements of Section 3309.2 to enter and inspect the adjoining building and perform such work thereon as may be necessary for such purpose; otherwise, the duty of protecting the roof, skylights, other roof outlets, and equipment on the roof of the adjoining building shall devolve upon the owner of such adjoining building.

Adjoining roof protection shall be secured to prevent dislodgement by wind. Where construction or demolition work occurs at a height of at least 48 inches (1219 mm) above the level of the adjoining roof, adjoining roof protection shall consist of 2 inches (51 mm) of flame-retardant foam under 2 inches (51 mm) of flame-retardant wood plank laid tight and covered by flame-retardant plywood, or shall consist of equivalent protection acceptable to the commissioner, and shall extend to a distance of at least 20 feet (508 mm) from the edge of the building being constructed or demolished.

3309.11 Protection of trees. No trees outside the property line within the public right-of-way shall be disturbed or removed without the permission of the commissioner of the department of parks and recreation. Protection meeting the requirements of the department of parks and recreation shall be provided for all such trees, and written notification shall also be made to the department of parks and recreation at least 48 hours prior to commencement of such work.

3309.11.1 Deleterious, caustic, or acid materials. No deleterious, caustic, or acid materials shall be dumped or mixed within 10 feet (3048 mm) of any tree within the public right-of-way, nor shall salt for the removal of ice or snow be applied when runoff will drain to a tree within the public right-of-way.

Exceptions:

1. Mixing, delivery, or placement of concrete from a concrete mixer or concrete truck.
2. Application of de-icing materials as necessary to prevent slipping and tripping hazards in areas accessible to the public during periods where freezing conditions are to be encountered.

3309.12 Protection of chimneys. Any person having the duty to alter or maintain chimneys of any adjoining building under and pursuant to the provisions of this code, the *New York City Mechanical Code*, the *New York City Fuel Gas Code*, or other applicable laws and rules shall be afforded a license in accordance with the requirements of Section 3309.2 to enter and inspect such adjoining building and perform such work thereon as may be necessary for such purpose; otherwise, such duty shall devolve upon the owner of

such adjoining building.

3309.13 Protection of adjoining equipment and spaces. Whenever a major building is constructed or demolished, and provided such work requires a site safety plan in accordance with Section 3310, it shall be the duty of the person causing such work to protect from damage, at all times during the course of such work and at his or her own expense, all mechanical, electrical, and similar equipment on the adjoining property that are within 20 feet (508 mm) from an unenclosed perimeter of the major building, and to protect all publically accessible spaces on the adjoining property that are within 20 feet (508 mm) from an unenclosed perimeter of the major building, and also to use every reasonable means to avoid interference with the use of such equipment and spaces during the course of such construction or demolition work, provided such person causing such work is afforded a license in accordance with the requirements of Section 3309.2 to enter and inspect the adjoining property and perform such work thereon as may be necessary for such purpose; otherwise, the duty of protecting such adjoining equipment and spaces shall devolve upon the owner of such adjoining property.

Exception: Equipment on an adjoining roof shall be protected in accordance with Section 3309.10.

3309.14 Protection of windows. Whenever exterior construction or demolition work occurs, and such work results in an unenclosed perimeter, it shall be the duty of the person causing such work to protect from damage, at all times during the course of such work and at his or her own expense, all windows on adjoining private property that face such work and are 20 feet (508 mm) or less from an unenclosed perimeter, provided such person causing such work is afforded a license in accordance with the requirements of Section 3309.2 to enter and inspect the adjoining property and perform such work thereon as may be necessary for such purpose; otherwise, the duty of protecting the adjoining windows shall devolve upon the owner of such adjoining building.

Where the window provides required means of lighting, ventilation, or egress, such protection shall not be allowed to interfere with such required means.

Exceptions: Window protection is not required for:

1. Minor alterations and ordinary repairs.
2. Work performed on a one-, two- or three-family detached house or accessory use to such.
3. Where all unenclosed perimeters are protected by vertical netting that meets the requirements of Section 3308.5, or an approved alternate system, that extends to cover the full height and width of the unenclosed perimeter; or a supported scaffold covers the full width of the unenclosed perimeter, provided the scaffold is decked and flush against the building at such level where the unenclosed perimeter exists, with no gap between the scaffold and the building greater than 3 inches (76 mm), and also provided that the scaffold is provided with netting and guardrails in accordance with Section 3314.8.

3309.15 Modifications and alternate methods. The commissioner may, based upon a written request from a registered design professional, modify the requirements for adjoining property protection required by this section, including the installation or use of alternative methods, provided such modification or alternative method meets or exceeds the level of surveying, monitoring, inspection, or protection, as applicable, afforded to the public and property by this section, and also provided the insurance requirements of Sections 103 and 105 of Title 28 of the *Administrative Code* are satisfied.

3309.15.1 Request content. A request submitted under Section 3309.15 shall include:

1. Details of the modification or alternative methods to be utilized;
2. Any stipulations;
3. Demonstration that the request meets or exceeds the level of surveying, monitoring, inspection, or protection, as applicable, afforded to the public and property by this section;
4. Where applicable, a description of the practical difficulty of complying with code requirements;
5. Where applicable, a reference to the site safety monitoring program; and
6. Where such request is made because an adjoining property owner has not afforded a license in accordance with the requirements of Section 3309.2, the request shall contain a notarized letter from the owner of the property where the project is to commence, or a duly authorized representative, certifying notification has been made to seek a license in accordance with the requirements of Section 3309.1.1.

3309.16 Monitoring plan. Where monitoring is required by Section 3309, such monitoring shall be in accordance with a monitoring plan developed by a registered design professional and acceptable to the commissioner. The monitoring plan shall be specific to the structures to be monitored and operations to be undertaken, and shall specify the scope and frequency of monitoring, acceptable tolerances, and reporting criteria for when tolerances are exceeded.

SECTION BC 3310
REQUIREMENTS FOR THE CONSTRUCTION OR
DEMOLITION OF MAJOR BUILDINGS

3310.1 Scope. This section shall apply to:

1. The construction of a new major building;
2. The vertical or horizontal enlargement of a major building;
3. The full or partial demolition of a major building;
4. The alteration, maintenance, or repair of a façade of a major building, provided the building is more than 14 stories or 200 feet (60 960 mm) in height and also provided the façade work requires a sidewalk shed to be installed; and
5. Any construction or demolition work, including the alteration, maintenance, or repair of a façade, in a building so designated by the commissioner.

Exception: The requirements of this section shall not apply to partial demolition operations limited to the interior components of a major building provided no mechanical demolition equipment, other than handheld devices, are used.

3310.1.1 Applicability of other laws. Nothing contained herein shall diminish or supersede any other applicable city, state, or federal regulation.

3310.2 Major buildings. See the definition of “Major building” in Section 3302.

3310.3 Site safety plan. No permit shall be issued for the type of work listed in Section 3310.1 until a site safety plan that meets the requirements of Article 110 of Chapter 1 of Title 28 of the *Administrative Code* has been approved by the department.

3310.4 Site safety monitoring program. For a project that requires a site safety plan, the general contractor shall enact and maintain a site safety monitoring program to implement such site safety plan. The site safety monitoring program shall, at a minimum, comply with Sections 3310.5 through 3310.10.

Exception: Subject to the approval of the commissioner, a site safety monitoring program may be waived, reduced, or modified in accordance with Section 3310.11.

3310.5 Site safety manager or coordinator to be designated. One or more site safety managers shall be designated, as necessary, to ensure compliance with the site safety plan and all site safety requirements as specified in this chapter. Such site safety manager or managers shall be designated by the owner, agent, construction manager, or general contractor. All such entities shall agree to designate one such site safety manager as the primary site safety manager, or where there is only one site safety manager, such manager shall automatically be designated as the primary site safety manager. Such site safety manager(s) shall be certified by the department in accordance with Article 402 of Chapter 4 of Title 28 of the *Administrative Code*.

Exception: One or more site safety coordinators, certified by the department in accordance with the requirements of Article 403 of Chapter 4 of Title 28 of the *Administrative Code*, may be designated in lieu of a site safety manager for the construction, vertical or horizontal enlargement, or full or partial demolition of a major building, provided such building:

1. Is less than 15 stories or 200 feet (60 960 mm) in height; and
2. Has a building footprint of 100,000 square feet (30 480 m²) or less.

3310.5.1 Notification to the department of the primary manager or coordinator. The department shall be notified of the primary site safety manager or coordinator prior to the commencement of work. In the event that an alternate site safety manager or coordinator will be acting as the primary site safety manager or coordinator for a period longer than two consecutive weeks, the department must be so notified. Any permanent change of the primary site safety manager or coordinator requires immediate notification to the department.

3310.5.2 Presence at the site. For the construction or alteration of a building, the primary site safety manager or coordinator shall be present at the site during all times while active work is occurring and through all phases of work, beginning with excavation and continuing until the building is enclosed and the sidewalk shed removed.

For the demolition of a building, the primary site safety manager or coordinator shall be present at the site during all times while active work is occurring and through all phases of work, beginning with the removal of any glass, asbestos, or façade and, for a full demolition, continuing until the site has been backfilled to grade, or for a partial demolition until the building is enclosed and the sidewalk shed removed.

Exceptions:

1. The primary site safety manager or coordinator is not required to be present at the site during the following activities, provided no other work is in progress.
 - 1.1 Surveying that does not involve the disturbance of material, structure, or earth;
 - 1.2 Use of a hoist to transport personnel only;
 - 1.3 Use of a material hoist that is fully enclosed within the perimeter of the building;
 - 1.4 Finish trowelling of concrete floors;
 - 1.5 When personnel are provided for temporary heat, light, or water;
 - 1.6 Truck deliveries to the site where the sidewalk is closed and the entrance gate is within that closed sidewalk area.
2. Subject to the approval of the commissioner, the requirement for a site safety manager, or where a site safety coordinator is authorized by this code, a site safety coordinator, may be waived entirely, or reduced to a part time basis with such part time basis determined by the commissioner, in accordance with Section 3310.11.

3310.5.3 Acting primary site safety manager or coordinator. Where the primary site safety manager or coordinator is unable to be at the site, an alternate site safety manager or coordinator shall act as the primary site safety manager or coordinator. Such shall be recorded in the site safety log as required by Section 3310.8.4.2, and where required by Section 3310.5.1 notification shall be provided to the department.

3310.5.4 Limitation on primary site safety manager or coordinator serving at another site. No site safety manager or coordinator designated as the primary site safety manager or coordinator at a site shall serve as a site safety manager or coordinator at any other site.

Exceptions:

1. A site safety manager or coordinator designated as the primary site safety manager or coordinator at a site may serve as a nonprimary site safety manager or coordinator at another site, provided there is no work requiring the presence of such individual in accordance with Section 3310.5.2 occurring at the site for which the individual has been designated as the primary site safety manager or coordinator.
2. Subject to the approval of the commissioner, a site safety manager or coordinator may be designated as the primary site safety manager or coordinator at two or more sites, provided all sites have had their requirement for a primary site safety manager or coordinator reduced by the commissioner to a part time basis in accordance with Section 3310.11.

3310.6 Reserved.

3310.7 Contractor shall inform personnel. General contractors and subcontractors shall state to their directly employed personnel at the construction or demolition site, prior to such directly employed person commencing work at the site, that they are to follow all safety regulations at all times and that they are required to obey and implement all orders and directives relating to safety requirements issued by the general contractor/subcontractor or the general contractor's/subcontractor's designee. Where a site safety manager or coordinator is required, the general contractor or subcontractor shall also state to their directly employed personnel at the site, prior to such directly employed person commencing work at the site, that the site safety manager or coordinator is responsible for monitoring compliance with laws and rules governing site safety; and shall inform their supervisory personnel at the site, prior to such supervisor commencing work at the site, of the name and responsibilities of the site safety manager or coordinator. Nothing in this section shall relieve persons engaged in construction or demolition work from their obligations under this chapter, including but not limited to Sections 3301.1 and 3301.2, and from complying with other applicable provisions of law.

3310.8 Site safety manager's and coordinator's duties. The site safety manager or coordinator shall monitor compliance with the safety requirements of this chapter by performing the duties required by Sections 3310.8.1 through 3310.8.6 and by performing all other safety duties assigned by the owner or general contractor to meet legal requirements.

3310.8.1 Meetings. The site safety manager or coordinator shall, at a minimum, meet on a weekly basis with the designated representative of each subcontractor to ascertain that all subcontractors are complying with the applicable provisions of this chapter.

3310.8.2 Notification of violations. In the event the site safety manager or coordinator discovers violation of this chapter, he or she shall immediately notify the person or persons responsible for creating the violation, whether these persons are employed by the general contractor or by subcontractors. If the site safety manager or coordinator is unable to obtain the cooperation of these persons in correcting the violation, he or she shall immediately inform the direct supervisor of the person or company responsible for creating the violation and request that the supervisor order the necessary corrective action. If such supervisor is not present at the site or is otherwise unavailable, the site safety manager or coordinator shall notify any other supervisory personnel of the permit holder or any other responsible manager or officer of the permit holder. All such violations and corrective work shall be

recorded in the daily log.

3310.8.2.1 Notification of conditions to the department. The site safety manager or coordinator shall immediately notify the department directly if he or she discovers any of the following conditions in the routine performance of the job:

1. A person is operating a crane, derrick or hoisting equipment on the site without a permit and refuses to desist from operating the equipment;
2. A crane is being operated by an unlicensed operator and such unlicensed operator refuses to desist from operating the crane;
3. No flagperson is present during crane operation where required by this chapter;
4. Sidewalk sheds required by the site safety plan are not in place during construction or demolition activity;
5. Permits have not been issued for the sidewalk sheds;
6. The designer and/or supplier of sidewalk sheds has not certified that the sheds have been erected in accordance with the approved drawings;
7. Any accident as defined by this chapter;
8. Required standpipe is not in place at each story below the construction or demolition floor;
9. Required standpipe valves are not in place at each story below the construction or demolition floor;
10. Required standpipe is not capped;
11. Required standpipe is not connected to a water source or fire department connection;
12. Required standpipe fire department hose connection is obstructed;
13. Required standpipe fire department hose connections are not marked by a red light and a sign reading, "Standpipe Connection";
14. A breach exists in the required standpipe risers, cross connections, or fire department connections;
15. The standpipe alarm activates; or
16. When a building over 75 feet (22.86 m) is being constructed or demolished and at least one elevator in a state of readiness or one hoist is not available for Fire Department access per Section 3303.12.

3310.8.2.1.1 Responsibility. Upon proper notification to the department of the existence of any of the above-noted circumstances, any responsibility the site safety manager or coordinator has under this code arising out of, relating to, or as a result of the existence of that circumstance, shall cease.

3310.8.3 Inspections. It shall be the responsibility of the site safety manager or coordinator to inspect personally, on a regular basis throughout the day while active work is occurring, the site to ensure compliance with the requirements of this chapter. At a minimum, inspections shall consist of those prescribed in rules promulgated by the commissioner, with such inspections performed personally by an individual certified by Chapter 4 of Title 28 of the *Administrative Code* as a site safety manager or coordinator.

3310.8.3.1 Site safety manager or coordinator standpipe inspection responsibilities. The site safety manager or coordinator shall, at a minimum, in accordance with rules promulgated by the department, conduct daily checks to ensure that a standpipe system is available and in a state of readiness at all times for use by firefighting personnel, by verifying:

1. That valves are in place at each story below the construction floor;
2. That standpipes are connected to a water source or fire department connection; and
3. That fire department hose connections are free from obstruction and are marked by a red light and sign that reads, "Standpipe Connection."

3310.8.3.1.1 Weekly checks. The site safety manager or coordinator shall also, in accordance with such rules, conduct weekly checks to verify that no breach exists by visually tracing the standpipe, including risers, cross connections and fire department connections.

3310.8.3.1.2 Record of inspections. A record of all such inspections shall be maintained by such site safety manager or coordinator in the site safety log.

3310.8.4 Site safety log. A site safety log shall be maintained and kept at the site. The log, or where there is more than one log, the logs in total, shall, at a minimum, contain the following information:

1. Date and location of inspections performed in accordance with Section 3310.8.3;
2. Date and names of individuals met with to satisfy the requirements of Section 3310.8.1;
3. Any unsafe acts and/or conditions, and dates and locations of said unsafe acts and/or conditions;
4. Companies and representatives notified of unsafe acts and/or conditions;
5. Dates of notification of unsafe acts and/or conditions;
6. Dates of correction of unsafe acts and/or conditions and nature of correction;
7. Any accident as defined by this chapter;
8. Any violations, stop work orders, or summonses issued by the department, including date issued and date lifted or dismissed;
9. Dates and location where horizontal and vertical safety netting have been installed, replaced and/or repaired;
10. Date horizontal safety netting is removed; and
11. Date when building reaches a height of 75 feet (22 860 mm).

3310.8.4.1 Recording inspections in the site safety log. Inspections shall be recorded by the end of the day by the site safety manager or coordinator who performed the inspection. The site safety log, or where there is more than one log, each individual log, shall be completed and signed by the site safety manager or coordinator who performed the inspection and by the site safety manager or coordinator designated as the primary site safety manager or coordinator in accordance with Section 3310.5.1.

Exception: Where a part time site safety manager or coordinator is approved by the commissioner in accordance with Section 3310.11, the site safety manager or coordinator shall sign the log when he or she arrives at the site and leaves the site, and all entries in the site safety log shall be completed and signed prior to leaving the site.

3310.8.4.2 Recording change in site safety manager or coordinator. If at any point during the day an alternate site safety manager or coordinator acts as the primary site safety manager, this shall be noted in the log, and the acting primary site safety manager shall log in. If a site safety manager or coordinator is relieved of his or her responsibilities at the site, or a site safety manager or coordinator leaves the site for any reason, this shall be indicated in the site safety log, and another site safety manager or coordinator shall assume the duties of such relieved or absent site safety manager or coordinator by signing in.

3310.8.5 Permit log. Any equipment brought onto the job that requires permits, as well as a description of the equipment, where it is to be located, permit number, issue and expiration date of the permit, and certificate of inspection, if required, shall be entered on a separate permit log that shall be maintained at the site by the site safety manager or coordinator and kept at the site.

3310.8.6 Reasonable prudence. In addition to the above requirements, the site safety manager or coordinator shall use reasonable prudence to ensure that safety is maintained at the site as job conditions dictate.

3310.9 Additional site safety personnel. The following additional personnel shall be employed to oversee concrete operations at a major building and such other classes of buildings or operations as the commissioner may designate by rule. These personnel shall coordinate directly with the primary site safety manager or coordinator designated in accordance with Section 3310.5.1. In all instances, the designated primary site safety manager or coordinator retains responsibility for ensuring compliance with the provisions of Section 3310 of this code and all applicable rules, and for signing the site safety log. The name and contact information of the additional site safety personnel shall be recorded in the site safety log.

3310.9.1 Concrete safety manager. A concrete safety manager shall be designated by the concrete contractor at those sites where the concrete portion of the project involves the pouring of a minimum of 2,000 cubic yards of concrete or such lesser amount as the commissioner may determine by rule. Concrete safety managers shall have five years of experience in concrete operations and shall have satisfactorily completed, within the five calendar years prior to registration, a thirty hour course approved by the commissioner that is sufficient to qualify the individual as a competent person under OSHA standards to oversee concrete operations, including such topics as formwork design, construction and stripping operations, rebar handling, and rigging. Concrete safety managers shall register with the department in the same manner as construction superintendents, and shall provide evidence of meeting the eligibility requirements set forth herein. No person shall perform the duties of a concrete safety manager without being registered as such with the department. The commissioner shall promulgate rules establishing the

duration that such registration shall be valid and the requirements for renewal of the registration. The concrete safety manager shall be present during all concrete operations. For purposes of this section, “concrete operations” shall mean the pouring of concrete and the construction and stripping of concrete forms and related activities as specified by the commissioner.

****3310.10 Orientation and training.** All workers employed at a major building site shall receive orientation and training as required by this section and section 3321.

**Section 3310.10 was amended by [Local Law 196 of 2017](#). This law has an effective date of October 16, 2017.*

***Section 3310.10.2 and subsections were repealed by [Local Law 196 of 2017](#). These changes went into effect on March 1, 2018.*

***3310.10.1 Orientation.** The requirements of Section 3301.11 shall apply.

**Section 3310.10.1 was amended by [Local Law 206 of 2017](#). This law has an effective date of May 16, 2017.*

3310.11 Modifications to the site safety monitoring program. The commissioner may, based upon a written request from a registered design professional, waive, reduce, or modify the requirements for the site safety monitoring program for a job of a limited scope or duration, provided such waiver, reduction, or modification is not detrimental to the safety of the public and property, or that alternative means of protection for the public and property meeting or exceeding those afforded by this section are provided. A submission under this section may include, but not be limited to, a request to reduce or modify the type or frequency of inspections performed by the site safety manager or coordinator, or to allow a part time site safety manager or coordinator, or to waive the requirement for a site safety manager or coordinator.

3310.11.1 Request content. A request submitted under Section 3310.11 shall include:

1. Details of the modification or alternative methods to be utilized;
2. Any stipulations;
3. A description of the work to be undertaken, for example:
 - 3.1 Type of work;
 - 3.2 Anticipated sequence and schedule;
 - 3.3 The anticipated number of suspended scaffold drops;
 - 3.4 Material handling and hoisting activities to be undertaken and equipment to be utilized;
 - 3.5 The extent of demolition activities and equipment to be utilized;
 - 3.6 Impact on the standpipe or sprinklers;
 - 3.7 Use of welding, torches, or similar equipment;
 - 3.8 Proximity to adjoining buildings or areas accessible to the public.
4. Demonstration that the request is not detrimental to the safety of the public and property, or that alternative means of protection for the public and property meet or exceed those afforded by this section are provided;
5. A description of the practical difficulty of complying with the site safety monitoring program requirements set forth in Section 3310;
6. Where the request is to reduce or modify the type or frequency of inspections performed by the site safety manager or coordinator, a proposed alternative list of site safety inspections;
7. Where the request is to allow a part time site safety manager or coordinator, a proposed schedule for the site safety manager or coordinator, as well as a proposed list of duties and site safety inspections to be performed by the site safety manager or coordinator while he or she is present at the site; and
8. Where the request involves a waiver of the site safety monitoring program or a request to allow a part time site safety manager or coordinator, a signed, dated, and notarized affidavit from a contractor or licensee stating he or she will be responsible for ensuring compliance with the site safety provisions of this code at the site at all times the site safety manager or coordinator is not present, with emergency contact information for such contractor or licensee provided.

SECTION BC 3311 EXPLOSIVE POWERED AND PROJECTILE TOOLS

3311.1 Scope. Explosive powered tools, including but not limited to powder-actuated tools and projectile tools, used in connection with the construction or demolition of a building or structure shall be in accordance with the requirements of this section.

3311.2 Projectile tools. Projectile tools shall comply with the requirements of Sections 3311.2.1 through 3311.2.3.

3311.2.1 Basic requirements. Design and construction of the tool must be such as to safely retain all internal pressures that may occur during its operation. The discharge mechanism shall be such that the projectile cannot be discharged by dropping the tool. The discharge mechanism shall be such that the discharge of each projectile shall be dependent on a separate and distinct act by the operator, and all safety features shall be durable.

A tool shall have such other characteristics as the commissioner may find necessary. Such other characteristics may include devices and materials external to the tool itself but associated with its function, and may also include, in respect to high velocity projectile tools, the basic requirements set forth above for explosive powered tools that discharge projectiles with comparable velocities.

3311.2.2 Maintenance. Every projectile tool shall be properly maintained. No such tool shall be used if any part necessary to retain internal pressures or to prevent accidental discharge of a projectile is not in sound and operable condition.

3311.2.3 Operation. The operation of projectile tools shall comply with the following:

1. A projectile tool shall be operated only by an authorized operator who shall be the owner, lessee, or other person having custody of the tool, or any other person whom he or she may authorize to operate it.
2. While a projectile tool is in the care and custody of an authorized operator, no other person shall handle or in any way utilize or modify it.
3. No authorized operator of a projectile tool shall leave it unattended while it is in a condition to discharge a projectile.
4. No person shall use a projectile tool for any purpose other than that for which it was manufactured.
5. No person shall point a projectile tool at another person or hold it at an angle that allows the projectile to fly free.
6. No person shall use a projectile tool in such a way as to endanger persons who may be in the vicinity.

3311.3 Explosive powered tools. The provisions of ANSI A10.3, as modified in Section 3311.4, shall apply to explosive powered tools, including but not limited to powder-actuated tools. The storage, handling and use of explosives shall also comply with the *New York City Fire Code* and Section 3307.4.2.

3311.4 Modifications to ANSI A10.3. The text of ANSI A10.3 shall be modified as indicated in Sections 3311.4.1 through 3311.4.12.

3311.4.1 ANSI A10.3, Section 4.2.2. Delete Sections 4.2.2.2, 4.2.2.3 and 4.2.2.4 in their entirety and modify Section 4.2.2.1 to read as follows:

4.2.2.1 Medium-velocity tools, indirect-acting (piston) type, as defined in Section 3, shall not be used.

3311.4.2 ANSI A10.3, Section 4.2.3. Delete Sections 4.2.3.2, 4.2.3.3 and 4.2.3.4 in their entirety and modify Section 4.2.3.1 to read as follows:

4.2.3.1 High velocity tools, direct-acting or indirect-acting type, as defined in Section 3, shall not be used.

3311.4.3 ANSI A10.3, Section 4.3. Delete Section 4.3 in its entirety.

3311.4.4 ANSI A10.3, Section 5.5. Add a new section 5.5 to read as follows:

5.5 Selection of load. No employer shall knowingly furnish to an employee for use in a tool any cartridge or load not suitable for safe use in that tool, whether by reason of excessive power, improper design or poor material. The operator shall use due care to select the proper cartridges or power loads, or other means of controlling the force of the explosion so that the tool develops no more than the necessary pressure to bring about the desired penetration. In doing so, the operator shall be guided by the manufacturer's specifications.

5.5.1 Proper load. When doubt exists as to proper load, the operator shall make a trial shot to test the surface and the strength of the material to be penetrated. The trial shot shall be made with the lowest power level and then increasing strength until a proper fastening is made. During this test, the operator and all bystanders shall adhere to all safety rules including but not limited to, wearing goggles and hard hats required for the job.

3311.4.5 ANSI A10.3, Section 7.9. Add the following sentence at the beginning of Section 7.9:

7.9 The operator shall always verify the thickness and type of material into which the stud, pin or fastener is to be driven.

3311.4.6 ANSI A10.3, Section 9.4. Add a new section 9.4 to read as follows:

9.4 Storage of power loads shall be in accordance with the requirements of the *New York City Fire Code* and regulations of the Fire Department.

3311.4.7 ANSI A10.3, Section 10.3.1. Add a new Section 10.3.1 to read as follows:

10.3.1 The authorized instructors' card shall list the specific models of powder-actuated tools for which training may be given.

3311.4.8 ANSI A10.3, Section 10.6. Add a new section 10.6 to read as follows:

10.6 All authorized instructors shall hold a Certificate of Fitness issued by the Fire Department.

3311.4.9 ANSI A10.3, Section 11.4.1. Add a new section 11.4.1 to read as follows:

11.4.1 The qualified operator's card shall list the specific models of powder-actuated tools that may be used.

3311.4.10 ANSI A10.3, Section 11.6. Add a new Section 11.6 to read as follows:

11.6 All qualified operators shall hold a Certificate of Fitness issued by the Fire Department.

3311.4.11 ANSI A10.3, Section 12. Delete Section 12 in its entirety and add a new Section 12 to read as follows:

12 Equipment acceptance.

12.1 Powder-actuated tools using ammunition (power loads) shall be approved by the commissioner or other approved agency.

12.2 Labeling. A certificate or label indicating that the tool is approved shall be attached to the toolbox or operator's manual and shall be made available for inspection upon request of the commissioner.

3311.4.12 ANSI A10.3, Section 13. Add a new Section 13 to read as follows:

13 Fire Department requirements.

13.1 The requirements of the *New York City Fire Code* and regulations of the Fire Department shall apply.

SECTION BC 3312 EXPLOSIVES AND BLASTING

3312.1 General. All handling, transporting, and use of explosives, as defined by the *New York City Fire Code*, shall comply with the *New York City Fire Code* and Section 3307.4.2. The use of explosives is strictly prohibited unless the written consent of the commissioner and the Fire Department is obtained.

Exception: Explosive powered or projectile tools that comply with Section 3311.

SECTION BC 3313 FLAMMABLE AND COMBUSTIBLE MIXTURES, COMPRESSED GASES, AND OTHER HAZARDOUS MATERIALS

3313.1 General. The transportation, handling, storage, installation, connection, ventilation, and use of all volatile flammable oils, flammable and combustible mixtures, compressed gases, and other hazardous materials shall comply with the *New York City Fire Code*, and shall also be safeguarded in accordance with the requirements of Section 3307.4.2.

SECTION BC 3314 SCAFFOLDS

3314.1 Scope. Scaffolds utilized in conjunction with the construction or demolition of a building or structure shall be erected and maintained so that the safety of public and property will not be endangered by falling material or equipment, or by collapse of the scaffold.

3314.1.1 Height. For the purposes of this section, the height of a scaffold shall be measured from the base of the scaffold to the top of the uppermost vertical member of the scaffold, with any temporary structure, but not any permanent structure, on which the scaffold rests included in the height measurement.

3314.2 Permit. Prior to the installation and use of a scaffold, the contractor or licensee who is to install the scaffold, or a designated representative of the installer, shall obtain a permit for such scaffold.

Exceptions:

1. A permit is not required for a two-point suspended scaffold suspended from a parapet using C-hooks.
2. A permit is not required for a suspended scaffold provided:
 - 2.1 The scaffold is installed and used in conjunction with a construction, alteration, or demolition project that holds a valid permit from the department for such project;

- 2.2 The site is closed to the public and enclosed with a fence in accordance with Section 3307; and
- 2.3 The installation, use, and removal of the scaffold is confined within the site or over an area protected by sidewalk sheds or roof protection.
- 3. Window washing equipment that is permanently anchored to the building or structure by a davit.
- 4. A permit is not required for a supported scaffold, provided:
 - 1.1 The scaffold is not an outrigger scaffold (thrust out);
 - 1.2 No hoisting equipment with a manufacturer's rated capacity greater than 2,000 pounds (907kg) will be located on the scaffold;
 - 1.3 The scaffold will not be loaded, or designed to be loaded, in excess of 75 pounds per square foot (366.15 kg/m²); and
 - 1.4 The scaffold is less than 40 feet (12 192mm) in height.

3314.3 Design. Scaffolds shall be designed, as follows.

3314.3.1 Supported scaffolds and outrigger scaffolds (thrust out). Supported scaffolds and outrigger scaffolds (thrust out) shall be designed by a registered design professional. Where the scaffold is to be located upon a sidewalk shed, the requirements of Section 3307.6.4.2.2 shall also apply.

Exception: Design is not required for a supported scaffold, provided:

- 1. The scaffold is not an outrigger scaffold (thrust out);
- 2. No hoisting equipment with a manufacturer's rated capacity greater than 2,000 pounds (907kg) will be located on the scaffold;
- 3. The scaffold will not be loaded, or designed to be loaded, in excess of 75 pounds per square foot (366.15 kg/m²);
- 4. The scaffold is less than 40 feet (12 192mm) in height;
- 5. Side-arm or end-arm scaffold brackets are used exclusively for the support of workers; and
- 6. The scaffold is a light duty scaffold, a medium duty scaffold, or a heavy duty scaffold.

3314.3.2 Suspended scaffolds. Suspended scaffolds shall be designed by a registered design professional.

Exceptions:

- 1. Design is not required for a single tier nonadjustable suspended scaffold whose platform is 40 square feet (12 192 mm) or less in size.
- 2. In lieu of a registered design professional, a two-point, single tier, suspended scaffold may be designed by a licensed rigger provided:
 - 2.1. The scaffold or scaffold outrigger beam or suspension member support structure is not anchored to the building or structure, other than tiebacks; and
 - 2.2. The scaffold will not be loaded, or designed to be loaded, in excess of 75 pounds per square foot (366.15 kg/m²); and either
 - 2.2.1. The scaffold utilizes c-hooks; or
 - 2.2.2. The distance from floor or roof on which the support structure is located to the top of the outrigger beam or suspension member support structure is less than 15 feet (4572 mm).
- 3. In lieu of a registered design professional or a licensed rigger, a two-point, single tier, suspended scaffold meeting the requirements of Item 2 of these exceptions that is used exclusively for sign hanging work may be designed by a licensed sign hanger.

3314.3.3 Drawings. Where design is required by this section, the drawings shall, at a minimum, include a plan view and an elevation view, with full dimensions, detailing:

- 1. The location of the scaffold;

2. Connections and attachments to the base structure, including but not limited to anchorages, fastenings, tie-ins, tie-backs, and lifelines;
3. Any structural modifications required to the base structure;
4. Netting with specific type and manufacturer indicated, overhead protection, or any other equipment attached to the scaffold;
5. Any hoisting equipment located on the scaffold;
6. Platform levels, support centers, and offsets, along with the maximum number of levels to be loaded simultaneously and the maximum loads to be imposed;
7. For a suspended scaffold, ropes, number of clips, and counterweights, as well as outrigger beams or other support devices;
8. For a suspended scaffold that will not be lowered to the street or deck of the sidewalk shed at the end of the shift, how the scaffold will be secured while work is not being performed; and
9. For a supported scaffold, structural members, as well as the founding of the scaffold, including but not limited to sidewalk sheds, floors, roofs, or ground.

3314.3.4 Loads imposed. Where a supported scaffold sits on a sidewalk shed or other temporary structure, the scaffold drawings shall be accompanied by a loads imposed letter signed, sealed, and dated by a registered design professional. The letter shall detail the loads to be imposed by the scaffold onto the base structure and indicate that the registered design professional has reviewed the adequacy of the base structure to sustain the load imposed.

3314.4 Installation, inspection, repair, maintenance, adjustment, use, and removal of scaffolds. Scaffolds shall be installed, inspected, repaired, maintained, adjusted, used, and removed in accordance with the specifications of the manufacturer, where such specifications exist, and the requirements of Sections 3314.4.1 through 3314.4.8.

3314.4.1 Installation and removal. Scaffolds shall be installed and removed in accordance with the requirements of Sections 3314.4.1.1 through 3314.4.1.5.

3314.4.1.1 Supervision of suspended scaffold installation and removal. Suspended scaffolds shall be installed and removed by or under the direct and continuing supervision of a licensed rigger.

Exceptions: In lieu of direct and continuing supervision by a licensed rigger:

1. The installation and removal of a suspended scaffold utilized exclusively for sign hanging work may be performed by or under the direct and continuing supervision of a licensed sign hanger.
2. The installation and removal of a suspended scaffold may be supervised by a competent person designated by the scaffold permit holder, or where there is no scaffold permit holder, designated by the scaffold controlling entity, provided such scaffold is installed and removed in conjunction with:
 - 2.1. The construction of a new building;
 - 2.2. The full demolition of an existing building;
 - 2.3. The vertical or horizontal enlargement of an existing building; or
 - 2.4. The alteration, maintenance, or repair of a façade of a major building where a site safety plan is required by Section 3310.3.
3. The lateral relocation of a wheel or track mounted scaffold and tiebacks may be supervised by a competent person designated by the scaffold controlling entity, provided the design developed by the registered design professional allows for such relocation, and also provided such lateral relocation occurs without the addition or removal of any part, component, attachment, counterweight, anchorage, or connection to the base building or structure, other than tie-backs so long as such tie-backs are placed as designated on the approved plan.

3314.4.1.2 Supervision of supported scaffold installation and removal. The installation and removal of a supported scaffold shall be supervised by a competent person designated by the contractor installing or removing the scaffold.

3314.4.1.3 Supervisor to be present at the site. The licensee or competent person supervising the installation or removal of a scaffold shall be present at the site during all installation and removal work and shall have the ability to communicate with all individuals involved in the installation or removal work. Where only one person is installing or removing a scaffold,

such person shall be deemed to be the supervisor present at the site and must have the qualifications and training required by this chapter to serve as a supervisor for such work.

Exception: The licensed rigger or sign hanger does not have to be present at the site, provided a suspended scaffold foreman is present at the site during all installation and removal work and provided such suspended scaffold foreman has the ability to communicate with all individuals involved in the installation or removal work.

3314.4.1.4 Training. All individuals involved in the installation or removal of a supported scaffold or an adjustable suspended scaffold, including the person supervising such work, shall have been trained as required by Section 3314.4.5.

3314.4.1.5 Notification of adjustable suspended scaffold installation and removal. Prior to the initial installation of the adjustable suspended scaffold at a site, and prior to the final removal of the adjustable suspended scaffold at a site, the department shall be notified at least 24 hours, but not more than 48 hours, prior to such installation or removal. Such notification:

1. Where the installation or removal occurs under the direct and continuing supervision of a licensed rigger or sign hanger, shall be made by such licensee; or
2. Where the installation or removal does not occur under the direct and continuing supervision of a licensed rigger or sign hanger, shall be made by the designer of the scaffold.

3314.4.2 Use of scaffolds. Scaffolds shall be used in accordance with the requirements of Sections 3314.4.2.1 through 3314.4.2.5.

3314.4.2.1 Supervision of suspended scaffold use. Suspended scaffolds shall be used by or under the direct and continuing supervision of a licensed rigger.

Exceptions:

1. In lieu of direct and continuing supervision by a licensed rigger, the use of a suspended scaffold utilized exclusively for sign hanging work may be performed by or under the direct and continuing supervision of a licensed sign hanger.
2. In lieu of direct and continuing supervision by a licensed rigger, the use of a suspended scaffold may be supervised by a competent person designated by the scaffold controlling entity, provided such scaffold is used in conjunction with:
 - 2.1 The construction of a new building;
 - 2.2 The full demolition of an existing building;
 - 2.3 The vertical or horizontal enlargement of an existing building; or
 - 2.4 The alteration, maintenance, or repair of a façade of a major building where a site safety plan is required by Section 3310.3.
3. Where a scaffold is used by or under the direct and continuing supervision of a licensed rigger, a registered design professional who is not in the direct employ of the licensee or business of the licensee may ride on a suspended scaffold to perform inspections provided the registered design professional:
 - 3.1 Does not perform construction, maintenance, repair, or demolition work from the scaffold;
 - 3.2 Does not operate the scaffold; and
 - 3.3 Is familiar with the use of the scaffold, safety equipment, and emergency procedures.
4. Where a scaffold is used by or under the direct and continuing supervision of a licensed rigger, a specialty crew who is not in the direct employ of the licensee or business of the licensee may use the suspended scaffold, provided:
 - 4.1 The work requires a specialty trade, including but not limited to work with hazardous materials or chemicals;
 - 4.2 The crew is in accordance with rules promulgated by the commissioner; and
 - 4.3 The members of the crew are approved by the commissioner.

3314.4.2.2 Supervision of supported scaffold use. The use of a supported scaffold shall be supervised by a competent

person designated by the scaffold controlling entity.

3314.4.2.3 Installer who is not the scaffold controlling entity. Where the contractor or licensee that installed the scaffold is not the scaffold controlling entity, the installer shall have no supervisory responsibility for the use of the scaffold.

3314.4.2.4 Supervisor to be present at the site. The licensee or competent person supervising the use of a scaffold shall be present at the site during all times the scaffold is in use and shall have the ability to communicate with all individuals using the scaffold; however, such supervisor does not need to be on the scaffold.

Exception: The licensed rigger or sign hanger does not have to be present at the site, provided a suspended scaffold foreman is present at the site during all times the scaffold is in use and provided such suspended scaffold foreman has the ability to communicate with all individuals using the scaffold. Such suspended scaffold foreman does not need to be on the scaffold.

3314.4.2.5 Users. All individuals using a supported scaffold or an adjustable suspended scaffold, including the person supervising such use, shall have been trained as required by Section 3314.4.5.

3314.4.3 Inspections. Scaffolds shall be inspected in accordance with the requirements of Sections 3314.4.3.1 through 3314.4.3.6.

3314.4.3.1 Inspection prior to the installation of a suspended scaffold. Prior to the installation of a suspended scaffold, all suspended scaffold support devices, including but not limited to outrigger beams and C-hooks, along with the support surface upon which they rest, shall be inspected by a qualified person. The qualified person shall:

1. Where the installation or removal occurs under the direct and continuing supervision of a licensed rigger or sign hanger, be designated by such licensee; or
2. Where the installation or removal does not occur under the direct and continuing supervision of a licensed rigger or sign hanger, be designated by the designer of the scaffold.

Exception: An inspection is not required for a non-adjustable suspended scaffold that, pursuant to Section 3314.3.2, is not required to be designed.

3314.4.3.1.1 Special provision for parapet clamps. Where parapet clamps are to be utilized, the qualified person who inspects the support surface as required by Section 3314.4.3.1 shall be a registered design professional.

3314.4.3.2 Installation inspection for suspended scaffolds. Upon completion of the installation of a suspended scaffold, the scaffold, all components of and attachments to the scaffold, and all supports and anchorages of the scaffold shall be inspected prior to use to verify that they are in a safe condition and, where design is required, installed in accordance with the design drawings. The individual performing the inspection shall have completed the training required by Section 3314.4.5.3 and shall be:

1. Where the scaffold was designed by a licensed rigger or sign hanger, or installed by or under the direct and continuing supervision of a licensed rigger or sign hanger:
 - 1.1. The licensee; or
 - 1.2. A suspended scaffold foreman; or
2. Where the scaffold was not designed by a licensed rigger or sign hanger, or installed by or under the direct and continuing supervision of a licensed rigger or sign hanger:
 - 2.1. The scaffold designer;
 - 2.2. An employee of the scaffold designer under his or her direct supervision;
 - 2.3. A registered design professional retained by the scaffold designer; or
 - 2.4. An employee of such retained registered design professional under the direct supervision of such retained registered design professional.

Exceptions: An installation inspection is not required for:

1. A nonadjustable suspended scaffold that, pursuant to Section 3314.3.2, is not required to be designed; or
2. The lateral relocation of a wheel or track mounted scaffold and tiebacks, provided the design developed by the registered design professional allows for such relocation, and also provided such lateral relocation occurs without the addition or removal of any part, component, attachment, counterweight, anchorage, or connection

to the base building or structure, other than tie-backs. Following such lateral relocation, the scaffold, and any re-installed tie-back, shall be inspected and documented under the requirements of Section 3314.4.3.4.

3314.4.3.2.1 Installation inspection report. The results of the inspection shall be documented in an installation inspection report signed and dated by the person who performed the inspection. The scaffold shall not be used until it has passed such inspection and the installation inspection report has been completed.

Exception: An installation inspection report is not required for a nonadjustable suspended scaffold that, pursuant to Section 3314.3.2, is not required to be designed.

3314.4.3.3 Installation inspection for supported scaffolds. Upon completion of the installation of a supported scaffold, the scaffold, all components of and attachments to the scaffold, and all supports and anchorages of the scaffold shall be inspected prior to use to verify that they are in a safe condition and, where design is required, installed in accordance with the design drawings. Such inspection shall be performed by a qualified person who has completed the training required by Section 3314.4.5.1 and who is designated by the designer, the installer, or a third party acceptable to both the designer and the installer. The results of the inspection shall be documented in an installation inspection report signed and dated by the person who performed the inspection. The scaffold shall not be used until it has passed such inspection and the installation inspection report has been completed.

Exceptions:

1. Where additional components or attachments are installed to an existing supported scaffold, or where existing deck planking or guardrails are relocated to a different level, the installation inspection and installation inspection report shall be limited to such components or attachments and related anchorages.
2. An inspection and report is not required for a supported scaffold that, pursuant to Section 3314.3.1, is not required to be designed.

3314.4.3.4 Pre-shift inspection for a suspended scaffold. Suspended scaffolds shall be inspected prior to each shift in accordance with a pre-shift inspection checklist that meets the requirements of Section 3314.4.3.4.2. The scaffold shall not be used until it has passed such inspection and the results have been documented on the checklist. The checklist shall be kept at the site by the scaffold controlling entity.

Exception: A pre-shift inspection is not required for a nonadjustable suspended scaffold that, pursuant to Section 3314.3.2, is not required to be designed.

3314.4.3.4.1 Responsibility for performing the inspection and signing the checklist. The inspection required by Section 3314.4.3.4 shall be performed by, and the checklist required by Section 3314.4.3.4.2 shall be signed and dated by, the licensee, suspended scaffold foreman, or competent person who is onsite and responsible for supervising the scaffold under the provisions of Section 3314.4.2.4.

3314.4.3.4.2 Pre-shift inspection checklist contents. The pre-shift inspection checklist shall be based on the manufacturer requirements for the inspection of the scaffold, where such requirements exist, and shall, at a minimum, include an inspection prior to each shift to verify the scaffold remains in a safe condition for use, and shall also include a comprehensive inspection following high winds. Such checklist shall be:

1. Where the scaffold was designed by a licensed rigger or sign hanger, or installed by or under the direct and continuing supervision of a licensed rigger or sign hanger, developed by the licensee; or
2. Where the scaffold was not designed by a licensed rigger or sign hanger, or installed by or under the direct and continuing supervision of a licensed rigger or sign hanger, developed by the registered design professional who designed the scaffold.

Exception: A pre-shift inspection checklist is not required for a nonadjustable suspended scaffold that, pursuant to Section 3314.3.2, is not required to be designed.

3314.4.3.5 Pre-shift inspection for a supported scaffold. Prior to each shift the supported scaffold shall be inspected by the competent person supervising the use of the scaffold in accordance with Section 3314.4.2.2 to verify the scaffold remains in a safe condition for use. The results of the inspection shall be documented in a pre-shift inspection report signed and dated by the person who performed the inspection. The scaffold shall not be used until it has passed such inspection and the pre-shift inspection report has been completed.

Exception: An inspection report is not required for a supported scaffold that is not required to be designed under Section 3314.3.1.

3314.4.3.6 Inspection following a site repair or adjustment. Following a repair or adjustment to a scaffold at a site, the portion adjusted or repaired shall be inspected by the person who supervised the adjustment or repair in accordance with Sections 3314.4.6 or 3314.4.7 to verify the adequacy of such adjustment or repair. A description of the adjustment or repair, and the results of the inspection, shall be recorded, signed, and dated by such supervisor and kept with the inspection report required by Sections 3314.4.3.4 or 3314.4.3.5. The scaffold shall not be used until it has passed such inspection and the results of the inspection have been documented.

Exceptions:

1. The scaffold may be used prior to the inspection where authorized in accordance with Section 3314.4.4.7.
2. An inspection and report is not required for a nonadjustable suspended scaffold that, pursuant to Section 3314.3.2, is not required to be designed.

3314.4.4 Safeguards. The safeguards required by Sections 3314.4.4.1 through 3314.4.4.8 shall be observed at all times.

3314.4.4.1 Safe working order. Scaffolds, all components of and attachments to the scaffold, and all supports and anchorages of the scaffold shall be provided to the site in a safe working order by their respective owner, with no known hazardous conditions, defective repairs, or maintenance problems that could compromise the safety of the public and property.

3314.4.4.2 Loads. At no time shall a scaffold be loaded beyond the capacity of the scaffold or the ground or structure upon which it rests or is supported. Loads shall not be concentrated so as to cause stresses in excess of the allowable values designated for the applicable material described in this code.

3314.4.4.3 Capacity. Each scaffold, and its components, shall be capable of supporting, without failure, its own weight and at least four times the maximum intended load applied or transmitted to it. Where applicable, scaffolds and their connections to the building or structure shall be designed to meet the anticipated loads during construction or demolition work, including wind loads as prescribed in Chapter 16. Each suspension rope, including connecting hardware, used on nonadjustable suspended scaffolds shall be capable of supporting, without failure, at least six times the maximum intended load applied or transmitted to the rope.

3314.4.4.4 Stable and secure. The scaffold and all materials and equipment located on or used from the scaffold shall be kept stable and secure at all times to prevent the scaffold from losing balance, overturning, or collapsing, and to prevent any object from falling from the scaffold.

3314.4.4.5 Dislodgement. Material and equipment susceptible to dislodgment shall not be stored on a scaffold while work is not being performed.

3314.4.4.6 Winds. Where sustained winds or wind gusts at the site exceed 30 miles per hour, the use and operation of scaffolds located on the roof of a building, exterior to a building or structure, on a working deck, or in an area with an unenclosed perimeter shall cease. If the manufacturer or designer of the scaffold recommends work to cease at a lower wind speed, such recommendation shall instead apply. Wind speed shall be determined based on data from the nearest United States weather bureau reporting station, or an anemometer located at the site, freely exposed to the wind, and calibrated in accordance with ASTM D5096-02.

3314.4.4.7 Use during installation, repairs, maintenance, adjustments, or removal. Only personnel, materials, and uses authorized by the person responsible for supervising the installation, repair, maintenance, adjustment, or removal of a scaffold shall be located on and using the scaffold during such work.

3314.4.4.8 Noncombustible construction. With the exception of the planking, the following scaffolds shall be constructed of noncombustible materials:

1. Exterior scaffolds exceeding 75 feet (22 860 mm) in height.
2. Interior scaffolds exceeding 21 feet (6.4 m) in height.
3. All scaffolds used in the alteration, repair, or partial demolition of buildings in Occupancy Groups I-1 to I-4.

3314.4.5 Training. Only those who are qualified to install, adjust, maintain, repair, use, or remove a scaffold, and are trained in accordance with the requirements of this section, shall perform such work or supervise such work. No person shall knowingly permit or cause an individual who does not have the experience and training required by this section to install, adjust, modify, repair, use, or remove a scaffold.

3314.4.5.1 Training for supported scaffold installers, adjusters, repairers, maintainers, inspectors, or removers. Workers who install, adjust, repair, maintain, inspect, or remove a supported scaffold that is 40 feet (12 192 mm) or more in

height, including the person supervising such, shall, at a minimum, have completed a department-approved training program or course that is at least 32 hours long and shall complete a department-approved 8-hour refresher program or course every 4 years thereafter. Workers who install, adjust, repair, maintain, or remove a sidewalk shed that provides a base for a supported scaffold that is 40 feet (12 192 mm) or more in height, including the person supervising such, are subject to the above requirements.

Exceptions:

1. The installation, adjustment, maintenance, repair, or removal of a supported scaffold performed by an employee of a public utility, including the person supervising such, where such supported scaffold is located within the interior of a structure owned or operated by such utility, and when such utility has a training safety program or course of not less than 32 hours for its employees who perform such scaffold work.
2. Where existing supported scaffold deck planking or guardrails are being relocated to a different level of the scaffold in accordance with the design, such may be performed by individuals who have completed the training required by Section 3314.4.5.2.

3314.4.5.2 Training for supported scaffold users. Individuals who use a supported scaffold, including the person supervising such, shall, at a minimum, have completed a department-approved training program or course that is at least 4 hours long and, every four years thereafter, retake the 4-hour training program or course.

Exceptions:

1. Employees of a public utility performing work while using a supported scaffold, including the person supervising such, provided that such employees are trained to be able to recognize the hazards associated with the type of supported scaffold being used and to understand the procedures to control those hazards.
2. A registered design professional who has not completed the training may use a supported scaffold to perform inspections provided the registered design professional does not perform construction, maintenance, repair, or demolition work from the scaffold.

3314.4.5.3 Training for suspended scaffold supervisors. Individuals who exercise supervisory responsibility in accordance with the requirements of Sections 3314.4.1 through 3314.4.4 for the installation, adjustment, repair, maintenance, use, or removal of a suspended scaffold shall, at a minimum, have completed a department-approved training program or course that is at least 32 hours long and, four years following completion of the 32-hour program or course, and every four years thereafter, complete a department-approved 8-hour refresher program or course.

Exception: Individuals supervising the installation, adjustment, modification, repair, use, or removal of a nonadjustable suspended scaffold.

3314.4.5.4 Training for suspended scaffold installers, adjusters, repairers, maintainers, users, inspectors, or removers. Individuals who install, adjust, repair, maintain, use, inspect, or remove a suspended scaffold shall, at a minimum, have completed a department-approved training program or course that is at least 16 hours long and, four years following completion of the 16-hour program or course, and every four years thereafter, complete a department-approved 8-hour refresher program or course.

Exceptions:

1. A registered design professional who has not completed the training may ride on a suspended scaffold to perform inspections provided the registered design professional does not perform construction, maintenance, repair, or demolition work from the scaffold, or operate the scaffold, and provided the registered design professional is familiar with the use of the scaffold, safety equipment, and emergency procedures.
2. Individuals who install, adjust, repair, maintain, use, or remove a nonadjustable suspended scaffold, including the person supervising such use.
3. A person who possesses a valid challenge examination certificate issued prior to January 1, 2014 need not take a new 16-hour initial program or course but shall be required to complete the 8-hour refresher program or course every 4 years, beginning from the date of enactment of this code.

3314.4.5.5 Course providers. Training programs or courses required by this section shall be conducted by a registered New York State Department of Labor apprenticeship training program or by an educational institution or school chartered, licensed or registered by the New York State Department of Education or by a provider approved by the department and presented by an instructor acceptable to the commissioner.

3314.4.5.6 Course curriculums. All training programs or courses required by this section shall be based on the scaffold requirements of this chapter and shall include, but not be limited to, instruction on the type of scaffold the training covers and associated hazards, common causes of scaffold accidents and steps to avoid such accidents, scaffold components, scaffold connections to a structure, scaffold inspection, the maximum intended load and load-handling capacities of scaffolds, and the prevention of overload conditions. Curriculums for scaffold users shall be focused on the proper use of the scaffold. Curriculums for scaffold installers, adjusters, maintainers, repairers, and removers shall be focused on the proper execution of such work. Curriculums in excess of eight hours in length shall include a significant portion of hands-on training.

3314.4.5.7 Evaluation. Successful completion of a training program or course that is more than 4 hours in length shall be based upon a written performance evaluation. For courses that are 16 hours or greater in length, successful completion shall also be based upon passage of a hands-on performance evaluation.

3314.4.5.8 Certificate card. Successful completion of the training program or course shall be evidenced by a wallet size certificate card issued by the training provider and acceptable to the commissioner. Such certificate card shall be readily available to the commissioner upon request and shall contain, at a minimum, the name and photograph of the individual to whom it was issued, as well as any other information required pursuant to rules promulgated by the commissioner for a department approved training course.

3314.4.5.9 Grace period. For individuals who fail to complete the required refresher program or course within any 4 year period, a refresher program or course shall be considered timely if completed within 1 year after the expiration date of the last previously completed initial or refresher program or course. During such period, such individual shall not perform or supervise any activity for which the lapsed training is required to perform or supervise such activity until such individual has successfully completed such refresher program or course. Where more than 1 year has lapsed, such individual shall be required to successfully recomplete the initial training program or course.

3314.4.6 Adjustments. Scaffolds, all components of and attachments to the scaffold, and all supports and anchorages of the scaffold installed at a site shall be adjusted under the supervision of a competent person designated by the contractor or licensee who installed the scaffold. Individuals who perform adjustments, and the person supervising such, shall be trained in accordance with Section 3314.4.5. Following the adjustment, the scaffold shall be inspected in accordance with Section 3314.4.3.6.

Exception: Where a sidewalk shed provides the base for a supported scaffold, the sidewalk shed shall be adjusted in accordance with the requirements of Section 3307.6.

3314.4.7 Repairs. Scaffolds, all components of and attachments to the scaffold, and all supports and anchorages of the scaffold installed at a site shall be repaired under the supervision of a competent person designated by the equipment owner. Individuals who perform repairs, and the person supervising such, shall be trained in accordance with Section 3314.4.5. Following the repair, the scaffold shall be inspected in accordance with Section 3314.4.3.6.

Exceptions:

1. Where a sidewalk shed provides the base for a supported scaffold, the sidewalk shed shall be repaired in accordance with the requirements of Section 3307.6.
2. Components and attachments may be replaced under the supervision of a competent person designated by the contractor or licensee who installed the scaffold.

3314.4.8 Maintenance. Scaffolds, all components of and attachments to the scaffold, and all supports and anchorages of the scaffold installed at a site shall be maintained in a good condition by a qualified person designated by the scaffold controlling entity. Individuals maintaining a scaffold shall have been trained in accordance with Section 3314.4.5. Individuals who maintain an adjustable suspended scaffold hoist shall also have been trained and authorized by the manufacturer of the scaffold hoist. A description of the maintenance shall be recorded, signed, and dated by the person who performed the maintenance and kept with the inspection checklist or report required by Sections 3314.4.3.4 or 3314.4.3.5.

Exceptions:

1. Where a sidewalk shed provides the base for a supported scaffold, the sidewalk shed shall be maintained in accordance with the requirements of Section 3307.6.
2. A description of the maintenance is not required for a nonadjustable suspended scaffold that, pursuant to Section 3314.3.2, is not required to be designed.

3314.5 Platform construction. Platforms on all working levels of a scaffold shall be fully planked or decked between the front uprights and the guardrail system supports in accordance with Sections 3314.5.1 through 3314.5.6.

Exception: Platforms used solely as walkways or used solely by workers installing or removing the scaffold shall be planked to the extent necessary to ensure the safety of the public and property.

3314.5.1 Platform spacing. Each platform unit shall be installed so that the space between adjacent units and the space between the platform and the uprights is no more than 1 inch (25 mm) wide except where a qualified person can demonstrate that a wider space is necessary.

3314.5.2 Maximum span for wood plank. All lumber used in scaffolds or their supports shall be at least equal in strength and quality to construction grade lumber in accordance with Section 2301. See Table 3314.5.2 for the maximum span for scaffold planks.

**TABLE 3314.5.2
MAXIMUM PERMISSIBLE SPANS FOR
2-INCH PLANK USED ON SCAFFOLDS**

MATERIAL	FULL THICKNESS UNDRESSED LUMBER			LUMBER OF NOMINAL THICKNESS		
	25	50	75	25	50	75
Working Load (psf)	25	50	75	25	50	75
Permissible Span (ft)	10	8	6	8	6	5

For SI: 1 inch = 25.4 mm, 1 pound per square foot = 47.88 Pa, 1 foot = 304.8 mm.

3314.5.3 Minimum overhang. The end of a platform shall extend over the centerline of its support a minimum of 6 inches (152 mm) unless cleated or otherwise restrained by hooks or equivalent means.

3314.5.4 Maximum cantilever. The maximum cantilever shall be as follows.

3314.5.4.1 Ten feet or less. The end of a platform 10 feet (3048 mm) or less in length shall not extend over the centerline of its support more than 12 inches (305 mm) unless the platform and its tiedown are designed by a qualified person or the platform has guardrails to prevent access to the cantilevered end.

3314.5.4.2 More than ten feet. The end of a platform more than 10 feet (3048 mm) in length shall not extend over the centerline of its support more than 18 inches (457 mm) unless the platform and its tiedown are designed by a qualified person or the platform has guardrails to prevent access to the cantilevered end.

3314.5.5 Platform tiedown. All platforms shall be tied down or otherwise positively restrained by hooks or equivalent means to prevent dislodgment in all directions.

3314.5.6 Platform deflection. Platforms shall not deflect more than 1/60 of the span when loaded.

3314.6 Footings and anchorage. The footings and anchorage for every scaffold shall be sound and rigid, capable of carrying the maximum load without excessive settlement or deformation and secure against movement in any direction. Supports such as barrels, boxes, loose brick, loose stone, or other unstable materials shall not be used.

3314.6.1 Safe points of anchorage. Safe points of anchorage include structural members of a building. Window washing anchors, window frames, mullions, handrails, standpipes, vents and other piping systems, electrical conduit, counterweights or similar elements shall not be used as anchors or braceback points.

Exception: Window washing anchor points that are part of the base building structure may be utilized as an anchor or braceback point for a scaffold, subject to the approval of the commissioner. The anchor points shall be inspected by a registered design professional prior to use to verify their ability to support all loads imposed. At the end of the job, the anchor points shall be restored to their original condition, any damage repaired, and inspected by a registered design professional to verify such. A report verifying such restoration and inspection shall be prepared by the registered design professional and submitted to the department.

3314.6.2 Lifeline anchorage. Lifeline anchorage shall be fastened to a fixed safe point of anchorage, shall be independent of the scaffold, and shall be protected from sharp edges and abrasion.

3314.6.3 Lifelines and suspension ropes. Lifelines, tiebacks, and suspension ropes shall each be attached to a different point of anchorage.

3314.6.4 Scaffolds supported on structure. Loads from supported and suspended scaffolds imposed on an existing roof or floor or similar structure shall:

1. Not be concentrated so as to cause stresses in excess of the allowable values designated for the applicable material described in this code; or
2. Be distributed with dunnage or shoring so as to prevent such load from exceeding the allowable values designated for the applicable material described in this code.

3314.7 Outrigger beams. Outrigger beams shall be made of structural metal or equivalent strength material and shall be restrained to prevent movement.

3314.7.1 Overhang. The overhang of outrigger beams shall not exceed that specified by the design and the inboard length of beam shall be at least one and one-half times the outboard length unless otherwise designed by a registered design professional.

3314.7.2 Placement. Outrigger beams shall be placed so that the suspension ropes will hang vertically.

3314.7.3 Outrigger beam end of suspension ropes. Suspension ropes shall be securely fastened to the outrigger beams by steel shackles, thimbles, or equivalent means.

3314.7.4 Load end of wire suspension ropes. The load end of wire suspension ropes shall be equipped with proper size thimbles and secured by eyesplicing or equivalent means.

3314.8 Guardrail system and debris netting. The open sides and ends of scaffold platforms shall be provided with a guardrail system that meets the requirements of Section 3314.8.1 and debris netting that meets the requirements of Section 3314.8.2.

Exceptions:

1. A guardrail system and debris netting are not required while the scaffold is being installed or removed but shall be in place before the scaffold is used.
2. A guardrail system and debris netting is not required along the edge of a scaffold facing a building or structure, provided the distance from the edge of the scaffold platform to the face of the building or structure is:
 - 2.1 For an outrigger scaffold, 3 inches (80 mm) or less;
 - 2.2 For a scaffold used in conjunction with plastering and lathing operations, 18 inches (460 mm) or less; or
 - 2.3 For all other scaffolds, 14 inches (360 mm) or less.
3. Notwithstanding the provisions of Sections 3308.6.1.4 and 3314.9.4, debris netting is not required along the perimeter of a scaffold provided such perimeter is set-back from all adjoining property and areas that remain open to the public at a distance that is equal to or greater than half the height of scaffold.
4. Notwithstanding the provisions of Sections 3308.6.1.4 and 3314.9.4, debris netting is not required for a scaffold which does not require a design in accordance with Section 3314.3.

3314.8.1 Guardrail system. Where required by Section 3314.8, the guardrail system for a scaffold shall meet the requirements of Section 3308.7.1 through 3308.7.7.

Exceptions: For the purposes of this section:

1. The term “floor” in Sections 3308.7.1 through 3308.7.7 shall mean “platform.”
2. The height of the toprail, as prescribed in Section 3308.7.2, may be as low as 38 inches (965 mm) in a guardrail system utilized in connection with a scaffold, and such toprail may deflect to a height of not less than 38 inches (965 mm) when designed in accordance with Exception 1 to Section 3308.7.3.
3. Alternate guardrail systems under Exception 1 to Section 3308.7.3 may be designed by the designer of the scaffold or the manufacturer of the scaffold to be capable of withstanding, without failure a force of at least:
 - 3.1. For toprails or equivalent members, a force applied in any downward or horizontal direction at any point along its top edge of at least 100 pounds (445 n) for guardrail systems installed on single-point adjustable suspended scaffolds or two-point adjustable suspended scaffolds, and at least 200 pounds (890 n) for guardrail systems installed on all other scaffolds.
 - 3.2. For midrails, screens, mesh, intermediate vertical members, solid panels, or equivalent members, a force applied in any downward or horizontal direction at any point along the midrail or other member of at least 75

pounds (333 n) for guardrail systems with a minimum 100 pound (445 n) toprail capacity, and at least 150 pounds (666 n) for guardrail systems with a minimum 200 pound (890 n) toprail capacity.

3.3. For toeboards, a force of at least 50 pounds (222 n) applied in any downward or horizontal direction at any point along the toeboard.

4. When intermediate supports, such as ballisters or additional rails are used, they shall not be more than 19 inches (483 mm) apart.

3314.8.2 Debris netting. Where required by Section 3314.8, the scaffold shall be enclosed with a debris netting consisting of a wire screen comprised of not less than number 18 gage wire mesh, or equivalent synthetic netting that is flame retardant in accordance with NFPA 701, with openings in the wire or synthetic mesh no larger than ½ inch (13 mm). Such netting shall be securely attached to the scaffold and shall enclose all open sides, ends, and bottom of the scaffold for the full height of all platform levels where work is occurring, or when on the upper level of a supported scaffold or when on a suspended scaffold, to the height of the toprail. The effect of wind on the netting shall be accounted for in the design of the scaffold, where such design is required by Section 3314.3.

Exception: Netting is not required to protect the bottom of the scaffold platform provided the netting is securely fastened to the scaffold deck and the scaffold platform planks are laid tight or the deck of the scaffold is solid.

3314.9 Supported scaffold. Supported scaffolds shall meet the requirements of Sections 3314.9.1 through 3314.9.4:

3314.9.1 Height-to-base ratio. A supported scaffold with a height-to-base ratio (including outriggers supports, if used) of more than four to one (4:1) shall be restrained from tipping by guying, tying, bracing or equivalent means as follows:

1. Guys, ties or braces shall be installed at locations where horizontal members support both inner and outer legs.
2. Guys, ties, or braces shall be installed according to the manufacturer's recommendations, or as designed in accordance with Section 3314.3, or at a minimum, the first guy, tie or brace shall be installed at a horizontal member and not more than a distance 4 times the least plan dimension from the base support and be repeated vertically at locations of horizontal members every 20 feet (6096 mm) or less thereafter for scaffolds 3 feet (914 mm) wide or less and every 26 feet (7925 mm) or less thereafter for scaffolds greater than 3 feet (914 mm) wide. The top guy, tie, or brace shall be placed no further than four times the least plan dimension from the top. Such guys, ties, or braces shall be installed at each end of the scaffold and at horizontal intervals not to exceed 30 feet (9144 mm) measured from one end (not both) towards each other.
3. Guys, ties, braces, or outriggers shall be used to prevent tipping of supported scaffolds in all circumstances where an eccentric load, such as a cantilevered work platform, is applied or is transmitted to the scaffold.

3314.9.2 Foundation. Supported scaffold poles, legs, posts, frames and uprights shall bear on base plates and mud sills or other adequate firm foundation to distribute the weight of the scaffold into the ground, structure, or sidewalk shed upon which it rests.

3314.9.3 Plumb. Supported scaffold poles, legs, posts, frames, and uprights shall be plumb and braced to prevent swaying and displacement. The tolerance shall not exceed L/100, where L is the distance measured from the ground or grade elevation to the first X-brace or bottom of the first bearer or frame horizontal member.

3314.9.4 Supported scaffolds at the edge. Supported scaffolds located on a floor, working deck, or roof and located within a distance from the edge of the roof or an unenclosed perimeter that is equal to or less than 1.5 times the height of the scaffold shall:

1. Be positively anchored or tied-back, and with all wheels or rollers secured by rope, cable, or chocking at the wheels in order to prevent movement; and
2. Have all sides of the scaffold facing an unenclosed perimeter or the edge of a roof within a distance that is equal to or less than 1.5 times the height of the scaffold provided with guardrails and debris netting in accordance with Section 3314.8; or
3. Have all material and equipment susceptible to dislodgement, and not being actively held by a person, secured in a manner to prevent dislodgement by wind or accidental impact.

Exception: The above requirements shall not apply where vertical safety netting that meets the requirements of Section 3308.5, or an approved alternate system, extends to cover the full height and width of all unenclosed perimeters within a distance from the scaffold equal to or less than 1.5 times the height of the scaffold.

3314.10 Suspended scaffold. Suspended scaffolds shall meet the requirements of Sections 3314.10.1 through 3314.10.11.

3314.10.1 Suspended elements to be kept vertical and parallel. Suspended scaffolds shall be installed and used in such a manner that the ropes or similar suspension elements are vertical and/or in a plane parallel to the wall at all times.

Exception: Ropes or similar suspension elements do not have to be vertical and/or in a plane parallel to the wall provided such occurs in accordance with design drawings prepared by a registered design professional. Such design drawings shall be based on an investigation of the support surface and anchorage of the scaffold conducted by such registered design professional. A signed, sealed, and dated report prepared by the registered design professional documenting such investigation shall accompany the design drawings.

3314.10.2 Support. All suspended scaffold support devices, such as outrigger beams, C-hooks, parapet clamps, and similar devices shall be supported by surfaces capable of supporting at least 4 times the load imposed on them by the scaffold operating at the rated load of the hoist. The support shall be inspected prior to installation in accordance with the requirements of Section 3314.4.3.1.

3314.10.3 Outrigger beam location. Outrigger beams shall be placed perpendicular to the face of the building or structure.

Exception: Where a licensed rigger or registered design professional can demonstrate to the commissioner's satisfaction that it is not possible to place an outrigger beam perpendicular to the face of the building or structure, the outrigger beam may be placed at a different angle, provided opposing angle tiebacks are used.

3314.10.4 Outrigger beam stabilization. The inboard ends of the suspended scaffold outrigger beam shall be stabilized by bolts or other direct connections to the floor or roof deck, or they shall have their inboard ends stabilized by counterweights.

Exception: Multipoint adjustable suspended scaffolds shall not be stabilized by counterweights.

3314.10.5 Outrigger beam installation. Outrigger beams shall be installed with all bearing supports perpendicular to the beam centerline and shall set and maintain the web in a vertical position. The shackle or clevis with which the rope is attached to the outrigger beam shall be placed directly over the centerline of the stirrup.

3314.10.6 Counterweight material. Counterweights shall be made of a nonflowable material. Sand, gravel and similar materials that can be easily dislocated shall not be used.

3314.10.7 Counterweight securement. Counterweights shall be secured by mechanical means to the outrigger to prevent accidental dislodgment.

3314.10.8 Counterweight removal. Counterweights shall not be removed from an outrigger beam until the scaffold is disassembled.

3314.10.9 Horizontal tieback location. Horizontal tiebacks shall be installed perpendicular to the face of the building or structure, or opposing angle tiebacks shall be installed. Single tiebacks installed at an angle are prohibited.

3314.10.10 Support devices. Suspended scaffold support devices, such as C-hooks, cornice hooks, roof hooks, roof irons, parapet clamps or other similar devices shall meet the following requirements:

1. Support devices shall be made of steel, wrought iron or materials of equivalent strength.
2. Such devices shall be supported by bearing blocks.
3. Support devices shall be secured against movement by tiebacks installed perpendicular to the face of the building or structure or by opposing angle tiebacks installed and secured to a structurally sound point of anchorage as prescribed in Section 3314.6.
4. Tieback rope shall be at least equal in strength to the suspension rope.

3314.10.11 Securing suspended scaffolds. At the end of the shift, the suspended scaffold shall be cleared of all equipment and material susceptible to dislodgement and shall be lowered to the street or deck of the sidewalk shed, or shall be secured to the roof or building in accordance with design drawings required by Section 3314.3.3.

3314.11 Suspension rope. When winding drum hoists are used on a suspended scaffold, they shall contain not fewer than four wraps of the suspension rope at the lowest point of scaffold travel. When other types of hoists are used, the suspension ropes shall be long enough to allow the scaffold to be lowered to the level below without the rope end passing through the hoist, or the rope end shall be configured or provided with means to prevent the end from passing through the hoist.

3314.11.1 Repaired rope. The use of repaired wire rope as suspension rope is prohibited.

3314.11.2 Rope replacement. Ropes shall be replaced or removed if any of the following conditions exist, and as otherwise prescribed by rule of the department:

1. Any physical damage that impairs the function and strength of the rope.
2. Presence of kinks that might impair the tracking or wrapping of the rope around the drums or sheaves.
3. Presence of abrasion, corrosion, scrubbing, flattening or peening causing the loss of more than one-third of the original diameter of the outside wires.
4. Heat damage caused by a torch or any damage caused by contact with electrical wires.
5. Evidence that the secondary brake has been activated during an overspeed condition and has engaged the suspension rope.

3314.11.3 Shielding. Suspension ropes shall be shielded from heat-producing processes.

3314.11.4 Corrosive substances. When acids or other corrosive substances are used on a scaffold, the ropes shall be shielded, treated to protect against corrosive substances, or made of a material that will not be damaged by the corrosive substance being used.

3314.11.5 Suspended scaffold welding precautions for arcing prevention. Precautions shall be taken to prevent the possibility of arcing through the suspension wire rope during welding operations.

3314.11.5.1 Insulated thimble. An insulated thimble shall be used to attach each suspension wire rope to its hanging support. Excessive suspension wire rope and any additional independent lines from grounding shall be insulated.

3314.11.5.2 Insulating material. The suspension wire rope shall be covered with insulating material extending at least 4 feet (1219 mm) above the hoist. If there is a tail line below the hoist, it shall be insulated to prevent contact with the platform. The portion of the tail line that hangs free below the scaffold shall be guided or retained or both so that it does not become grounded.

3314.11.5.3 Protective covers. Each hoist shall be covered with insulated protective covers.

3314.11.5.4 Grounding conductor. In addition to a work lead attachment required by the welding process, a grounding conductor shall be connected from the scaffold to the structure. The size of the connector shall be at least the size of the welding process work lead, and this conductor shall not be in series with the welding process or the work piece.

3314.11.5.5 Disconnected grounding lead. If the scaffold grounding lead is disconnected at any time, the welding machine shall be shut off or the welding lead shall be removed from the scaffold.

3314.11.5.6 Welding rod or lead. An active welding rod or uninsulated welding lead shall not be allowed to make contact with the scaffold or its suspension system.

3314.11.6 Wire rope clips. When wire clips are used on suspended scaffolds there shall be a minimum of three wire rope clips installed a minimum of six rope diameters apart. The clips shall be retightened to the manufacturer's specifications after initial loading. U-bolt clips shall not be used at the point of suspension. When U-bolt clips are used, the U-bolt shall be placed over the dead end of the rope and the saddle shall be placed over the live end of the rope.

3314.12 Wood pole scaffolds. Wood pole scaffolds shall meet the requirements of Sections 3314.12.1 through 3314.12.9.

3314.12.1 Standard designs. All wood pole scaffolds 40 feet (12 192 mm) high or less shall be constructed in accordance with the minimum nominal sizes and maximum spacings shown in Tables 3314.12.1 (1) through 3314.12.1 (6). Wood pole scaffolds more than 40 feet (12 192 mm) high shall be designed in accordance with Section 3314.3.

TABLE 3314.12.1(1)
MINIMUM SIZE AND MAXIMUM SPACING OF MEMBERS OF SINGLE WOOD POLE LIGHT DUTY SCAFFOLDS

UNIFORMLY DISTRIBUTED LOAD NOT TO EXCEED 25 psf					
Max. height of scaffold (ft)	20'	40'	60'	75'	
Poles or uprights (min)	2" × 4"	3" × 4"	4" × 4"	Top 60' 4" × 4"	Lower Sect. 4" × 6"
Pole foundation (min)	2" × 9"				
Max. pole spacing (longitudinal)	10'-0"				
Max. width of scaffold	5'-0"				
Bearers or putlogs (min)	3" × 4" or 2" × 6" (on edge)				
Ledgers (minimum) With 6'-0" pole space	1" × 6" (on edge)				
With 10'-0" pole space	1¼" × 9" (on edge)				
Vertical spacing of ledgers (max)	7'-0"				
Nonsupporting stringers	1" × 4"				
Tie-ins	1" × 4"				
Bracing	1" × 4"				
Planking Not more than 6' span	1¼" × 9"				
Up to 10' span	2" × 9"				
Toeboards	1" × 6"				
Guardrails	2" × 4"				

Note: For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 47.88 Pa.

TABLE 3314.12.1(2)
MINIMUM SIZE AND MAXIMUM SPACING OF MEMBERS OF SINGLE WOOD POLE MEDIUM DUTY SCAFFOLDS

UNIFORMLY DISTRIBUTED LOAD NOT TO EXCEED 50 psf					
Max. height of scaffold	20'	40'	60'	75'	
Poles or uprights (min)	3" × 4" or 2" × 6"	4" × 4"	4" × 6"	Top 60' 4" × 4"	Lower Sect. 4" × 6"
Pole foundation (min)	2' × 9"				
Max. pole spacing (longitudinal)	8'-0"				
Max. width of scaffold	5'-0"		8'-0"		
Bearers or putlogs (min)	3" × 4" or 2" × 6" (on edge)			3" × 5" or 2" × 9" (on edge)	
Max. spacing of bearers or putlogs	8'-0"				
Ledgers (minimum)	2" × 9" (on edge)				
Vertical spacing of ledgers (max)	7" × 0"				
Nonsupporting stringers	1" × 6" or 1¼" × 4"				
Tie-ins	1" × 6"				
Bracing	1" × 6"				
Planking Not more than 6' span	1¼" × 9"				
Up to 8' span	2" × 9"				
Toeboards	2" × 9"				
Guardrails	2" × 4"				

Note: For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 47.88 Pa.

TABLE 3314.12.1(3)
MINIMUM SIZE AND MAXIMUM SPACING OF MEMBERS OF SINGLE WOOD POLE HEAVY DUTY SCAFFOLDS
UNIFORMLY DISTRIBUTED LOAD
NOT TO EXCEED 75 psf

Max. height of scaffold	20'	40'	60'	75'	
Poles or uprights (min)	3'' × 4'' or 2'' × 6''	4'' × 4''	4'' × 6''	Top 60' 4'' × 6''	Lower Sect. 6'' × 6''
Pole foundation (min)	2'' × 9''				
Max. pole spacing (longitudinal)	6'-0''				
Max. width of scaffold	5'-0''			8'-0''	
Bearers or putlogs (min)	3'' × 5''			3'' × 6'' or 2'' × 9''	
Max. spacing of bearers or putlogs	6'-0''				
Ledgers (minimum)	2'' × 9'' (on edge)				
Vertical spacing of ledgers (max)	7'' × 0''				
Nonsupporting stringers	2'' × 4''				
Tie-ins	1'' × 6''				
Bracing	1'' × 6''				
Planking	2'' × 9''				
Toeboards	2'' × 9''				
Guardrails	2'' × 4''				

Note: For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 47.88 Pa.

TABLE 3314.12.1(4)
MINIMUM SIZE AND MAXIMUM SPACING OF MEMBERS OF INDEPENDENT WOOD POLE LIGHT DUTY SCAFFOLDS
UNIFORMLY DISTRIBUTED LOAD
NOT TO EXCEED 25 psf

Max. height of scaffold (ft)	20'	40'	60'	75'	
Poles or uprights (min)	2" × 4"	3" × 4" or 2" × 6"	4" × 4"	Top 60' 4" × 4"	Lower Sect. 4" × 6"
Pole foundation (min)	2" × 9"				
Max. pole spacing (longitudinal) With 1 1/4" × 9" ledgers With 2" × 9" ledgers	6'-0"				
Max. pole spacing (transverse)	10'-0" ^a				
Ledgers (min)	1 1/4" × 9" (on edge) or 2" × 9"				
Vertical spacing of ledgers (max)	7'-0"				
Bearers (min)	1 1/4" × 9" (on edge)				
Non-supporting stringers	1" × 4"				
Bracing	1" × 4"				
Planking Not more than 6' span	1 1/4" × 9"				
Up to 8' span	2" × 9"				
Toeboards	1" × 6"				
Guardrails	2" × 4"				

Note: For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 47.88 Pa.

a. Total base dimension in both directions to be at least 25 percent of height.

TABLE 3314.12.1(5)
MINIMUM SIZE AND MAXIMUM SPACING OF MEMBERS OF INDEPENDENT WOOD POLE MEDIUM DUTY SCAFFOLDS
UNIFORMLY DISTRIBUTED LOAD
NOT TO EXCEED 50 psf

Max. height of scaffold (ft)	20'	40'	60'	75'	
Poles or uprights (min)	3" × 4" or 2" × 6"	4" × 4"	4" × 6"	Top 60' 4" × 6"	Lower Sect. 6" × 6"
Pole foundation (min)	2" x 9"				
Max. pole spacing (longitudinal)	8'-0"				
Max. pole spacing (transverse)	10'-0" ^a				
Ledgers (min)	2" × 9" (on edge)				
Vertical spacing of ledgers (max)	6'-0"				
Bearers (min)	2" × 9" (on edge)				
Non-supporting stringers	1¼" × 4" or 1" × 6"				
Bracing	1" × 6"				
Planking Not more than 6' span	1¼" × 9"				
Up to 6' span	2" × 9"				
Toeboards	2" × 9"				
Guardrails	2" × 4"				

Note: For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 47.88 Pa.

a. Total base dimension in both directions to be at least 25 percent of height.

TABLE 3314.12.1(6)
MINIMUM SIZE AND MAXIMUM SPACING OF MEMBERS OF INDEPENDENT WOOD POLE HEAVY DUTY SCAFFOLDS
UNIFORMLY DISTRIBUTED LOAD
NOT TO EXCEED 75 psf

Max. height of scaffold (ft)	20'	40'	60'	75'	
Poles or uprights (min)	4" × 4"	4" × 4"	4" × 6"	Top 60' 4" × 6"	Lower Sect. 6" × 6"
Pole foundation (min)			2" × 9"		
Max. pole spacing (longitudinal)			6'-0" ^a		
Max. pole spacing (transverse)			10'-0" ^a		
Ledgers (min)			2" × 9" (on edge)		
Vertical spacing of ledgers (max)			5'-0"		
Bearers (min)			2" × 9" (on edge)		
Non-supporting stringers			1¼" × 9"		
Bracing			1" × 6"		
Planking			2" × 9"		
Toeboards			2" × 9"		
Guardrails			2" × 4"		

Note: For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 47.88 Pa.

a. Total base dimension in both directions to be at least 25 percent of height.

3314.12.2 Erection and removal. When a new working level is desired, the existing planks shall be left undisturbed until the new working level is framed. As the platform level is abandoned with the progress of the work, all members other than the planking, railing and toeboards shall be left intact. When removing a scaffold, the sequence of removing the members shall be the reverse of that used in erection.

3314.12.3 Materials and construction for wood pole scaffolds. Wood pole scaffold materials and construction shall comply with the following requirements:

1. All lumber used in wood pole scaffolds or their supports shall be at least equal in strength and quality to construction grade lumber in accordance with Section 2301.
2. All lumber and timber shall be fastened at the various joints with sufficient nails or bolts of a suitable size to produce a secure joint capable of withstanding the design load. Table 3314.12.3 provides minimum requirements for size and number of nails. All nails shall be driven full length.
3. Any other suitable material, or dimensions other than those indicated, may be used for wood pole scaffold construction provided it is at least equivalent in strength and suitability to the comparable wood scaffold it is designed to replace, and approval of the commissioner has been obtained.

**TABLE 3314.12.3
SIZE AND NUMBER OF NAILS REQUIRED FOR
SCAFFOLD CONSTRUCTION**

Thickness of Smaller Member (inches)	Trade Size of Nail	Length of Nail (inches)
1	8d	2 ½
2	20d	4
3	60d	6
4	-	8
Width of Smaller Member (inches)		Minimum Number of Nails Required
4		2
6		3
8		4
10		5
12		5

3314.12.4 Poles. Wooden scaffold poles shall be plumb and the foot ends shall be secured against lateral movement. Where wood poles are spliced, the squared end of the upper section shall bear uniformly on the squared end of the lower section and the two ends shall be rigidly fastened together with two or more wood splice plates, each at least 4 feet (1219 mm) in length. The plates shall be placed at right angles to each other, shall overlap the abutting ends of the pole equally, and shall have a combined sectional area not less than 50 percent of the cross sectional area of the pole. Splicing of adjacent poles shall be staggered. Splices shall be close to ledgers, but so located as not to interfere with the fastenings.

3314.12.5 Bracing. Wood pole scaffolds shall be braced and stayed to prevent movement away from the building. Diagonal or equivalent bracing shall be provided to prevent the poles from moving in a direction parallel to the building face and shall be so installed that every spliced section of every pole is braced to adjacent poles.

3314.12.6 Planking. Planking shall comply with Items 1 through 3.

1. Where planks are butted end to end, parallel putlogs or bearers shall be provided not more than 8 inches (203 mm) apart so that the butted ends rest on separate putlogs or bearers. Ends shall be nailed or cleated.
2. Where platform planks are used with overlapping ends, the ends of both the upper and lower planks shall overlap the putlog or bearer by at least 6 inches (152 mm).
3. Planks shall be laid close together and shall be of sufficient length to extend over three bearers.

3314.12.7 Connections. Ledgers shall not be spliced between poles but shall overlap the poles at each end by at least 4 inches (102 mm). Where ledgers lap each other, bearing-blocks attached to the pole shall be provided to support the ledger.

3314.12.7.1 Braces. The ends of all wooden braces shall overlap the nailed fastenings by an amount sufficient to prevent the ends of the braces from splitting.

3314.12.8 Putlogs for single pole scaffolds. All putlogs shall be set with the greater dimension vertical and shall be long enough to project beyond the outer edge of the poles by at least 12 inches (305 mm). Putlogs shall be supported on the ledger and located against the side of the poles and fastened to either the pole or the ledger. The other end of the putlog shall rest in the wall of the building, with at least a 4 inch (102 mm) bearing, and shall not be notched or cut down, except for light duty scaffolds, which may be notched or cut down to fit into a space made by the removal of a brick. In such cases, the notch shall be made on the top of the putlog just deep enough to permit it to be inserted in the hole in the wall.

3314.12.9 Bearers for independent pole scaffolds. Bearers shall be set with their greater dimensions vertical, and shall be long enough to project over the ledgers beyond the outer row of poles by at least 12 inches (305 mm) and beyond the inner row of poles by at least 2 inches (51 mm). Bearers shall be supported on the ledgers, located against the sides of the poles and fastened to the ledgers.

3314.13 Fabricated frame scaffolds. Fabricated frame scaffolds shall meet the requirements of Sections 3314.13.1 through 3314.13.3.

3314.13.1 Bracing. Frames and panels shall be braced by cross, horizontal or diagonal braces or a combination thereof, which secure vertical members together laterally.

3314.13.2 Vertical joining. Frames and panels shall be joined together vertically by coupling or stacking pins or equivalent

means. Where uplift can occur, the frames or panels shall be locked together vertically by pins or equivalent means.

3314.13.3 Frame scaffold brackets. Brackets used to support cantilevered loads shall be seated with side-brackets parallel to the frame and end-brackets at 90 degrees (1.57 rad) to the frames shall not be bent or twisted from these positions and shall be used only to support light duty loads as defined in Section 3302.1, unless the design provisions of Section 3314.3 have been met.

3314.14 Outrigger scaffolds (thrust out). Outrigger scaffolds (thrust out) shall not be used for loading in excess of 50 pounds per square foot (244.1 kg/m²) (medium duty).

3314.14.1 Outrigger beams. The fulcrum point of the beam shall rest on a secure bearing at least 6 inches (152 mm) in each horizontal dimension. The beam shall be secured against movement and shall be securely braced against tipping at both the fulcrum point and the inboard end.

3314.14.2 Inboard supports. The inboard ends of outrigger beams shall be securely fixed to resist all vertical, horizontal and torsional forces. Pull-out tests for adhesive and expansions anchors, if used, shall be approved by the commissioner.

3314.15 Two-point adjustable suspended scaffolds. Two-point adjustable suspended scaffolds shall meet the requirements of Sections 3314.15.1 through 3314.15.7.

3314.15.1 Width and support. Two-point adjustable suspended platforms shall be at least 20 inches (508 mm) but not more than 36 inches (914 mm) in width unless designed by a registered design professional. Each end of the platform shall be supported by a stirrup or hanger that meets the requirements of Section 3315.15.2, and the platform shall be securely fastened thereto. Not more than two hangers or stirrups shall be used to support one scaffold.

3314.15.2 Hangers or stirrups. Hangers or stirrups shall be of steel or wrought iron. Each such hanger shall be formed to properly fit the platform and the hoist mechanism. The hanger or stirrup shall be placed at least 6 inches (152 mm) but not more than 18 inches (457 mm) from the end of the platform unless the manufacturer specifies otherwise.

3314.15.3 Fiber suspension rope. The use of fiber rope shall be limited to light duty two-point adjustable suspended scaffolds. Fiber rope shall be at least equivalent in strength and suitability to ³/₄-inch (19 mm) grade #1 unspliced manila rope.

3314.15.3.1 Corrosive substances. Fiber rope susceptible to damage from corrosive substances shall not be permitted for or near any work involving the use of corrosive substances.

3314.15.3.2 Upper block. Fiber rope shall not be used where the upper block is more than 100 feet (30 480 mm) or ten stories above the ground or roof setback.

3314.15.3.3 Fit. All blocks shall fit the size of rope they carry, and shall be constructed so as not to chafe the rope.

3314.15.4 Combination. Two or more two-point adjustable suspended scaffolds shall not be combined into one by bridging the distance between them or by any other form of connection.

3314.15.5 Number of workers. Not more than two workers shall be permitted to work on one scaffold at one time except where the scaffold is designed to hold more. Written permission from the commissioner shall be required for more than two workers on the scaffold.

3314.15.6 Device to raise, lower, and hold the scaffold. Every two-point adjustable suspended scaffold shall be equipped with a device to raise, lower or hold the scaffold in position.

3314.15.7 Platforms. The platforms of every two-point adjustable suspended scaffold shall be ladder-type, plank-type, beam-type, light-metal type, or another type acceptable to the commissioner.

3314.16 Corner and angle scaffolds. Corner and angle scaffolds shall comply with the requirements of Sections 3314.16.1 through 3314.16.4.

3314.16.1 Motors. As many motors as needed shall be provided to maintain the stability of the platform under all operating conditions.

3314.16.2 Maximum number of people. The number of people allowed on a corner or angle scaffold shall not be more than the number of motors required to keep the scaffold stable, unless otherwise designed by a registered design professional.

3314.16.3 Additional information. In addition to the information required by Section 3314.3, corner and angle scaffolds shall also contain load capacity and distribution charts and a certification from the registered design professional that he/she has reviewed the manufacturer's design calculations and testing or prepared sufficient calculations of his/her own and found them to conform to this code.

3314.16.4 Inspection. The equipment setting for corner and angle scaffolds shall be inspected by the department prior to its use.

Additional inspection by the department shall be required each time the equipment is moved to a different position.

3314.17 Multiple-point adjustable suspended scaffolds. Multiple-point adjustable suspended scaffolds shall comply with the following:

1. All multiple-point adjustable suspended scaffolds shall be supported by wire ropes. The use of fiber ropes is not permitted;
2. Provision shall be made to prevent supports from slipping off the ends of outrigger beams;
3. Platform bearers shall be of metal; and
4. During raising or lowering, the levels of the various sections of the scaffolds shall be kept uniform and the differential height between sections shall be minimized.

3314.18 Manually propelled, free-standing scaffolds. All manually propelled free-standing scaffolds shall meet the following requirements:

1. Work platforms shall be tightly planked for the full width of the scaffold, except for necessary entrance openings. Planks shall be secured in place;
2. Platforms shall have a guardrail system;
3. Where a ladder is used to approach a platform, the ladder shall be secured to the scaffold;
4. Handholds shall be provided for safe passage from the ladder to the platform;
5. Unless temporarily braced to an adjacent structure, the ratio of the platform height to the least base dimension shall be such as to assure stability, but in no case shall such height be more than four times the least base dimension;
6. Provisions shall be made to prevent the scaffold from falling during movement from one location to another;
7. While the scaffold is in use, it shall rest upon a stable footing and shall stand plumb. The casters or wheels shall be locked in position; and
8. While the scaffold is being moved, no person shall be permitted to ride on it, and all tools, equipment and material shall be removed.

3314.19 Mast climber. Mast climbers shall be designed, constructed, permitted, installed, adjusted, maintained, repaired, used, operated, inspected, and removed in accordance with rules promulgated by the commissioner.

***3314.20** No scaffolding permit issued for construction projects on public housing developments provided by the New York city housing authority shall be renewed unless the commissioner determines that such scaffolding is being used as part of an ongoing construction project. The commissioner shall promulgate such rules and regulations as shall be necessary to implement the provisions of this section.

An "ongoing" construction project" shall mean any construction project during which persons employed in construction work are utilizing such scaffolding at least two days per week, or have utilized such scaffolding for at least two days per week at any time over the course of the six months immediately preceding a request to renew a scaffolding permit.

**Section 3314.20 was added by [Chapter 520 of the Laws of NYS of 2015](#). This act has an effective date of January 10, 2016.*

SECTION BC 3315 STRUCTURAL RAMPS, RUNWAYS AND PLATFORMS

3315.1 Ramps and runways. Ramps and runways (including elevated walkways) shall comply with the requirements of Sections 3315.1.1 through 3315.1.6.

3315.1.1 Construction. All runways and ramps shall be constructed, braced and supported to resist lateral displacement and all vertical loads, including impact.

3315.1.2 For motor vehicle use. Runways and ramps for the use of motor vehicles may consist of an earthfill or may be structurally supported. Such runways and ramps shall have a clear width of not less than 12 feet (3658 mm) with timber curbs at least 8 inches by 8 inches (203 mm by 203 mm) placed parallel to, and secured to, the sides of the runway or ramp. The flooring of structurally supported ramps shall consist of no smaller than 3 inch (76 mm) planking full size, undressed, or equivalent material, with spans designed for the loads to be imposed.

3315.1.3 For use of workers. Runways and ramps for the use of workers shall be at least 1 foot 6 inches (457 mm) in clear

width. Where used for wheelbarrows, handcarts, or hand-trucks, runways and ramps shall be at least 3 feet (914 mm) in clear width. Flooring shall consist of at least 2-inch (51 mm) planking spanning as permitted by Table 3314.5.2, laid close, butt-joined and securely fastened.

3315.1.4 Slope limitations. Ramps shall have a slope not steeper than one in four. If the slope is steeper than one in eight, the ramp shall be provided with cleats spaced not more than 14 inches (356 mm) apart and securely fastened to the planking to afford a foothold. Spaces in the cleats may be provided for the passage of the wheels of vehicles. The total rise of a continuous ramp used by workers carrying material or using wheelbarrows, hand-carts, or hand-trucks shall not exceed 12 feet (3658 mm) unless broken by horizontal landings at least 4 feet (1219 mm) in length.

3315.1.5 Guardrail required. A guardrail meeting the requirements of Section 3308.7.1 through Section 3308.7.7 shall be provided:

1. On all edges of the runway or ramp that are located more than 5 feet (1524 mm) above the ground or floor; and
2. Along any portion of the runway or ramp that abuts motor vehicle traffic.

For the purposes of this section, the term "floor" in Sections 3308.7.1 through 3308.7.7 shall mean "runway or ramp."

3315.1.6 Netting required. Where it is possible for the public to pass under, or next to, runways or ramps, the space between the top rail and the toeboard shall be enclosed with a wire screen composed of not less than No. 18 steel wire gage, or equivalent synthetic netting that is flame retardant in accordance with NFPA 701, with openings in the wire or synthetic mesh no larger than ½ inch (13 mm).

3315.2 Platforms. Platforms shall comply with the requirements of Sections 3315.2.1 through 3315.2.3.

3315.2.1 Planking. Platforms used as working areas, or for the unloading of wheelbarrows, hand-trucks, or carts shall have a floor consisting of at least 2-inch (51 mm) planking spanning as permitted by Table 3314.5.2. Platforms for the use of motor trucks shall have a floor of at least 3-inch (76 mm) planking, full size, undressed or equivalent materials with spans designed for the loads to be imposed. Planking shall be laid close and shall be butt-joined and securely fastened.

3315.2.2 Guardrail required. A guardrail meeting the requirements of Section 3308.7.1 through Section 3308.7.7 shall be provided on all open sides of platforms located more than 5 feet (1524 mm) above the ground or floor. For the purposes of this section the term "floor" in Sections 3308.7.1 through 3308.7.7 shall mean "platform."

Exception: In lieu of a guardrail, the side of the platform used for the loading or unloading of vehicles may be protected by a timber curb at least 8 inches by 8 inches (203 mm by 203 mm) for motor trucks or 4 inches by 4 inches (102 mm by 102 mm) for wheelbarrows and hand-trucks.

3315.2.3 Netting required. Where it is possible for the public to pass under, or next to, platforms, the space between the top rail and the toeboard shall be enclosed with a wire screen composed of not less than No. 18 steel wire gage, or equivalent synthetic netting that is flame retardant in accordance with NFPA 701, with openings in the wire or synthetic mesh no larger than ½ inch (13 mm).

3315.3 Special requirements where power buggies are used. Runways, ramps, platforms, and other surfaces upon which power buggies are operated shall meet the following minimum requirements:

1. They shall be designed by a qualified person.
2. They shall be able to sustain, without failure, at least four times the maximum live load for which they are intended.
3. The minimum width, inside of curbs, for any ramp, runway, or platform shall be 2 feet (610 mm) wider than the outside width of any power buggy operated thereon without passing, and 3 feet (914 mm) wider than twice such buggy width in the places where passing occurs.
4. All runways shall be essentially level transversely.
5. Curbs shall be furnished along all buggy traffic paths that are nearer than 10 feet (3048 mm) horizontally to any unenclosed area, shaft, or other open space into which or through which a fall of more than 12 inches (305 mm) from such surface is possible, except as set forth in numbered Item 7.
6. Where curbs are not required because the buggy is operated on a surface not over 12 inches (305 mm) above another surface, the lower surface shall be strong enough to sustain the loaded vehicle in the event of a fall thereon.
7. Curbs may be omitted at actual dumping points more than 12 inches (305mm) above other surfaces if the edge over which dumping occurs is provided with bumpers or other means that will effectively stop the buggy from running over the edge

while dumping.

8. Curbs must be at least 7 inches (178 mm) high, securely fastened, and capable of resisting side impact, and shall be equivalent to at least 2 inch by 8 inch (51 mm by 203 mm) plank set on edge against uprights securely fastened and braced at not more than 4-foot (1219 mm) intervals.

SECTION BC 3316 HOISTING EQUIPMENT

3316.1 Scope. Hoisting equipment shall meet and be used in accordance with the requirements of this section. Material hoists and bucket hoists shall also meet the requirements of Section 3317, personnel hoists shall also meet the requirements of Section 3318, and cranes and derricks shall also meet the requirements of Section 3319.

3316.2 Requirements. Hoisting equipment, its supports and runback structures shall be installed, operated, and maintained to eliminate hazard to the public or to property. It shall be unlawful to operate any such equipment that is not provided with a positive means for preventing the unauthorized operation of such machine. The means whereby such machines may be made inoperative shall be accepted by the department.

3316.3 Notification of hoisting accidents. The owner or person directly in charge of any hoisting equipment shall immediately notify the commissioner following any accident involving hoisting equipment. Following an incident, no person shall permit either of the following, without the permission of the commissioner:

1. Use of such hoisting equipment; or
2. Removal of the hoisting equipment or any part thereof from the area of the job site.

3316.4 Permit. Permits for hoisting equipment shall comply with the requirements of Sections 3316.4.1 through 3316.4.5.

3316.4.1 Acceptance of equipment. Hoists and all premanufactured runback structures shall be approved for use by the commissioner or other agency acceptable to the commissioner

Exception: Cranes and derricks shall meet the requirements of Section 3319.3.

3316.4.2 Posting of permits. Permits, or duplicates of the permits, shall be posted in a conspicuous location in the car or on the equipment.

3316.4.3 Construction documents. Copies of the written permit application and approved construction documents shall be kept at the site and made available to the commissioner upon request.

3316.4.4 Permit signage. Following the receipt of a permit to install a hoist, the permit holder shall post a sign that meets the requirements of Section 3301.9.6. Such sign shall be clearly visible from the street.

3316.4.5 Other temporary signage. Other than as specified in Section 3301.10, there shall be no information, pictorial representation, or any business or advertising messages posted on the hoisting equipment or runback structure.

3316.5 Design, construction and inspection. Hoisting equipment, its supports and runback structures shall be designed, constructed and inspected in accordance with rules promulgated by the commissioner.

3316.6 Rope inspection and replacement. All ropes used in hoisting equipment shall meet the inspection and replacement requirements specified in rules promulgated by the commissioner.

3316.7 Operation. Only operators designated by the person causing such hoisting equipment to be used shall operate such hoisting machinery. Operators and signalmen/signalwomen shall be qualified for the operation they perform. The operator shall be responsible for making the machine inoperative before he or she leaves the machine.

3316.7.1 Use. Hoisting equipment, its supports and runback structures shall be operated in compliance with the manufacturing specifications, the requirements of this code, and rules promulgated by the commissioner. If there is a discrepancy, the stricter requirement shall be met.

3316.7.2 Use during installation, jumping, dismantling or alteration. Personnel and building materials connected with or related to the building project shall not be moved by the hoist while it is being installed, jumped, dismantled or altered.

3316.8 Maintenance. Hoisting equipment, its supports and runback structures shall be maintained in compliance with the manufacturing specifications and rules promulgated by the commissioner. If there is a discrepancy, the stricter requirement shall be met.

3316.9 Rigging. The attachment and detachment of articles from hoisting equipment used to hoist or lower articles on the outside of a

building shall be in accordance with the requirements of Sections 3316.9.1 through 3316.9.3.

3316.9.1 Supervision. The hoisting or lowering of any article on the outside of any building in the city shall be performed by or under the direct and continuing supervision of a licensed rigger.

Exceptions:

1. In lieu of a licensed rigger, the hoisting or lowering of a sign may be performed by or under the direct and continuing supervision of a licensed sign hanger.
2. Suspended scaffold operations shall meet the requirements of Section 3314.
3. In lieu of a licensed rigger, the hoisting or lowering of articles on the outside of a building may be performed by or under the supervision of a competent person designated by the contractor using the equipment provided the following conditions are met:
 - 3.1 The hoisting or lowering occurs in conjunction with:
 - 3.1.1 The construction of a new building;
 - 3.1.2 The full demolition of an existing building;
 - 3.1.3 The vertical or horizontal enlargement of an existing building; or
 - 3.1.4 The alteration, maintenance, or repair of a façade of a major building where a site safety plan is required by Section 3310.3.
 - 3.2 All individuals involved in the work are certified or trained in accordance with Section 3316.9.2, where such certification or training is required;
 - 3.3 The hoisting or lowering does not meet the definition of industrial rope access;
 - 3.4 The article being hoisted or lowered is not a boiler or tank;
 - 3.5 The article being hoisted or lowered is not related to the assembly, jumping, or disassembly of a tower or climber crane; and
 - 3.6 Where the hoisting or lowering meets the definition of a critical pick, such critical pick is:
 - 3.6.1 Performed in accordance with a plan developed by either a:
 - 3.6.1.1 Licensed master rigger; or
 - 3.6.1.2 Registered design professional who has demonstrated knowledge or experience with safe loads and computation thereof, types of rigging, size and strength of ropes, cables, blocks, and any other rigging equipment to be used during the critical pick; and
 - 3.6.2 Immediately prior to the pick, onsite verification is made to ensure conformance with the plan by either:
 - 3.6.2.1 The licensed master rigger who developed the plan;
 - 3.6.2.2 The registered design professional who developed the plan; or
 - 3.6.2.3 A registered design professional employed by and working under the direct supervision of the registered design professional who developed the plan.
4. Where the hoisting or lowering is performed under the direct and continuing supervision of a licensed rigger, a specialty crew who is not in the direct employ of the licensee or business of the licensee may be utilized, provided:
 - 1.5 The work requires a specialty trade, including but not limited to work with hazardous materials or chemicals;
 - 1.6 The crew is in accordance with rules promulgated by the commissioner; and
 - 1.7 The members of the crew are approved by the commissioner.

3316.9.1.1 Supervisor. The individual supervising the hoisting or lowering in accordance with Section 3316.9.1 shall:

1. Be present at the site during all times articles are being attached or detached;
2. Have the ability to communicate with all individuals involved with such work; and
3. Be in the line of sight of either the:
 - 3.1 Attaching operation;
 - 3.2 Detaching operation, or
 - 3.3 The hoisting equipment.

3316.9.2 Certification or training. All individuals who attach or detach articles from the hook of hoisting equipment in conjunction with the hoisting or lowering of an article outside of a building, the supervisor of such individuals, and signalpersons communicating with such individuals, shall, eighteen months after the effective date of this section, either:

1. Possess a valid certification for both rigging and signaling from an organization acceptable to the commissioner and accredited by the National Commission for Certifying Agencies (NCCA) or the American National Standards Institute (ANSI). The certification shall be valid for a term of no more than five years before it has to be renewed and shall cover areas including, but not limited to, the inspection and use of rigging hardware, basic rigging techniques, signaling, and hazards associated with rigging. The certification for a supervisor shall, in addition to the foregoing, include calculations and problem solving with respect to rigging; or
2. Have completed an initial department-approved training course, and four years following the completion of the initial training course, and every four years thereafter, complete a department-approved refresher course. The courses shall be in accordance with the following:
 - 2.1 The initial training course for individuals who attach or detach articles from the hook of hoisting equipment and signalpersons communicating with such shall be, at a minimum, 16 hours long, with the refresher course, at a minimum, 8 hours long. The initial training course for a supervisor shall be, at a minimum, 32 hours long, with the refresher course, at a minimum, 16 hours long.
 - 2.2 The training course shall be conducted by a registered New York State Department of Labor apprenticeship training program or by an educational institution or school chartered, licensed or registered by the New York State Department of Education or by a provider approved by the department and presented by an instructor acceptable to the commissioner.
 - 2.3 Training courses and refresher courses shall cover areas including, but not limited to, the inspection and use of rigging hardware, basic rigging techniques, signaling, and hazards associated with rigging. The training course and refresher course for a supervisor shall, in addition to the foregoing, include calculations and problem solving with respect to rigging. The training course and refresher course, both for crew members and supervisors, shall include a significant portion of hands on training.
 - 2.4 Successful completion of the initial training course and refresher course shall be based upon passage of a written and a practical exam.
 - 2.5 Successful completion of the initial training course and refresher course shall be evidenced by a wallet size certificate card issued by the training provider and acceptable to the commissioner. Such certificate card shall be readily available to the commissioner upon request and shall contain, at a minimum, the following information:
 - 2.5.1 The name of the individual to whom it was issued;
 - 2.5.2 A photograph of the individual to whom it was issued; and
 - 2.5.3 Any other information required pursuant to rules promulgated by the commissioner for a department approved training course.
 - 2.6 For individuals who fail to complete the required refresher course within any 4 year period, a refresher course shall be considered timely if completed within 1 year after the expiration date of the last previously completed initial or refresher course. During such period, such individual shall not perform or supervise any activity for which the lapsed training is required to perform or supervise such activity until such individual has successfully completed such refresher course. Where more than 1 year has lapsed, such individual shall be required to successfully recomplete the initial training course.

Exceptions: Training or certification is not required for:

1. Individuals working under the direct and continuing supervision of a licensed rigger or sign hanger.
2. The loading or unloading of a material delivery truck provided the material is loaded or unloaded only between the ground and the truck, or vice versa, and also provided that the material is not raised more than 12 feet (3658 mm) above the bed of the truck during the loading or unloading process.
3. The use of hoisting equipment that has a manufacturer's rated capacity of 2,000 pounds (907 kg) or less.

3316.9.3 Industrial rope access. Any person using industrial rope access methods to descend or ascend outside a building, including the individual supervising such, must be certified by either the Society of Professional Rope Access Technicians ("SPRAT") or the Industrial Rope Access Trade Association ("IRATA"), or an equivalent acceptable to the department. Only hand tools, securely attached to a person, may be carried by such person during the use of industrial rope access methods. Any other tools or equipment must be separately hoisted or lowered.

SECTION BC 3317 MATERIAL HOISTS AND BUCKET HOISTS

3317.1 Scope. Material hoists and bucket hoists shall meet the requirements of this section and Section 3316.

3317.2 Permit. The equipment user or his or her designated representative shall obtain a written permit issued by the commissioner on the basis of construction documents, drawings and specifications prior to erecting or installing all power-operated, material hoists, including any runback structure or supports.

Exception: Power-operated, nonguided material hoists with a maximum capacity of one ton or less and installed on new construction, or on alterations where the operation of the hoist is confined within the property and the site is protected in accordance with Section 3307.

3317.3 Design, inspection and operation. Material hoists, bucket hoists and their components shall be designed, inspected, and operated in accordance with rules promulgated by the commissioner.

3317.4 Construction. Material hoists, bucket hoists and their components shall be constructed in compliance with the manufacturing specifications, the requirements of this code, and rules promulgated by the commissioner. If there is a discrepancy, the stricter requirement shall be met.

Upon completion of the installation of the hoisting equipment and/or its runback structure, an inspection report verifying that the hoist has been installed in accordance with the design drawings, construction documents and specifications shall be prepared by the designer, installer or an approved inspection agency designated by both the designer and installer.

3317.5 Operation. Notwithstanding any other provision of law, material hoists with a manufacturer's capacity over one ton shall be operated only by persons holding a Class A or B hoisting machine operators license except during installation, jumping, dismantling or alteration operations.

SECTION BC 3318 PERSONNEL HOISTS

3318.1 Scope. Personnel hoists shall meet and be used in accordance with the requirements of this section and Section 3316.

3318.2 Permit. The equipment user or his or her designated representative shall obtain a written permit issued by the commissioner on the basis of construction documents, drawings and specifications prior to erecting or installing all power-operated, material hoists, including any runback structure or supports.

3318.3 Design and inspection. Personnel hoists and their components shall be designed and inspected in accordance with rules promulgated by the commissioner.

3318.4 Construction. Personnel hoists and their components shall be constructed in compliance with the manufacturer's specifications, this code, and rules promulgated by the commissioner. If there is a discrepancy, the stricter requirement shall be met.

Upon completion of the installation of the hoisting equipment and/or its runback structure, an inspection report verifying that the hoist has been installed in accordance with the design drawings, construction documents and specifications shall be prepared by the designer, installer or third-party designated by both the designer and installer and acceptable to the commissioner.

3318.5 Operation. Personnel hoists and their components shall be operated in accordance with this code and rules promulgated by the commissioner.

When the hoist is equipped with manual controls, the hoist shall be operated by a competent qualified operator. Only the operator authorized by the equipment user shall operate the hoist.

3318.5.1 Making safety devices inoperative. No person shall at any time make any required safety device or electrical protective device inoperative except when necessary during tests, inspections and maintenance.

Immediately upon completion of the tests, inspections and maintenance, such devices shall be restored to their normal operating condition in conformance with the applicable requirements of this section.

SECTION BC 3319 CRANES AND DERRICKS

3319.1 Scope. The construction, installation, inspection, maintenance and use of cranes and derricks shall be in conformance with the requirements of this section, Section 3316, and with rules promulgated by the commissioner.

***3319.2 Personnel.** Personnel shall comply with Sections 3319.2.1 through 3319.2.3.

***3319.2.1 Hoisting machine operators.** The hoisting machine operator shall be licensed as required by Chapter 4 of Title 28 of the *Administrative Code*.

***3319.2.2 Riggers.** Rigging work must be supervised in accordance with Section 3316.9.1 and where required, riggers must be licensed in accordance with Chapter 4 of Title 28 of the *Administrative Code*.

***3319.2.3 Lift directors.** Lift directors shall be designated, and perform the duties assigned to them, in accordance with rules promulgated by the commissioner. Such duties shall include, but not be limited to, ensuring compliance with approved plans, traffic and pedestrian controls, and weather restrictions.

**Section 3319.2 was amended by [Local Law 14 of 2018](#). This law has an effective date of December 31, 2017.*

3319.3 Requirements. No owner or other person shall authorize or permit the operation of any crane or derrick without a certificate of approval, a Certificate of Operation and a Certificate of On-site Inspection.

Exceptions:

1. The requirements of this section shall not apply to excavating or earth-moving equipment, except cranes used with clamshells.
2. The requirements of this section shall not apply to cranes or derricks performing an emergency use pursuant to the lawful order of the head of any department.
3. The requirements of this section shall not apply to mobile cranes, including jibs and any other extensions to the boom not exceeding 50 feet (15 240 mm) in length and with a manufacturer's rated capacity of 3 tons (2722 kg) or less.
4. The requirements of this section shall not apply to mobile cranes, including jibs and any other extensions, exceeding 50 feet (15 240 mm) but not exceeding 135 feet (41 148 mm) in length, and with a manufacturer's rated capacity of 3 tons (2722 kg) or less, except that a Certificate of Operation, as provided for in Section 3319.5, shall be required. The requirement for a Certificate of Operation shall not apply to such a crane used exclusively as a man basket. The commissioner may, by rule, exempt other mobile cranes of limited size from any or all requirements of this section.
5. The requirements of this section shall not apply to hoisting machines permanently mounted on the bed of material delivery trucks that are used exclusively for loading and unloading such trucks, provided that the length of boom does not exceed the length of the truck bed by more than 5 feet (1524 mm) and that any material transported thereon shall not be raised more than 2 feet (610mm) in the unloading process. Operators of such equipment shall be exempt from licensing requirements described in Chapter 4 of Title 28 of the *Administrative Code*.
6. The requirements of this section shall not apply to cranes or derricks used in industrial or commercial plants or yards not used for the construction of the facility. Floating cranes, floating derricks, and cranes and derricks used on floating equipment shall also be exempt from the requirements of this section. Operators of such equipment shall be exempt from the licensing requirements described in Chapter 4 of Title 28 of the *Administrative Code*.
7. The requirements of this section shall not apply to augurs, churn-drills and other drilling equipment not used for hoisting any objects. Operators of such equipment shall be exempt from the licensing requirements described in Chapter 4 of Title 28 of the *Administrative Code*.
8. The requirements of this section shall not apply to derricks having a maximum rated capacity not exceeding 1 ton (907 kg).
9. The requirements of this section shall not apply to mechanic's truck with a hoisting device when used in activities related to the maintenance and repair of construction-related equipment.

10. The requirements of this section shall not apply to articulating boom cranes that do not have an integral hoisting mechanism, and that are used exclusively for loading and unloading of trucks or trailers, provided that the length of boom does not exceed 135 feet (41 148 mm) and that any material transported thereon shall not be raised more than 100 feet (30 480 mm) in the unloading process. Operators of such equipment shall be exempt from licensing requirements described in Chapter 4 of Title 28 of the *Administrative Code*.

3319.4 Certificate of Approval. Certificates of Approval shall comply with the following:

1. The manufacturer, owner, or designated representative of a crane or derrick for which a Certificate of Approval is sought shall file an application for such Certificate of Approval and provide such information as set forth in rules promulgated by the commissioner.
2. Upon the department's approval of the application described in Item 1 above, the department shall issue a Certificate of Approval for the equipment and an approval of the submitted load rating chart.
3. A new Certificate of Approval shall be required when a crane or derrick is modified or altered to increase the boom length, jibs or any extensions to the boom beyond the maximum approval length or when the load ratings are increased.

3319.5 Certificate of Operation. Certificates of Operation shall comply with the following:

1. The commissioner shall issue the initial Certificate of Operations for the crane or derrick with Certificate of Approval upon satisfactory inspection and test indicating that such crane or derrick is in a safe operating condition. The initial Certificate of Operation shall expire 1 year from the date of issuance.
2. The owner of a crane or derrick covered by the Certificate of Operation shall renew the Certificate of Operation each year.
3. If the owner of the covered crane or derrick applies for renewal of a certificate of operation within not more than 60 nor less than 30 days prior to the date of its expiration, such owner may continue to use the covered crane or derrick until the department grants or denies a new certificate.
4. When a crane or derrick configuration is changed to increase the boom length, jibs or any extensions to the boom beyond the maximum approval length or when the load ratings are increased, a new Certificate of Operation shall be required. In such a case, the crane or derrick may not be operated until the new Certificate of Operation is obtained.
5. An application for a new certificate of operation shall be submitted when attachments that affect the stability or structure of the crane or derrick are added. Calculations and load rating charts as required by rules promulgated by the commissioner shall be submitted with the renewal request.

3319.6 Certificate of On-site Inspection. Certificates of on-site inspection shall comply with the following:

1. The equipment user, or his or her designated representative, shall obtain a Certificate of On-site Inspection for the use of any crane or derrick used for construction or demolition purposes at each job site. Such application for the Certificate of On-site Inspection shall include information set forth in rules promulgated by the commissioner.
2. Upon approval of the application, a copy of such approval shall be given to the applicant. It shall be unlawful to operate the equipment that is the subject of the approval until it has been inspected and found to be satisfactory by the department as set forth in rules promulgated by the commissioner. Upon inspection and a finding of satisfactory compliance, the approval shall be deemed a Certificate of On-site Inspection, which shall expire one year from the date of issuance. A Certificate of On-site Inspection may be renewed in accordance with rules promulgated by the commissioner.
3. The Certificate of On-site Inspection is valid only if the conditions and statements contained in the approved application are complied with, and the crane or derrick is operated in conformance with the provisions of this section and the rules applicable thereto.
4. A Certificate of On-site Inspection is not required for cranes or derricks performing work exempted from such requirement by rules promulgated by the commissioner.

3319.7 Temporary certificates. The commissioner may issue temporary Certificates of Approval, operation and on-site inspection for any crane or derrick during the pendency of an application for Certificates of Approval and operation upon inspection and upon such analysis and testing as the commissioner may deem necessary. The commissioner may revoke such temporary certificates if the application is denied.

3319.8 Special provisions for tower and climber cranes. Tower and climber cranes shall comply with the following requirements:

***3319.8.1 Plan for the erection, jumping, climbing, and dismantling of tower or climber cranes.** An erection, jumping, climbing and dismantling plan for tower or climber cranes, other than truck and crawler mounted tower cranes, shall be

submitted to the department by a licensed engineer. The plan must be prepared by a licensed engineer in conjunction with a licensed rigger and must be in compliance with the manufacturer's recommendation for erection, jumping, climbing, or dismantling of the specific crane where such manufacturer's recommendations exist. The plan must be filed with the certificate of on-site inspection application as required by Section 3319.3. No erection, jumping, climbing, or dismantling of a tower or climber crane shall take place without the prior issuance of a certificate of on-site inspection by the cranes and derricks unit. The plan shall include the following:

1. Identification of the equipment proposed to be used; including all machines proposed to be used in the erection or dismantling;
2. A detailed identification of the assemblies and components required for the erection and dismantling of the equipment;
3. Location of the equipment, sidewalk sheds (or Department of Transportation street closing permits, if applicable), surrounding buildings, protection for their roofs and the pick-up points, loads, and radius of swing of all loads. In addition, the safe load from the approved load radius chart shall be submitted for lift radius;
4. A weight list of all assemblies and components proposed to be lifted. Components are to be clearly marked with their weight painted on the assembly or stamped on metal tags attached to the assembly. The manufacturer of the climber or tower crane shall certify the weight of assemblies and components. Alternately, in lieu of painted weight markings or metal tags, or when the manufacturer's certification is not available, the licensed engineer applicant shall certify an erection, jumping, climbing or dismantling weight list indicating how such weights were determined;
5. The center of gravity of all asymmetrical components shall be located and shown;
6. A sequence of operation detailing the erection, jumping, climbing, and dismantling, along with the rigging materials to be used in such operations;
7. The certification of the calibration as required in Item 6 of Section 3319.8.8;
8. Cranes or derricks located either within the lot line or on the street and used to erect, jump, climb, or dismantle a tower or climber crane shall be indicated;
9. The names and contact information of the licensed master, climber or tower crane rigger, and the rigger foreman along with the name and contact information of the company performing the erection, dismantling, climbing and/or jumping work.

**Section 3319.8.1 was amended by [Local Law 14 of 2018](#). This law has an effective date of December 31, 2017.*

***3319.8.2 Safety coordination meeting.** The general contractor must hold a safety coordination meeting prior to the initial erection, as well as the dismantling or initial jump down, of a climber or tower crane. No work related to the erection, climbing, jumping or dismantling of the tower or climber crane may be performed without the safety coordination meeting having taken place. The following parties must be present at the safety coordination meeting:

1. General contractor or designee;
2. Professional engineer of record for the crane or designee;
3. Licensed master, tower or climber crane rigger and rigger foreman;
4. Site safety manager or coordinator, if required for the job by Chapter 33 of the code;
5. Licensed crane operator and oiler; and
6. Any other parties the department deems necessary.

**Section 3319.8.2 was amended by [Local Law 14 of 2018](#). This law has an effective date of December 31, 2017.*

***3319.8.3 Pre-jump safety meeting.** The general contractor must coordinate a pre-jump safety meeting no more than 24 hours prior to each instance of a tower or climber crane jump or climb. No work related to the jumping or climbing of the tower or climber crane may be performed without the pre-jump safety meeting having taken place. The following parties must be present at the pre-jump safety meeting:

1. General contractor or designee;
2. Licensed master, tower or climber crane rigger and rigger foreman;
3. Site safety manager or coordinator, if required for the job by Chapter 33 of the *building code*;

4. Licensed crane operator and oiler;
5. “Jumping” crew and back-up personnel;
6. Flagman/woman where required;
7. Signalman/woman and communications personnel; and
8. Any other parties the department deems necessary.

**Section 3319.8.3 was amended by [Local Law 14 of 2018](#). This law has an effective date of December 31, 2017.*

3319.8.4 Department notification.

3319.8.4.1 Meeting notifications. The general contractor must notify the department at least 48 hours in advance of any safety coordination meeting or pre-jump safety meeting. No work related to the erecting, jumping, climbing, or dismantling of the tower or climber crane is to be performed without prior notice of the meeting having been given to the department.

3319.8.4.2 Time schedule. A time schedule including date and time of day that the erection, jumping, climbing, or dismantling is proposed to take place shall be provided as soon as it is known by the general contractor.

3319.8.5 Safety coordination and pre-jump safety meeting topics. The following topics are to be covered during safety coordination and pre-jump safety meetings:

1. Scope of work;
2. Roles and responsibilities;
3. Rigging to be used and the specific sequence of operations;
4. Inspection of all rigging equipment, materials, and tools prior to work;
5. Review of all equipment, including but not limited to, collars, ties, and bolts;
6. Permit validity;
7. Qualifications and training of personnel;
8. Relevant weather warnings;
9. Compliance with the manufacturer’s manual; and
10. Softening mechanisms, if using nylon slings.

3319.8.6 Meeting log. The general contractor, or his or her designee, and/or the company erecting, jumping, climbing, or dismantling the tower or climber crane shall keep a log on site and available to the department at all times that shall include:

1. The dates and times of all safety coordination meetings and pre-jump safety meetings held;
2. The names, titles, and company affiliations of all those present at the meetings;
3. A summary of what was discussed during each meeting, including specific tasks and the name of the person to whom they were assigned;
4. A list of the decisions made at the meeting; and
5. Certification of worker training pursuant to Section 3319.10.

3319.8.7 Inspection and certification by the engineer of record. Prior to jumping or climbing a tower or climber crane, the engineer of record for the crane must provide the department with a certified, signed, and sealed report stating that:

1. He or she (or his or her designee) has inspected the crane installation prior to the pre-jump safety meeting, and providing the date of inspection;
2. He or she has found no hazardous conditions during the crane inspection or any other condition within his or her purview that adversely affects the safety of erection, dismantling, climbing, or jumping operations;
3. The crane is installed according to the plans approved by the department as well as in accordance with the manufacturer’s specifications to the extent applicable; and
4. The appropriate technical testing records for the crane, including torque, plumb, and magnetic particle or other

appropriate reports comply with safety requirements and with the manufacturer's specifications.

***3319.8.8 Erection, jumping, climbing, and dismantling operations.** The erection, jumping, climbing, and dismantling operations for tower and climber cranes shall be subject to the following requirements:

1. The licensed master, tower or climber crane rigger, and the rigger foreman, shall be present at the job site during erection, jumping, climbing, and dismantling of the tower or climber crane;
2. Cranes or derricks located either within the lot line or on the street, and used to erect, jump, climb, or dismantle tower or climber cranes, shall be subject to certificate of on-site inspection requirements;
3. A load radius chart approved by department shall be posted in the cabin of the crane;
4. The approved erection, jumping, climbing, or dismantling procedure and sequence, with weights of assemblies and components clearly marked, shall be given by the equipment user to the licensed operator of the crane or derrick and to the rigger prior to commencement of the work;
5. No tower or climber crane shall be placed, erected or disassembled in any roadway, sidewalk, or street unless a permit is first obtained from the New York City Department of Transportation;
6. All accepted or approved installed safety devices on a crane involved in the erection, jumping, climbing, or dismantling procedure shall have been calibrated within the time period provided by department rules or manufacturer's specifications; and
7. The safety devices of the tower or climber crane shall be inspected by the licensed crane operator as part of the inspection procedure.

**Section 3319.8.8 was amended by [Local Law 14 of 2018](#). This law has an effective date of December 31, 2017.*

3319.9 Slings. Slings shall be used in accordance with the following requirements and any rules promulgated by the commissioner.

3319.9.1 Use of nylon slings in conjunction with climber or tower crane erection, jumping, climbing, and dismantling. Nylon slings shall only be used in conjunction with climber or tower crane erection, jumping, climbing, and dismantling if the manufacturer's manual specifically states or recommends the use of nylon slings. Nylon slings shall not be used unless softening mechanisms have been applied to all sharp edges.

3319.9.2 Discarded rope. Discarded rope shall not be used for slings.

3319.10 Worker training.

3319.10.1 Training Requirements. All workers engaged in the erection, jumping, climbing, rigging, or dismantling of a climber or tower crane, including the licensed rigger and the rigger foreman, shall have satisfactorily completed a department-approved training course of not less than thirty hours. Such course shall, at a minimum, include instruction on fall protection, crane assembly and disassembly, pre-lift planning, weights and materials, the use of slings, lifting/lowering loads, signaling and other proper means of communication with the crane operator, crane and hoist inspections, rigging requirements, and generally how to avoid accidents with cranes and hoists. The commissioner may by rule identify additional types of cranes for which such training is necessary. Any person who, within the three years prior to the effective date of this section, has successfully completed at least a thirty-hour training course need not take a second thirty-hour course, provided such person can provide to the department a dated certificate as set forth in this section evidencing completion of such a training course. Such person shall, however, take a department-approved eight-hour re-certification course within three years of the initial course and every three years thereafter. Successful completion of the training or re-certification course shall be evidenced by a dated certificate issued by the provider of the training or re-certification course. The certificate shall include such information as specified by the department by rule. The certificate, or a valid wallet card version thereof, shall be readily available to the commissioner upon request.

3319.10.1.1 Training providers. Such training or refresher course shall be conducted (i) pursuant to a registered New York state department of labor training program, or (ii) by a provider approved by the department.

3319.10.2 Certification. Prior to erecting, jumping, climbing or dismantling the climber or tower crane, or other crane type the commissioner specifies by rule, the master, climber or tower crane rigger shall certify in the meeting log, described in Section 3319.8.6, that the rigger foreman and all other members of the "jumping crew" and back-up personnel have satisfactorily completed all training requirements.

***3319.11 Crane location device.** No crane operation that requires a certificate of on-site inspection, and other such types of crane operations where identified in rules promulgated by the commissioner, shall commence unless the crane is equipped with a global positioning system, or other similar device, that is approved by the department and capable of transmitting the location of the crane

to which it is attached to the department. Where no such system or device has been approved by the department, (i) no crane operation subject to the provisions of this section shall commence until after the department has been notified by the equipment user, in a form and manner approved by the commissioner, of the date upon which the crane will arrive at the site, and (ii) upon the conclusion of the work, the equipment user shall also notify the department, in a form and manner approved by the commissioner, of the date of the departure of the crane from the site.

Exception: Crane operations that utilize tower or climber cranes and require submission of an erection, jumping, climbing and dismantling plan to the department by a licensed engineer.

**Section 3319.11 was added by [Local Law 77 of 2017](#). This law has an effective date of May 1, 2018.*

****3319.12 Crane event recorder.** No certificate of operation for a crane shall be issued or renewed on or after January 1, 2019, unless the crane is equipped with an event recorder that is supplied by the crane manufacturer, or by a dealer, distributor, vendor, or third-party authorized crane manufacturer.

Exception: Cranes where the manufacturer certifies to the department that an event recorder cannot be installed on the crane due to a technological limitation.

**Section 3319.12 was added by [Local Law 79 of 2017](#). This law has an effective date of January 1, 2019.*

***Section 3319.12 was renumbered by [Local Law 13 of 2018](#). This law has an effective date of April 30, 2018.*

****3319.12.1 Data to be recorded.** At a minimum, the event recorder shall collect the following data:

1. Crane configuration;
2. Any overload condition;
3. Status of limit switches; and
4. Operator overrides.

**Section 3319.12.1 was added by [Local Law 79 of 2017](#). This law has an effective date of January 1, 2019.*

***Section 3319.12.1 was renumbered by [Local Law 13 of 2018](#). This law has an effective date of April 30, 2018.*

****3319.12.2 Data to be made available to commissioner upon request.** Data collected by the event recorder shall be made available to the commissioner upon request.

**Section 3319.12.2 was added by [Local Law 79 of 2017](#). This law has an effective date of January 1, 2019.*

***Section 3319.12.2 was renumbered by [Local Law 13 of 2018](#). This law has an effective date of April 30, 2018.*

***3319.13 Measuring wind.** Wind speed during crane or derrick operations shall be determined in accordance with the requirements of Table 3319.13. Options 1, 2, and 3 in Table 3319.13 shall be in accordance with the requirements of Sections 3319.13.1 through 3319.13.3, respectively.

**Section 3319.13 was added by [Local Law 13 of 2018](#). This law has an effective date of April 30, 2018.*

***Table 3319.13**
Wind measurement requirements for cranes and derricks

Equipment type		Allowable options		
		Option 1: Anemometer on the crane or derrick	Option 2: Anemometer at the site	Option 3: Nearest weather station
Certificate of on-site inspection or supervision by a licensed master rigger required	Crane with lattice boom, jib, or mast (and not a pile driver or clamshell)	Yes	No (Except may utilize if anemometer on crane malfunctions)	No
	Crane utilizing only a telescoping boom	Yes	Yes	Yes
	Crane utilizing only an articulating boom	Yes	Yes	Yes
	Pile driver	Yes	Yes	Yes
	Clamshell	Yes	Yes	Yes
	Derrick	Yes	Yes	No
A crane, derrick, pile driver, or clamshell that does not require a certificate of on-site inspection or supervision by a licensed master rigger		Yes	Yes	Yes

**Table 3319.13 was added by [Local Law 13 of 2018](#). This law has an effective date of April 30, 2018.*

***3319.13.1 Option 1: Anemometer on the crane or derrick.** An anemometer provided by the crane or derrick manufacturer, or an entity acceptable to such manufacturer, and installed at the top of the boom or at the location specified by such manufacturer. The anemometer must measure a 3-second gust wind. A real time display of the anemometer must be available to the hoisting machine operator in the crane cab or at the operator's station. Such anemometer is to be considered an operational aid and must be checked prior to each shift as required by department rules.

Exception: Where the manufacturer is no longer in business, or the manufacturer or an entity acceptable to such manufacturer is unable to provide the anemometer, the anemometer may be approved by the department.

**Section 3319.13.1 was added by [Local Law 13 of 2018](#). This law has an effective date of April 30, 2018.*

***3319.13.2 Option 2: Anemometer at the site.** An anemometer located at a high point of the site approximate to the height and location of the crane or derrick boom/jib, freely exposed to the wind, and calibrated in accordance with ASTM D5096-02. The anemometer must measure a 3-second gust wind. A real time display of the anemometer must be available to the hoisting machine operator at the operator's station, or a person designated by the hoisting machine operator must be provided to monitor the display and alert the hoisting machine operator when measurements near, meet, or exceed the thresholds specified in the approved wind action plan. Such anemometer is to be considered an operational aid and must be checked prior to each shift as required by department rules.

**Section 3319.13.2 was added by [Local Law 13 of 2018](#). This law has an effective date of April 30, 2018.*

***3319.13.3 Option 3: Nearest weather station.** The most recent gust wind speed reported at the nearest National Weather Service weather station. The equipment user must establish a system to ensure the hoisting machine operator is notified when reported wind gusts near, meet, or exceed the thresholds specified in the approved wind action plan. An acceptable system may include engaging a metrological service to provide a text or similar alert to a person designated by the equipment user when wind thresholds are neared, met, or exceeded, and have such designated person notify the hoisting machine operator.

**Section 3319.13.3 was added by [Local Law 13 of 2018](#). This law has an effective date of April 30, 2018.*

***3319.13 Age limitations for cranes.** Only cranes having an age of less than 25 years from the manufacture date may be used in New York City. Notwithstanding the provisions of Section 3319.5, the certificate of operation for a crane with an age greater than 25 years from the manufacture date shall be deemed to have expired.

Exceptions:

1. A crane with an age of 25 years or greater from the manufacture date that is (i) in use on a project on January 1, 2019 or (ii) not in use on January 1, 2019, but for which an application for a certificate of on-site inspection has been approved as of January 1, 2019, may continue to be used until completion of the project for which it is being used or the project for which such certificate of onsite inspection was issued.
2. Where a crane with an age of less than 25 years from the manufacture date at the time the department approved the application for a certificate of on-site inspection is being used on a project and will reach an age of 25 years or greater from the manufacture date during such project, such crane may be used for the duration of that project or until it reaches 28 years of age, whichever occurs earlier.
3. The commissioner may approve the use of a crane with an age of 25 years or greater from the manufacture date for up to a maximum of five years, not to exceed 30 years from the manufacture date, when records as required by rule of the department are deemed sufficient by the commissioner to establish that such crane meets the manufacturer's standards for use.
4. This section shall not apply to equipment used for pile driving or clamshell work.

**Section 3319.13 was added by [Local Law 3 of 2018](#). This law has an effective date of January 1, 2019. The mis-numbering will be corrected in future legislation.*

**SECTION BC 3320
MATERIAL HANDLING EQUIPMENT**

3320.1 Scope. Material handling equipment shall meet and be used in accordance with the requirements of this section.

3320.2 Requirements. Material handling equipment shall be installed, operated, and maintained to eliminate hazard to the public or to property. It shall be unlawful to operate any such equipment that is not provided with a positive means for preventing the unauthorized operation of such machine. The means whereby such machines may be made inoperative shall be acceptable to the commissioner.

3320.3 Operation. Only operators designated by the person causing such machinery to be used shall operate material handling machinery. Operators and signalmen/signalwoman shall be experienced at the operation they perform. The operator shall be responsible for making the machine inoperative before he or she leaves the machine.

3320.3.1 Loading. Loading of material handling equipment shall be conducted in accordance with the following requirements:

1. Material handling equipment shall not be loaded in excess of the rated load specified by the manufacturer. When necessary, manufacturer load ratings shall be reduced to take into account effects of wind, ground condition and operating speed.
2. Rated load capacities and required charts shall be conspicuously posted on all material handling equipment or on the job site and shall be available to the commissioner at all times.
3. All loads shall be properly trimmed to prevent the dislodgment of any part during raising, lowering, swinging or transit.
4. Suspended loads shall be securely slung and properly balanced before they are set in motion.

3320.3.2 Refueling. Refueling of material handling equipment shall be conducted in accordance with the following requirements:

1. The engine shall be stopped during refueling, except as otherwise provided in rules promulgated by the commissioner.
2. Open lights, flames, or spark-producing devices shall be kept at a safe distance while refueling an internal combustion engine.
3. No person shall smoke or carry lighted smoking material in the immediate vicinity of the refueling area.
4. "No smoking" signs shall be conspicuously posted in all fueling or fuel storage areas.
5. Fuel shall be kept in containers that meet the requirements of the Fire Department.
6. All other requirements of the Fire Department shall be satisfied.

3320.4 Notification of accidents involving material handling equipment. The owner or person directly in charge of any material handling equipment shall immediately notify the commissioner following any accident involving material handling equipment. In such a case, no person shall permit either of the following without the permission of the commissioner:

1. Use of such material handling equipment; or
2. Remove of the material handling equipment or any part thereof from the area of the job site.

3320.5 Conveyors. Conveyors shall meet the requirements of Sections 3320.5.1 through 3320.5.3.

3320.5.1 Walkways. Walkways along belt conveyors or bucket conveyors shall be kept free of materials and, where 5 feet (127 mm) or more above the ground, shall be provided with a standard guardrail and standard toeboard that meets the requirements of Section 3307.8 along the outside of the walkway. The standard guardrail and standard toeboard may be omitted on the side toward the belt if the walkway is located adjacent to the conveyor.

3320.5.2 Trippers. Where trippers are used to control discharge, a device for throwing the belt or bucket drive into neutral shall be installed at each end of the runway.

3320.5.3 Spillage. Where conveyor belts cross any traveled way, trays shall be installed to catch spillage and overhead protection shall be provided for persons or traffic passing beneath.

3320.6 Trucks. Trucks shall meet the requirements of Sections 3320.6.1 and 3320.6.2.

3320.6.1 Maintenance. All parts and accessories of trucks shall be kept in repair. Brakes shall be maintained so that the vehicle with full load may be held on any grade that may be encountered on the job. Provision shall be made for the immediate application of wheel blocks to trucks traversing ramps steeper than one in ten.

3320.6.2 Loading. Trucks shall not be loaded beyond the manufacturer's rated capacity, nor beyond the legal load limit, where applicable. The loads shall be trimmed before the truck is set in motion to prevent spillage. Loads that project beyond the sides of the truck, or that may be dislodged in transit, shall be removed or securely lashed in place.

3320.7 Power buggies. Power buggies shall meet the requirements of Sections 3320.7.1 and 3320.7.2.

3320.7.1 Responsibilities of employers and workers. Employers and workers shall have the following responsibilities regarding power buggies:

1. Every person causing a power buggy to be used shall provide trained and competent operators and shall carry out or enforce all provisions of this section pertaining to the use, operation and maintenance thereof.
2. No person other than the operator assigned by the employer shall operate a power buggy. A power buggy shall be in the charge and custody of the operator assigned, and no other person shall in any way interfere with or handle it, nor shall the operator cause or permit any other person to do so.
3. No power buggy shall be operated unless it is in good operating condition and is so constructed that it is stable under conditions of normal use.

3320.7.2 Operation and construction. Power buggies shall be operated and constructed in accordance with the requirements of Sections 3320.7.2.1 through 3320.7.2.4.

3320.7.2.1 Brakes. Every power buggy shall be provided with brakes and tire surfaces capable of bringing it to a full stop within 25 feet (635 mm) on a level surface that is similar to the one on which it will be used and at full rated load and maximum design speed. Brakes shall be capable of being fixed in engagement to hold the full load stationary on a 25 percent grade.

3320.7.2.2 Accidental starting. All movement controls of every power buggy shall be so arranged or shielded that they cannot be inadvertently engaged or the buggy accidentally set in motion.

3320.7.2.3 Parking on grades. No power buggy shall be left unattended on any grade sufficiently steep to cause it to coast if free of engine and brake resistance.

3320.7.2.4 Use on ramps, runways and platforms. Power buggies shall not be used on ramps, runways, or platforms that do not meet the requirements of Section 3315

3320.8 Lift and fork trucks. Lift and fork trucks shall meet the requirements of Sections 3320.8.1 through 3320.8.4.

3320.8.1 Load capacity. A metal plate with readily legible etched or stamped figures giving the capacity rating in pounds shall

be attached to every lift or fork truck.

3320.8.2 Maintenance. All parts and accessories of lift or fork trucks shall be kept in repair and with brakes adequate to maintain the fully loaded vehicle on any grade that may be encountered on the job.

3320.8.3 Loading. No lift or fork truck shall be loaded beyond its capacity rating. No hand-operated pallet truck loaded so that any point on the load is at a greater height than 4 feet 6 inches (114 mm) above the floor shall be moved by pushing unless handled by two persons.

3320.8.4 Prohibited use. No lift or fork truck shall be in motion when the loaded forks are elevated higher than necessary to clear obstructions, except as may be required for positioning, picking up, or depositing the load.

3320.9 Hand propelled vehicles. Hand propelled vehicles shall be constructed and braked to withstand the loads to be carried and shall be maintained in repair. Vehicles with loose parts shall not be used.

3320.10 Mixing machines. Where the public may have access to the working area near charging skips, standard guardrails that meet the requirements of Section 3307.8 shall be erected to enclose the area under the raised skip and the mixing machine. Each time before raising or lowering the charging skip, the operator shall ascertain that no one is in the danger zone.

3320.11 Jacks. Jacks shall meet the requirements of Sections 3320.11.1 through 3320.11.5.

3320.11.1 Marking. The rated capacity of every jack shall be legibly marked in a prominent location on the jack by casting or stamping. The manufacturer shall designate the intended supporting point of the load and the maximum permissible length of lever and force applied.

3320.11.2 Overtravel to be limited. Every jack shall, where practicable, be provided with a positive stop to prevent overtravel; otherwise an indicator to clearly show overtravel shall be provided on the jack.

3320.11.3 Maintenance. Lubrication and operation of jacks shall be in accordance with the recommendations of the manufacturer.

3320.11.4 Foundations. Jacks shall rest on a firm, level foundation adequate to support the load.

3320.11.5 Blocking required. When the object has been lifted to the desired height, blocking or cribbing shall be immediately placed under it if the jack does not have built-in safety devices such as stop-rings, locknuts or place-in cylinder sleeves.

3320.12 Cableways. The construction, installation, inspection, maintenance and use of cableways shall be in conformance with rules.

***SECTION BC 3321 CONSTRUCTION SITE SAFETY TRAINING**

**Section 3321 was added by [Local Law 196 of 2017](#). This law has an effective date of October 16, 2017.*

***3321.1 Site safety training required.** In addition to any other applicable city, state or federal law or rule, each permit holder at a building site for which a construction superintendent, site safety manager or site safety coordinator is required shall be responsible for the following:

1. On and after March 1, 2018, and until the day before the SST second compliance date, ensuring that each construction or demolition worker employed or otherwise engaged at such site by the permit holder or performing subcontracted work for or on behalf of such permit holder has successfully completed (i) and OSHA 10-hour class, (ii) an OSHA 30-hour class or (iii) a 100-hour training program.
2. On and after the SST second compliance date, and until the day before the SST full compliance date, ensuring that (i) each such worker has an SST card, a limited SST card or a temporary SST card and (ii) each such worker who is serving as a site safety manager, site safety coordinator, concrete safety manager, construction superintendent or a competent person at such site has an SST supervisor card.
3. On and after the SST full compliance date, ensuring that (i) each such worker has an SST card or a temporary SST card and (ii) each such worker who is serving as a site safety manager, site safety coordinator, concrete safety manager, construction superintendent or a competent person at such site shall have an SST supervisor card.

Exception: The department may by rule establish alternative training requirements for workers who are (i) working on a building that is four stories or less in height or working on a new building that will, upon completion of such work, be four stories or less in height and (ii) engaged on a volunteer basis by a not-for-profit humanitarian organization that is registered with the New York state charities bureau.

**Section 3321.1 was added by [Local Law 196 of 2017](#). This law has an effective date of October 16, 2017.*

***3321.2 Duties of permit holder.** On and after March 1, 2018, each permit holder at a building site shall be responsible for the following:

1. Ensuring that each construction or demolition worker employed or otherwise engaged at such site by or on behalf of such permit holder complies with the requirements of Section 3321.1.
2. Certifying to the department, in a form and manner established by the department, that the requirements of Section 3321 have been met.
3. Maintaining at such site a daily log, in a form and manner established by the department, that identifies each such worker and that includes, for each such worker, a copy of the SST card, SST supervisor card, limited SST card, temporary SST card or proof of compliance with Item 1 of Section 3321.1, as applicable.
4. Providing such log to the department upon request by the department.

**Section 3321.2 was added by [Local Law 196 of 2017](#). This law has an effective date of October 16, 2017.*

1 RCNY §3310-01

CHAPTER 3300

Safeguards during Construction or Demolition

§3310-01 Site safety.

(a) Site safety inspections. It is the responsibility of the site safety manager or coordinator to perform the site safety inspections detailed in Tables 1 through 9 below at the intervals prescribed in the tables.

TABLE 1
General inspections

	Requirement	Minimum schedule of inspections
(1)	When a building is being constructed or demolished at a height greater than 75 feet (22.86 m), verify that at least one elevator or personal hoist in a state of readiness is available for FDNY access.	As appropriate
(2)	When a personnel hoist requires a jump, verify that all necessary permits are obtained and testing performed.	As appropriate
(3)	When a building is being constructed or demolished at a height greater than 75 feet (22.86 m), verify that a standpipe system is available and in readiness at all times for use by the Fire Department.	Daily
	(i) Verify the standpipe is in place at each story below the construction or demolition floor. For the purposes of this section, the construction floor shall be the stripping operation floor, except for steel construction, in which case it shall be the uppermost finished and walkable concrete floor; for demolition the demolition floor shall be the floor being demolished.	Daily
	(ii) Verify that valves are in place at each story below the construction or demolition floor.	Daily
	(iii) Verify that the standpipe is capped.	Daily
	(iv) Verify that standpipes are connected to a water source, as applicable and a siamese connection.	Daily
	(v) Verify that siamese hose connections are not obstructed.	Daily
	(vi) Verify siamese hose connections are marked by a red light and a sign reading, "Standpipe Siamese Connection."	Daily
	(vii) Verify that no breach exists by visually tracing standpipe risers, cross connections and siamese connections.	Weekly
(4)	If a construction shed is located within 30 feet (9.144 m) of the building, verify that it meets the requirements of section 3303.1.3 of the building code.	Once per shed
(5)	Verify that interior and exterior guardrails and toeboards are provided and properly installed as required by the building code.	Daily
(6)	Verify that all openings and/or holes in the floor are covered at all times.	Daily
(7)	Verify that all stairwells have standard handrails.	Daily
(8)	Verify that all signs required by section 3301.9 of the building code are installed and contain the required information.	Once per sign

TABLE 2
Safety netting inspections

	Requirement	Minimum schedule of inspections
(1)	Verify that horizontal safety netting is maintained not more than two stories below the stripping operation floor on concrete structures or the uppermost finished and walkable concrete floor on steel frame structures, provided that such floor is more than six stories or 75 feet (22.86 m) in height above the adjoining ground or adjoining roof level, whichever is applicable.	Daily
(2)	Verify that horizontal safety netting projects outward horizontally from the edge of the floor a minimum of 10 feet (3.048 m).	Daily
(3)	Verify that omitted horizontal safety netting in designated crane and derrick lifting areas is indicated and approved on the crane application and the site safety plan.	Weekly
(4)	For steel frame construction, where the steel frame extends more than eight stories above the walkable concrete floor, verify that the vertical safety netting is provided on the floors at and below the topmost working metal deck where this deck is substantially completed and that the required guardrails and toeboards are in place.	Daily
(5)	Verify that vertical safety netting is provided on all floors below the floor on which horizontal netting is required.	Daily
(6)	Verify that vertical safety netting is secured and kept closed at all times, except during actual loading operations or perimeter construction operations.	Daily

TABLE 3
Maintenance of site and adjacent area inspections

	Requirement	Minimum schedule of inspections
(1)	Verify that all areas used by the public are maintained free from ice, snow, grease, debris, equipment, materials, projections, tools, or other items, substance, or conditions that may constitute a slipping, tripping or other hazard.	Throughout the day
(2)	Verify that guards, shields or barricades surround all exposed, electrically charged, moving or otherwise dangerous parts of machines and construction equipment so as to prevent contact with the public.	Daily
(3)	Verify that there are no exposed hose lines, wire, rope, or other items that may constitute a tripping hazard to the public.	Throughout the day
(4)	Verify that adjoining property is protected when the height of the building exceeds that of the adjoining property.	Daily
(5)	When the building is extended, enlarged or increased in height so that any portion of such building, except chimneys or vents, extends higher than the top of any previously constructed chimneys within 100 feet (30.48 m), verify that the chimneys conform to section 801 of the New York City mechanical code.	As appropriate

TABLE 4
Housekeeping inspections

	Requirement	Minimum Schedule of Inspections
(1)	Verify that floors and stairs are clean from excess debris.	Throughout the day
(2)	Verify that tools and equipment not in use are kept away from edges or openings.	Throughout the day
(3)	Verify that the roof of the sidewalk shed and the street are free of debris.	Daily
(4)	Verify that sufficient containers for the storage of garbage and debris are provided.	Daily
(5)	Verify that containers are covered and secured when full.	Daily

TABLE 5
Removal and storage of material inspections

	Requirement	Minimum Schedule of Inspections
(1)	Verify that combustible waste material and combustible debris have been removed from the site.	Daily
(2)	Verify that chutes used for the removal of debris are installed and maintained in accordance with section 3303.5.5 of the building code.	Weekly
(3)	Verify that material stored on floors of a building is secured when not being used.	Daily
(4)	When exterior walls are not in place, verify that stored material is kept at least 10 feet (3.048 m) back from the perimeter of the building, or at least 5 feet (1524 mm) back from the perimeter of the building if the floor area is less than 1,000 square feet (304.8 m), or at least 2 feet (609.6 mm) back from the perimeter of the building on upper working floors located not more than two stories below the stripping operation on concrete structures or the uppermost concrete floor on steel structures.	Daily
(5)	Verify that no material hangs over the edge of a building unless banded and braced for relocation by the end of the workday, except on the floor of the stripping operation and on floors designated as the lumber or steel mill.	Daily
	(i) On the floor of the stripping operation, verify that material that overhangs the floor is banded and braced, overhangs by not more than one-third of its length, and is relocated by the next workday for concrete operations.	Daily
	(ii) Where the steel mill and lumber mill are located, verify that any material that overhangs is relocated by the next workday.	Daily

TABLE 6
Protection of sidewalks inspections

	Requirement	Minimum Schedule of Inspections
(1)	Verify that valid permits for sidewalk sheds have been obtained, have not expired, and are posted in a central, visible area.	Periodic
(2)	Verify that approved drawings of the sidewalk shed are at the construction site.	Periodic
(3)	Verify that the designer and/or supplier of the sidewalk shed has certified that such shed has been erected in accordance with the approved plans and that the proper forms have been filed with the department.	Once
(4)	Verify that sidewalk sheds extend the entire perimeter of the building.	Once
(5)	Verify that when the building exceeds 100 feet (30.48 m) in height, the sidewalk sheds extend 20 feet (6.096 m) beyond the property line.	Once
(6)	Verify that required sidewalk sheds remain in place until the structure is enclosed, all exterior work completed, the sash is gazed above the second story, the exterior façade is cleaned down, all outside handling of material equipment and machinery is completed, and dismantling of a hoist, crane, or the use of a derrick in their removal above the second story has been completed.	Weekly
(7)	Verify that all openings in sidewalk sheds, fences and railings for loading purposes are kept closed, barricaded, protected, or guarded at all times.	Throughout the day
(8)	Verify that sidewalk sheds are illuminated at night by the equivalent of 100-watt bulbs spaced 15 feet (4.572 m) apart at a minimum height of 8 feet (2.44 m) above the sidewalk.	Daily
(9)	Verify that temporary footbridges and walkways for the public are at least 5 feet (1.524 m) in width.	Daily as appropriate

TABLE 7
Warning signs and lights inspections

	Requirement	Minimum Schedule of Inspections
(1)	Verify that all areas that are dangerous or hazardous to the public or areas where work is performed near vehicular traffic are appropriately marked with warning signs and lights.	Daily
(2)	Verify that steps necessary to protect the public are taken, including provisions for flagmen/flagwomen whenever intermittent operations are conducted on or across areas open to the public or when dangerous operations, such as blasting, may affect such areas.	Throughout the day, as appropriate

TABLE 8
Scaffolds, structural ramps, runways and platform inspections

	Requirement	Minimum Schedule of Inspections
(1)	Verify that where they pose a risk to the public that all structural ramps, scaffolds, runways and platforms are provided with guardrails, toeboards, screening, or nets, unless otherwise specified by the building code.	Daily

TABLE 9
Material handling and hoisting equipment inspections

	Requirement	Minimum Schedule of Inspections
(1)	Verify that all certificates of approval, operation, and onsite inspection for all cranes, derricks, and/or cableways have been obtained and are available for inspection at the construction site.	As required
(2)	Verify that all permits for highway and street closings are available for inspection at the construction site.	As required
(3)	Verify that licenses of crane operators are available at the construction site.	Daily
(4)	When a crane is to be jumped, verify that it is in accordance with the schedule submitted by the professional engineer and approved by the department.	As appropriate
(5)	Verify that a means of communication exists between the responsible parties when the operator of hoisting machinery has no vision of the lift or loading areas.	Daily when operational
(6)	Verify that a program has been established and is operational for the control of pedestrian and/or vehicular traffic around the construction site during all lifting and hoisting operations.	Daily when operational
(7)	Verify that flagmen/women are present to stop pedestrian and/or vehicular traffic during the following intermittent operations: <ul style="list-style-type: none"> (i) During all lifting and hoisting operations; (ii) When trucks enter and exit the site; (iii) When materials are being lifted over the sidewalk shed; (iv) When dangerous operations, e.g., blasting, occur; (v) When the sidewalk and/or street is temporarily closed. 	As appropriate

(b) Site safety log. A site safety log shall be maintained at the site by the site safety manager or coordinator and made available for inspection upon the request of the commissioner.

- (1) The site safety manager or coordinator shall ensure that all daily entries in the site safety log are completed. These entries must be recorded by 7:00 a.m. on the day following the activities.
- (2) The site safety manager or coordinator, or an alternate, shall sign the log at the beginning of each day, and must be present at the job at all times during ongoing construction or demolition. If at any point during the day the site safety manager or coordinator, or alternate, shall be relieved of his or her responsibilities at the site, or leave the site for any reason, he or she shall indicate this in the log and an alternate shall sign in.
- (3) Log contents. At a minimum, the site safety log shall contain the following:

- (i) Date and location of inspections performed in accordance with subdivision (a) of this rule;
- (ii) Date and names of individuals met with to satisfy the requirements of section 3310.8.1 of the building code;
- (iii) Any unsafe acts and/or conditions, and dates and locations of said unsafe acts and/or conditions;
- (iv) Companies and representatives notified of unsafe acts and/or conditions;
- (v) Dates of notification of unsafe acts and/or conditions;
- (vi) Dates of correction of unsafe acts and/or conditions;
- (vii) Any accident involving the public or damage to public or private property;
- (viii) Any violations, stop work orders or summonses issued by the department, including date issued and date lifted or dismissed;
- (ix) Dates and location where horizontal and vertical netting have been installed, replaced and/or repaired;
- (x) Date horizontal safety netting is removed; and
- (xi) Date when building reaches a height of 75 feet (22 860 mm).

(c) Permit log. Any equipment brought onto the job that requires permits, as well as a description of the equipment, where it is to be located, permit number, issue and expiration date of the permit, and certificate of inspection, if required, shall be entered on a separate permit log that shall be maintained at the site by the site safety manager or coordinator and made available for inspection upon the request of the commissioner.

(d) Notification. The site safety manager or coordinator shall immediately and directly notify the department in accordance with section 3310.8.2 of the building code if he or she discovers in the routine performance of the job any of the conditions listed in section 3310.8.2 or below:

- (i) Required standpipe is not in place at each story below the construction or demolition floor;
- (ii) Required standpipe valve(s) are not in place at each story below the construction or demolition floor;
- (iii) Required standpipe is not capped;
- (iv) Required standpipe is not connected to a water source or siamese connection;
- (v) Required standpipe siamese hose connection(s) is obstructed;
- (vi) Required standpipe siamese hose connections are not marked by a red light and a sign reading, "Standpipe Siamese Connection";
- (vii) A breach exists in the required standpipe risers, cross connections, or siamese connections;
- (viii) The standpipe alarm activates; or
- (ix) When a building over 75 feet (22.86 m) is being constructed or demolished and at least one elevator or hoist in a state of readiness is not available for FDNY access.

Statement of Basis and Purpose of Rule

Section 3310-01 of the DOB's rules establishes site safety requirements for major buildings. The prior rules were drafted with construction and demolition sites in mind. However, façade projects possess their own unique safety challenges, which the existing site safety requirements do not specifically address. Accordingly, DOB Rule section 3310-01 is amended to establish separate site safety requirements for major building façade projects.

Specifically, the amendments to section 3310-01:

- Establish a new table of inspections for façade jobs.
- Require a site safety manager to inspect prior to the start of a façade job to verify compliance with the site safety plan.
- For the full recladding of a façade, require a site safety manager to be present full time.
- For façade repairs/alteration/maintenance (not full recladding), require a site safety manager to be present during certain operations.
- For façade repairs/alteration/maintenance (not full recladding), require a "qualified person" designated by the permit holder to be present at all times active work is occurring.
- Set out requirements for the "qualified person."

The Department's authority for these rules is found in sections 643 and 1043(a) of the New York City Charter and section 3310 of the New York City Building Code.

New material is underlined.

[Deleted material is in brackets.]

"Shall" and "must" denote mandatory requirements and may be used interchangeably in the rules of this department, unless otherwise specified or unless the context clearly indicates otherwise.

Section 1. Subdivision (a) of section 3310-01 of chapter 3300 of title 1 of the rules of the city of New York is amended to read as follows:

(a) Site safety inspections for construction, alteration, or demolition projects. [It is the responsibility of the site safety manager or coordinator to perform the site safety inspections detailed in Tables 1 through 9 below at the intervals prescribed in the tables.] The primary site safety manager or coordinator for a construction, alteration, or demolition project must, at all times such site safety manager or coordinator is required to be present, perform the site safety inspections detailed in Tables 1 through 9, below, at the intervals prescribed in the tables, or ensure such inspections are performed by a site safety manager or coordinator. The requirements of this subdivision do not apply to a project whose scope is limited to façade work.

§ 2. Subdivisions (b), (c), and (d) of section 3310-01 of chapter 3300 of title 1 of the rules of the city of New York are relettered as subdivisions (f), (h), and (j), respectively, subdivisions (f), (h), and (j), as relettered, are amended, and new subdivisions (b), (c), (d), (e), (g), (i), and (k), and a new table 10, to follow the new subdivision (c) and precede the new subdivision (d), are added, to read as follows:

(b) Definitions.

Alteration. For the purposes of this section, the term “alteration” shall have the same meaning as set forth in section 28-101.5 of the Administrative Code.

Alternate site safety manager or coordinator. A site safety manager or coordinator who is acting on behalf of and is approved by, the primary site safety manager or coordinator in accordance with the provisions of section 3310.5.3 of the Building Code.

Construction. For the purposes of this section, the term “construction” shall have the same meaning as set forth in section 3302.1 of the Building Code.

Demolition. For the purposes of this section, the term “demolition” shall have the same meaning as set forth in section 3302.1 of the Building Code.

Façade work (façade project). The restoration of an existing façade to a safe and like new condition following decay, wear, or damage; the modification of an existing façade; or the recladding of a façade.

Façade recladding (recladding of a façade). The removal of the exterior building envelope and replacement with a new exterior building envelope; or the installation of a new exterior building envelope over the existing façade.

Primary site safety manager or coordinator. The site safety manager or coordinator who has been designated as the primary site safety manager in accordance with the provisions of section 3310.5 of the Building Code.

Project. For the purposes of this section, the term “project” shall have the same meaning as set forth in section 28-101.5 of the Administrative Code.

Qualified person. For the purposes of this section, the term “qualified person” shall have the same meaning as set forth in section 3302.1 of the Building Code.

Rigging foreman. An individual working under the direct and continuing supervision of a licensed rigger and who meets the qualifications as a designated rigging foreman as set forth in section 104-20 of these rules.

Site safety coordinator. An individual who holds a valid site safety coordinator certificate from the department.

Site safety manager. An individual who holds a valid site safety manager certificate from the department.

(c) Site safety inspections for façade project. For a project whose scope is limited to façade work:

(1) The primary or alternate site safety manager must, whenever he or she is present at the project site, perform the site safety inspections detailed in Table 10, below, at the intervals prescribed in the table.

(2) At all times when paragraph (1) of subdivision (e) of this section requires the presence of a qualified person, and the primary or alternate site safety manager is not present at the site, the qualified person as described by subdivision (e) must perform the site safety inspections detailed in Table 10, below, at the intervals prescribed in the table.

TABLE 10
Façade project inspections

	<u>Requirement</u>	<u>Minimum Schedule of Inspections</u>
<u>(1)</u>	<u>Verify that the approved site safety plan is on site.</u>	<u>Prior to the commencement of the project; and daily thereafter</u>
<u>(2)</u>	<u>Verify that required sidewalk sheds, fences, pedestrian protection, roof and adjoining property protection, safety netting, guardrails, perimeter protection, and controlled access zones are in accordance with the approved site safety plan.</u>	<u>Prior to the commencement of the project; and daily thereafter</u>
<u>(3)</u>	<u>Verify that all scaffolds, cranes, derricks, hoisting machines, mast climbers, sidewalk sheds, and fences possess a valid permit/certificate, and that such information is recorded in the permit log. (Note: certain types of scaffolds and cranes/derricks are exempt from permit/certificate requirements; see sections 3314.2 and 3319.3 of the building code for details.)</u>	<u>Prior to the commencement of the project; as each piece of equipment is brought to the site; and at the renewal or expiration of the permit/certificate</u>
<u>(4)</u>	<u>Verify that, where required, Department of Transportation permits for street or sidewalk closings are available at the site.</u>	<u>Once per permit</u>
<u>(5)</u>	<u>Verify that notice has been provided to the department prior to the installation or removal of a suspended scaffold or a mast climber.</u>	<u>Prior to each instance</u>
<u>(6)</u>	<u>Verify that plans for all scaffolds, cranes, derricks, hoisting machines, mast climbers, sidewalk sheds, and fences are available at the site. (Note: certain types of scaffolds and cranes/derricks are exempt from design requirements; see sections 3314.3 and 3319.3 of the building code for details.)</u>	<u>Prior to the commencement of the project; as each piece of equipment is brought to the site; and monthly thereafter</u>
<u>(7)</u>	<u>Verify that installation inspections have been completed for all scaffolds, tower/climber cranes, derricks, hoisting machines, mast climbers, and sidewalk sheds, and that a record of such</u>	<u>Following the installation of each piece of equipment</u>

	<u>inspection is available at the site. (Note, installation inspections may also be required when equipment is moved to a new location at the site, or when components are relocated – for example, when decking and guardrails on a supported scaffold are moved to a different level.)</u>	
(8)	<u>Verify that daily/pre-shift inspections have been completed for all scaffolds, cranes, derricks, hoisting machines, mast climbers, and sidewalk sheds and that a record of such inspection is available at the site. (Note: certain types of cranes do not require an inspection; see section 3319.3 of the building code for details.)</u>	<u>Daily</u>
(9)	<u>Verify that inspections have been completed following an adjustment or repair to a scaffold, crane, derrick, hoisting machine, mast climber, or sidewalk shed.</u>	<u>Following each adjustment or repair</u>
(10)	<u>Verify that the general contractor or sub-contractors, as appropriate, are verifying that workers have completed a course that is at least ten hours in length and approved by the United States Department of Labor Occupational Safety and Health Administration (OSHA) in construction industry safety and health, or an equivalent training, and that documentation of such verification is maintained at the site by the general contractor or sub-contractors.</u>	<u>Daily</u>
(11)	<u>Verify that the general contractor or sub-contractors, as appropriate, are providing a site specific safety orientation to all workers employed at the site, and that documentation of such orientation is maintained at the site by the general contractor or sub-contractors.</u>	<u>Weekly</u>
(12)	<u>Verify that contractors engaged in scaffold, mast climber, rigging, hoisting, or sign hanging work are checking that individuals engaged in such work possess training, certification, or licensing for such work, as appropriate, and that documentation of such check is maintained at the site by the contractor.</u>	<u>Daily</u>
(13)	<u>Verify that flagpersons are present to stop pedestrian and/or vehicular traffic during the following intermittent operations:</u> <u>(i) During all lifting and hoisting operations;</u> <u>(ii) When trucks enter and exit the site;</u> <u>(iii) When materials are being lifted over the sidewalk shed;</u> <u>(iv) When dangerous operations, e.g., blasting, occur; and</u> <u>(v) When the sidewalk and/or street is</u>	<u>Throughout the day</u>

	<u>temporarily closed.</u>	
(14)	<u>Verify workers are provided with and are utilizing required personal protection equipment (PPE), including but not limited to harness and life line.</u>	<u>Throughout the day</u>
(15)	<u>Verify that a means of communication exists between the responsible parties when the operator of hoisting machinery has no vision of the lift or loading areas.</u>	<u>Prior to the start of any such hoisting operation; and throughout the day as such hoisting operation is ongoing</u>
(16)	<u>Verify that all signs required by section 3301.9 of the building code are installed and contain the required information.</u>	<u>Prior to the commencement of the project; and upon the posting of any sign added after the commencement of the project</u>
(17)	<u>Verify that scaffolds, sidewalk sheds, fences, and other pedestrian protection are free of signs or advertisements not directly related to the project.</u>	<u>Prior to the commencement of the project; and daily thereafter</u>
(18)	<u>Verify that the standpipe system has passed its most recent hydrostatic pressure test and flow test, and that the sprinkler system has passed its most recent hydrostatic pressure test.</u>	<u>Prior to the commencement of the project; and, if applicable, when a new hydrostatic pressure test and/or flow test is required.</u>
(19)	<u>Verify that where active work is occurring, where project material/debris/equipment is being stored, and where sidewalk sheds, fences, or other pedestrian protection is located:</u> <ul style="list-style-type: none"> <u>(i) Standpipe valves/hose connections/fire department connections are in place; and</u> <u>(ii) Standpipe valves/hose connections/fire department connections are free from obstruction.</u> 	<u>Daily</u>
(20)	<u>In areas where a sidewalk shed or fence has been installed, verify that the required red light marking the fire department connection is functional and the required sign identifying the fire department standpipe connection is visible.</u>	<u>Prior to the commencement of the project; and daily thereafter</u>
(21)	<u>If "hot works" (welding, grinding operations producing sparks, torch operations, etc.) operations are performed, verify that fire extinguishers and dedicated personnel with valid FDNY fire watch certificate of fitness are on site at the location of "hot works" operations.</u>	<u>Prior to start of any "hot works" operations; and throughout the day as "hot works" operations are performed.</u>
(22)	<u>Verify compliance with the provisions of section 3314.11.5 of the building code when welding operations are conducted from a suspended scaffold.</u>	<u>Prior to the start of any welding operation from a suspended scaffold; and throughout the day as welding operations occur from a suspended scaffold</u>
(23)	<u>Verify that all flammable/combustible liquids and gases are located in a well-ventilated area, away from combustible materials, and away from open</u>	<u>Throughout the day</u>

	<u>flame or sources of ignition in accordance with the requirements of the fire department.</u>	
(24)	<u>Verify that, where active work is occurring, where project material/debris/equipment is being stored, or where sidewalk sheds, fences, or other pedestrian protection are located:</u> (i) <u>Building egress is not obstructed;</u> (ii) <u>Areas used by the public are maintained free from ice, snow, grease, debris, equipment, materials, projections, tools, hoses, wires, ropes, or other items, substances, or conditions that may constitute a slipping, tripping, or other hazard; and</u> (iii) <u>Guards, shields or barricades surround all exposed, electrically charged, moving or otherwise dangerous parts of machines and equipment so as to prevent contact with the public.</u>	<u>Throughout the day</u>
(25)	<u>Verify that:</u> (i) <u>Sidewalk shed lights are functioning;</u> (ii) <u>No brace or rail is hanging unattached at one or more ends of the sidewalk shed;</u> (iii) <u>No portions of the sidewalk shed support structure are disconnected;</u> (iv) <u>No section of the sidewalk shed parapet is missing; and</u> (v) <u>All legs of the sidewalk shed remain on their support and are supported to the ground.</u>	<u>Prior to the commencement of the project; and daily thereafter</u>
(26)	<u>Verify that contractor sheds and offices are in accordance with section 3303.16 of the building code.</u>	<u>Prior to the commencement of the project; and upon the installation of any contractor shed added after the commencement of the project</u>
(27)	<u>Verify that chutes used for the removal of debris are installed and maintained in accordance with section 3303.5.5 of the building code.</u>	<u>As new chutes are installed at the site; as existing chutes are relocated at the site; and weekly thereafter</u>
(28)	<u>Verify required safety netting is installed and in good repair.</u>	<u>Daily</u>
(29)	<u>Verify required guardrails and toeboards on exterior scaffolds are installed and in good repair.</u>	<u>Daily</u>
(30)	<u>Verify that sufficient containers for the storage of waste/debris generated by the project are provided, and that such containers are:</u> (i) <u>Covered at the end of the shift;</u> (ii) <u>Covered anytime when full to near the rim; and</u>	<u>Daily</u>

	<u>(iii) Wheels are secured at the end of the shift.</u>	
<u>(31)</u>	<u>Verify that, at the end of the shift, all tools and loose materials have been secured, and that all waste/debris generated by the project, including but not limited to garbage/debris located on scaffolds, mast climbers, sidewalk sheds, roofs, and setbacks, has been placed into containers or removed from the site.</u>	<u>Daily, at the end of the shift</u>
<u>(32)</u>	<u>Verify that combustible waste/debris generated by the project is not allowed to accumulate and is removed from the site.</u>	<u>Throughout the day</u>
<u>(33)</u>	<u>Verify that tools and equipment not in use are kept away from edges or openings.</u>	<u>Throughout the day</u>
<u>(34)</u>	<u>Verify that materials placed/stored on a sidewalk shed are placed/stored only in areas designated on the sidewalk shed plans, and such materials are secured against dislodgement, and there is no evidence of deflection or failure of the sidewalk shed in the vicinity of the storage.</u>	<u>Daily</u>
<u>(35)</u>	<u>Verify that, at the end of the shift, suspended scaffolds have been lowered to the street, sidewalk shed deck, or building setback, or have been otherwise secured to the roof or the building in accordance with the scaffold plans.</u>	<u>Daily, at the end of the shift</u>

(d) Site safety manager requirements for a façade project.

(1) Site safety manager presence at a façade project which does not constitute façade recladding. For a project that is limited in scope to façade work, and which does not constitute façade recladding:

(i) The primary site safety manager must, at a minimum, visit the site after required sidewalk sheds, fences, pedestrian protection, and roof and adjoining property protection have been installed, but prior to the commencement of the project.

(ii) The primary or alternate site safety manager must be present while the following work is performed:

(A) Supported scaffold installation or removal, but not including the relocation of existing deck planking or guardrails to a different level of the scaffold provided any such relocation is designated on the scaffold design documents;

(B) Mast climber installation or removal; or

(C) Other work as directed by the commissioner.

(iii) The primary or alternate site safety manager must visit the site within 24-hours of the issuance of a hazardous violation by the department.

(iv) The primary or alternate site safety manager must be present when the following rigging work is performed, and such rigging work is not performed by or under the direct and continuing supervision of a licensed rigger:

- (A) Suspended scaffold installation or removal;
- (B) Suspended scaffold use; or
- (C) Hoisting machine installation/assembly/erection, climbing/jumping, removal/disassembly, or a relocation requiring modifications to tie-backs, counterweights, or connections to the base building/structure.

(2) Façade recladding. For a project that is limited in scope to façade work, and which constitutes façade recladding, the primary or alternate site safety manager is required to be present at the site during all times active work is occurring, through all phases of work, beginning with the commencement of the façade work and continuing until the building is enclosed and the sidewalk shed is removed, except that, the primary or alternate site safety manager is not required to be present at the site during the following activities, provided no other work is in progress:

- (i) Surveying that does not involve the disturbance of material, structure, or earth;
- (ii) Use of a hoist to transport personnel only;
- (iii) Use of a material hoist that is fully enclosed within the perimeter of the building;
- (iv) Finish trowelling of concrete floors;
- (v) When personnel are provided for temporary heat, light, or water; or
- (vi) Truck deliveries to the site where the sidewalk is closed and the entrance gate is within that closed sidewalk area.

(3) Multiple façade jobs. A site safety manager may serve as the primary or alternate site safety manager at multiple projects whose scope is limited to façade work, and which does not constitute façade recladding, provided such site safety manager is not contemporaneously the primary or alternate site safety manager for any construction, alteration, or demolition project, or any façade recladding project, and further provided that the site safety manager is able to fulfill all duties imposed upon the site safety manager by law and these rules.

(4) Site safety log. In addition to the requirements of subdivisions (f) and (g) of this section, the primary or alternate site safety manager working pursuant to this subdivision must:

- (i) Record their presence at the jobsite by signing the site safety log and noting their time of arrival and departure from the site, immediately after arriving at the site and immediately prior to leaving the site, respectively; and
- (ii) Record the results of inspections required by subdivision (c) of this section prior to leaving the site for the day.

(e) Qualified person for façade project.

(1) Qualified person to be present. For a project that is limited in scope to façade work, and which does not constitute façade recladding, a qualified person, who meets the requirements of paragraphs (2) and (3) of this subdivision, must be present at the site during all times active work is occurring, continuing through all phases of work, beginning with the installation of the sidewalk shed and continuing until the building is enclosed and the sidewalk shed is removed, except that such qualified person is not required to be present at the site during the following activities, provided no other work is in progress:

(i) Surveying that does not involve the disturbance of material, structure, or earth;

(ii) Use of a hoist to transport personnel only;

(iii) Use of a material hoist that is fully enclosed within the perimeter of the building;

(iv) Finish trowelling of concrete floors;

(v) When personnel are provided for temporary heat, light, or water; or

(vi) Truck deliveries to the site where the sidewalk is closed and the entrance gate is within that closed sidewalk area.

(2) Written designation of the qualified person. The designation of one or more individuals to serve as a qualified person pursuant to this subdivision must be evidenced by a written letter, signed and dated by the permit holder. Such letter must, at a minimum, contain the name and contact information for each designated individual. Such letter must be kept on site and be available for inspection by the commissioner upon request.

(3) Qualifications of qualified person. A qualified person designated in accordance with this subdivision must possess all of the following qualifications:

(i) Completed the orientation and training required by Section 3310.10 of the Building Code;

(ii) Beginning July 1, 2016, completed a department approved site safety manager training course that is least 40 hours in length, and every three years thereafter, complete a department approved site safety manager refresher course that is at least 7 hours in length;

(iii) Beginning July 1, 2016, completed the training required by Section 3314.4.5.1 of the building code for supported scaffold installers;

(iv) Beginning July 1, 2016, completed the training required by Section 3314.4.5.3 of the building code for suspended scaffold supervisors;

- (v) Beginning July 1, 2016, completed a course that is at least 30 hours in length and approved by the United States Department of Labor Occupational Safety and Health Administration (OSHA) in construction industry safety and health; and
 - (vi) If the qualified person is not a licensed rigger or a rigging foreman, be approved by the primary site safety manager.
- (4) Proof of qualifications. Evidence, acceptable to the commissioner, of completion of the licensure, training, or other qualifications required by paragraph (3) of this subdivision must be made readily available to the commissioner upon request.
- (5) Site safety log. In addition to the requirements of subdivisions (f) and (g) of this section, the qualified person working pursuant to this subdivision must:
 - (i) Record his or her presence at the jobsite by signing the site safety log and noting the time of arrival and departure from the site, immediately after arriving at the site and immediately prior to leaving the site, respectively;
 - (ii) Record the results of inspections required by subdivision (c) of this section prior to leaving the site for the day; and
 - (iii) Record any conditions reported to the site safety manager in accordance with paragraph (8) of this subdivision.
- (6) Reporting to the department. The qualified person working pursuant to this subdivision must immediately report to the department any:
 - (i) Accidents or incidents that require notification to the department in accordance with Section 3301.8 of the building code; and
 - (ii) Any items listed in Section 3310.8.2.1 of the building code.
- (7) Providing a copy of the log to the site safety manager. The qualified person working pursuant to this subdivision must, at the end of the day, provide a copy of the day's completed site safety log to the primary site safety manager, or to the alternate site safety manager where so directed by the primary site safety manager.
- (8) Reporting to the site safety manager. The qualified person must immediately report the following items to the primary or alternate site safety manager:
 - (i) Any accidents or incidents that require notification to the department in accordance with Section 3301.8 of the building code;
 - (ii) Any items that fail the inspections required by subdivision (c) of this section;
 - (iii) Any items listed in Section 3310.8.2.1 of the building code; and
 - (iv) Any violations issued by the department relating to the work performed.

(f) Site safety log for jobs whose site safety plan was approved prior to December 31, 2014.
[A] For jobs whose site safety plan was approved by the department prior to December 31, 2014, a site safety log [shall] must be maintained at the site by the site safety manager or coordinator and made available for inspection upon the request of the commissioner.

(1) The site safety manager or coordinator shall ensure that all daily entries in the site safety log are completed. These entries must be recorded by 7:00 a.m. on the day following the activities.

(2) The site safety manager or coordinator, or an alternate, shall sign the log at the beginning of each day, and must be present at the job at all times during ongoing construction or demolition. If at any point during the day the site safety manager or coordinator, or alternate, shall be relieved of his or her responsibilities at the site, or leave the site for any reason, he or she shall indicate this in the log and an alternate shall sign in.

(3) Log contents. At a minimum, the site safety log shall contain the following:

(i) Date and location of inspections performed in accordance with subdivision (a) of this rule;

(ii) Date and names of individuals met with to satisfy the requirements of §3310.8.1 of the building code;

(iii) Any unsafe acts and/or conditions, and dates and locations of said unsafe acts and/or conditions;

(iv) Companies and representatives notified of unsafe acts and/or conditions;

(v) Dates of notification of unsafe acts and/or conditions;

(vi) Dates of correction of unsafe acts and/or conditions;

(vii) Any accident involving the public or damage to public or private property;

(viii) Any violations, stop work orders or summonses issued by the department, including date issued and date lifted or dismissed;

(ix) Dates and location where horizontal and vertical netting have been installed, replaced and/or repaired;

(x) Date horizontal safety netting is removed; and

(xi) Date when building reaches a height of 75 feet (22.860 mm).

(g) Site safety log for jobs whose site safety plan was approved on or after December 31, 2014. For jobs whose site safety plan was approved on or after December 31, 2014, the requirements of Section 3310.8.4 of the building code shall apply.

(h) Permit log for jobs whose site safety plan was approved prior to December 31, 2014.
[Any] For jobs whose site safety plan was approved by the department prior to December 31,

2014, any equipment brought onto the job that requires permits, as well as a description of the equipment, where it is to be located, permit number, issue and expiration date of the permit, and certificate of inspection, if required, [shall] must be entered on a separate permit log that [shall] must be maintained at the site by the site safety manager or coordinator and made available for inspection upon the request of the commissioner.

(i) Permit log for jobs whose site safety plan was approved on or after December 31, 2014. For jobs whose site safety plan was approved on or after December 31, 2014, the requirements of Section 3310.8.5 of the building code shall apply.

(j) Notification[. The] for jobs whose site safety plan was approved prior to December 31, 2014. For jobs whose site safety plan was approved by the department prior to December 31, 2014, the site safety manager or coordinator [shall] must immediately and directly notify the department in accordance with section 3310.8.2 of the building code, as such code existed on the date the site safety plan was approved, if he or she discovers in the routine performance of the job any of the conditions listed in such section 3310.8.2 or below:

([i]1) Required standpipe is not in place at each story below the construction or demolition floor;

([ii]2) Required standpipe valve(s) are not in place at each story below the construction or demolition floor;

([iii]3) Required standpipe is not capped;

([iv]4) Required standpipe is not connected to a water source or siamese connection;

([v]5) Required standpipe siamese hose connection(s) is obstructed;

([vi]6) Required standpipe siamese hose connections are not marked by a red light and a sign reading, "Standpipe Siamese Connection";

([vii]7) A breach exists in the required standpipe risers, cross connections, or siamese connections;

([viii]8) The standpipe alarm activates; or

([ix]9) When a building over 75 feet (22.86 m) is being constructed or demolished and at least one elevator or hoist in a state of readiness is not available for FDNY access.

(k) Notification for jobs whose site safety plan was approved on or after December 31, 2014. For jobs whose site safety plan was approved on or after December 31, 2014, the requirements of Section 3310.8.2.1 of the building code shall apply.



CHAPTER 14

FIRE SAFETY DURING CONSTRUCTION, ALTERATION AND DEMOLITION

SECTION FC 1401

GENERAL

1401.1 Scope. This chapter shall govern fire safety measures during the construction, alteration, or demolition of buildings, structures, premises and facilities.

1401.2 General. Buildings, structures, premises and facilities undergoing construction, alteration or demolition shall comply with the fire safety measures set forth in this chapter, and shall additionally comply with the requirements of NFPA 241 as to measures not specifically addressed herein.

1401.3 Permits. Permits shall be required as set forth in FC105.6.

1401.4 Prohibitions. It shall be unlawful at a construction site to store, handle or use portable fueled heating devices or equipment:

1. For purposes of human comfort or any other purpose other than construction-related curing and drying.
2. Utilizing a flammable liquid as a fuel.

SECTION FC 1402

DEFINITIONS

1402.1 Definitions. The following term shall, for the purposes of this chapter and as used elsewhere in this code, have the meaning shown herein.

CONSTRUCTION SITE. Any location at which a building, structure, premises or facility is undergoing construction, alteration or demolition.

SECTION FC 1403

PORTABLE FUELED SPACE HEATERS

1403.1 Design. Portable fueled space heaters shall be designed, listed and labeled in accordance with the construction codes, including the Mechanical Code and the Fuel Gas Code, this code, and standards promulgated by the commissioner by rule, as applicable. Portable fueled space heaters shall be installed, operated and maintained in accordance with this chapter, the terms of the listing, and manufacturer's specifications.

1403.2 Portable oil-fueled heaters. Portable oil-fueled space heaters may be stored, handled and used at construction sites for construction-related curing and drying purposes during the heating season beginning on October 15 and ending on May 30 of the following year, and at such other times of year as may be authorized by permit. Such heaters shall be stored, handled and used in accordance with this code and the rules.

1403.3 Portable gas-fueled heaters. Portable gas-fueled space heaters utilizing liquefied petroleum gas (LPG), compressed natural gas (CNG) and piped natural gas may be stored, handled and used at construction sites for construction-related curing and drying purposes during the heating season beginning on October 15 and ending on May 30 of the following year, and at such other times of year as may be authorized by permit. Such heaters shall be stored, handled and used in accordance with this code and the rules.

1403.4 Refueling. Refueling operations shall be conducted in accordance with FC3405. Portable fueled space heaters shall be shut down and cool to the touch before refueling.

1403.5 Installation. Clearance to combustibles from portable fueled space heaters shall be maintained in accordance with the manufacturer's specifications. When in operation, portable fueled space heaters shall be fixed in place and protected from overturning, movement or damage in accordance with the manufacturer's specifications.

1403.5.1 Protection of heating element. The heating element or combustion chamber shall have a permanent device to prevent accidental contact by persons or material.

1403.6 Supervision. The handling and use of portable fueled space heaters shall be under the personal supervision of a person holding a certificate of fitness. The storage of portable fueled space heaters, and the fuel therefore, shall be under the general supervision of a certificate of fitness holder.

SECTION FC 1404 PRECAUTIONS AGAINST FIRE

1404.1 Smoking prohibited. Smoking is prohibited at all construction sites.

1404.1.1 Areas affected. At construction sites required by the Building Code to be enclosed with a fence, including buildings under construction or demolition, smoking shall be prohibited within the area enclosed by such fence, including in construction trailers and other indoor or outdoor areas. At construction sites not required by the Building Code to be enclosed with a fence, including existing buildings undergoing interior alterations, smoking shall be prohibited in those areas of the building in which work is to be conducted under the work permit issued by the Department of Buildings.

1404.1.2 Signage. "No Smoking" signs complying with FC310 shall be conspicuously posted at construction sites at the following locations and such other locations as are necessary to provide notice to a person entering upon or working at the site of the prohibition against smoking:

1. at construction sites required by the Building Code to be enclosed with a fence, on all sliding and swinging gate openings, and any other openings allowing for access to the site by persons or vehicles;
2. at the entrances to any building or structure under construction or demolition;

3. on each floor at stairway, elevator and hoistway access points of any building undergoing alteration, construction or demolition; and

4. at any indoor or outdoor areas on the construction site at which persons congregate.

1404.2 Waste disposal. Combustible waste, including rubbish and construction and demolition material, shall not be allowed to accumulate within buildings and shall be removed from a building at least once a day. Accumulations of combustible waste not stored in containers in accordance with FC304.3 and in a manner that obstructs movement on the floor, or containing flammable or combustible liquid residues, shall be removed from a building at the end of each work shift. Combustible waste, including rubbish and construction and demolition material, shall be removed from the premises or stored in noncombustible containers.

1404.3 Open fires. It shall be unlawful to ignite or maintain an open fire at a construction site, except for the use of coke-fueled salamanders in accordance with FC 307.1 and 307.6, and the rules.

1404.4 Spontaneous ignition. Materials susceptible to spontaneous ignition, such as oily rags, shall be stored in a container listed for such use.

1404.5 Fire watch. The commissioner may require, at a demolition site, and at other construction sites that are unusually hazardous in nature, that a fire watch be maintained by fire guards. The fire guards conducting such fire watch shall have the duties and responsibilities set forth in FC901.7.2.1.

1404.6 Cutting and welding. Operations involving the use of cutting and welding shall be performed in accordance with FC Chapter 26.

1404.7 Electrical. Temporary wiring for electrical power and lighting installations at construction sites shall comply with the requirements of the Electrical Code.

1404.8 Fire-resistance-rated construction. Fire walls, fire barriers, and spray-on fire protection of structural members required by the Building Code for the completed building, shall be given construction priority. Required fire doors, with automatic closing devices, shall be installed on openings as soon as practicable. Required fire walls, fire barriers and fire doors shall be left in place in buildings undergoing alteration or demolition until construction operations necessitate their removal.

SECTION FC 1405 FLAMMABLE AND COMBUSTIBLE LIQUIDS

1405.1 Storage, handling and use of flammable and combustible liquids. Storage, handling and use of flammable and combustible liquids shall be in accordance with FC 3406.2 and such other provisions of FC Chapter 34 as may be applicable to the specific construction site material or operation.

1405.2 Ventilation. Adequate ventilation shall be provided for operations involving the application of materials containing flammable solvents.

1405.3 Housekeeping. Flammable and combustible liquid storage areas shall be maintained clear of vegetation and combustible waste. Such storage areas shall not be used for the storage of combustible materials.

1405.4 Precautions against fire. Sources of ignition and smoking shall be prohibited in flammable and combustible liquid storage areas. "No Smoking" signs in compliance with the requirements of FC310 shall be conspicuously posted.

1405.5 Handling at point of final use. Class I and II liquids shall be stored in approved safety containers.

1405.6 Leakage and spills. Leaking containers shall be immediately repaired or taken out of service. Spills shall be cleaned up immediately and all liquid and waste material disposed of lawfully.

SECTION FC 1406 FLAMMABLE GASES AND OXYGEN

1406.1 Flammable gases. The storage, handling and use of flammable gases shall comply with the requirements of FC Chapters 26, 35 and 38, as applicable.

1406.2 Oxygen. The storage, handling and use of oxygen shall comply with the requirements of FC 1406.2.1 through 1406.2.3, and FC Chapters 26 and 30, as applicable.

1406.2.1 Portable liquid oxygen containers. The storage, handling and use of portable liquid oxygen containers shall be in accordance with FC 1406.2.1.1 through 1406.2.1.9.

1406.2.1.1 Design and installation documents. A sketch showing the following information shall be submitted to the department for approval in connection with an application for a permit for oxygen storage:

1. Number and size of containers.
2. Enclosure, manifold and service piping construction.
3. Location of risers and outlets.
4. Location of all equipment and devices including vaporizers, valves and safety relief devices.

1406.2.1.2 Indoor storage restrictions. Not more than one liquid oxygen container having a maximum water capacity of 6.2 cubic feet (0.176 m³) may be stored indoors. Such container shall be connected for use with a flammable gas. Storage in excess of one liquid oxygen container shall be located outdoors.

1406.2.1.3 Ventilation. The room used for the storage, handling and use of a liquid oxygen container shall be equipped with ventilation direct to the outdoors, and shall not contain any combustible material or flammable gas.

1406.2.1.4 Manifolds and vaporizers. Manifolds and vaporizers shall be constructed of materials suitable for oxygen service at a pressure of 250 psig (1724 kPa). Such manifolds and vaporizers shall have a minimum bursting pressure of 1,000 psig (6895 kPa) and shall be protected with safety relief devices which will relieve at or below 500 psig (3448 kPa).

1406.2.1.4.1 Test. The assembled vaporizer and manifold shall be pressure tested at 500 psig (3448 kPa) with an oil-free and nonflammable material as the testing medium.

1406.2.1.5 Service piping from the oxygen manifold. Service piping from the oxygen manifold shall be copper tubing, stainless steel, wrought iron or steel, and shall run vertically outdoors to the floor or floors being serviced, where outlets may be provided for hose connections to approved torches. The service piping shall be properly secured, protected from damage from mechanical injury and properly labeled. Any connection between service piping and the manifold shall be made using not more than 5 feet (1524 mm) of hose capable of withstanding pressure up to at least 1,000 psig (6895 kPa).

1406.2.1.5.1 Service pressure. Service piping shall be suitable for 250 psig (1724 kPa) service unless an intervening pressure regulator is provided at the manifold, and shall withstand a test of two times the maximum operating pressure, using an oil-free and nonflammable material as the testing medium.

1406.2.1.6 Hose and connectors. Hose and connectors capable of withstanding pressure up to at least 1,000 psig (6895 kPa) and of a design suitable for oxygen service at a pressure of 250 psig (1724 kPa) shall be used to connect the outlets on the service piping to the blowpipes. Hose shall be rejected for use if it shows excessive wear, loose connections, leaks or burns; hose subjected to a flash back in use shall be tested to twice the service pressure, but not less than 200 psig (1379 kPa), before being returned to service.

1406.2.1.7 Signs. Signs shall be posted in the vicinity of liquid oxygen container storage and use, reading: DANGER-LIQUID OXYGEN-NO SMOKING-NO OPEN FLAMES.

1406.2.1.8 Operating instructions. Legible operating instructions shall be posted near any liquid oxygen manifold.

1406.2.1.9 Affidavit. An affidavit shall be provided by the installer and/or contractor to certify that the vaporizer, valves, piping, hose and safety devices are of an approved type, that they meet the specifications for bursting test and design pressure, and that they have been satisfactorily tested in accordance with this section.

1406.2.2 Oxygen trailers. The storage and use of oxygen trailers shall be in accordance with FC 1406.2.2.1 through 1406.2.2.5.

1406.2.2.1 Design, construction, testing and maintenance. Oxygen trailer containers shall be designed, constructed, tested and maintained in accordance with the United States Department of Transportation specifications and regulations.

1406.2.2.2 Instructions. Legible operating instructions shall be posted in the trailer and on or near any oxygen manifold used indoors.

1406.2.2.3 License plates. Oxygen trailers shall at all times have affixed to them a motor vehicle license plate as issued in accordance with New York State or other applicable motor vehicle license plate laws, rules or regulations.

1406.2.2.4 Notification. The owner or operator of an oxygen trailer shall notify the department, in writing, of the delivery of the trailer to a construction site, at least 48 hours in advance of such delivery. Such notification shall include:

1. Contractor's name, address and telephone number.
2. Location of the construction site.
3. Quantity and frequency of oxygen delivery to the construction site.
4. Expected duration of oxygen storage and use at the construction site.

1406.2.2.5 Oxygen trailers having a capacity exceeding 20,000 SCF (566 m³). The distance between oxygen trailers having a total aggregate capacity exceeding 20,000 SCF (566 m³) and exposures shall be in accordance with NFPA 55.

1406.2.3 Supervision. The handling and use of portable liquid oxygen containers and oxygen trailers shall be under the personal supervision of a certificate of fitness holder. The storage of liquid oxygen containers and oxygen trailers shall be under the general supervision of a certificate of fitness holder.

1406.3 Discontinued torch operations. When oxygen and acetylene torch operations are not in use, including when such operations are discontinued for the workday, the oxygen and acetylene containers shall be removed from the work area and moved to an approved storage area or removed from the premises.

Exception: Brief interruptions in work of not more than 2 hours, including lunch breaks and coffee breaks.

1406.3.1 Torch operation container floor storage. Oxygen and acetylene containers used for torch operations may be stored on the floors on which the torch work is being conducted only in an unoccupied building and only in an approved storage area. Oxygen or acetylene

containers, other than those necessary for the day's torch operations, shall be considered as reserve storage, and shall not be stored on such floors.

1406.3.1.1 Storage location. Oxygen and acetylene storage areas on the floors on which the torch work is being conducted shall comply with the distance to exposure requirements of FC3504.1.3.

1406.3.1.2 Maximum storage quantities. The maximum quantity of acetylene containers stored on any floor shall not exceed 3,500 SCF (99.12 m³).

1406.3.1.3 Storage cabinet. Oxygen and acetylene containers shall be located within a compressed gas storage cabinet designed and secured to prevent unauthorized entry. The storage cabinet shall be conspicuously marked with a hazard identification sign as set forth in FC2703.5.

1406.4 Reserve oxygen and acetylene containers. The storage of reserve oxygen and acetylene containers at a construction site shall comply with the requirements of FC 1406.4.1 through 1406.4.4, and FC1406.5.

1406.4.1 Storage location. Oxygen and acetylene container storage areas shall comply with the distance to exposure requirements of FC3504.2.1.

1406.4.2 Storage cabinet. Oxygen and acetylene containers shall be located within a compressed gas storage cabinet designed and secured to prevent unauthorized entry. The storage cabinet shall be conspicuously marked with a hazard identification sign as set forth in FC2703.5.

1406.4.3 Indoor acetylene storage. Indoor reserve storage of acetylene containers shall be allowed only when outdoor storage is unavailable on the premises, the building is unoccupied, the containers are stored on the ground floor of the building, and the total quantities stored do not exceed 3,500 SCF (99.12 m³).

1406.4.4 Outdoor acetylene storage. Outdoor reserve acetylene container storage areas shall not exceed 3,500 SCF (99.12 m³). More than one outdoor storage area may be authorized on the premises provided the distance from each outdoor storage area to each exposure identified in FC Chapter 35 complies with the requirements of FC Chapter 35.

1406.5 Maximum aggregate indoor acetylene storage quantities. The aggregate of the indoor storage of acetylene authorized by FC 1406.3.1.2 and 1406.4.3 shall not exceed 15,000 SCF (424.8 m³).

SECTION FC 1407 EXPLOSIVE MATERIALS

1407.1 Storage and handling. Explosive materials shall be stored, handled and used in accordance with FC1418 and FC Chapter 33.

1407.2 Blasting operations. Blasting operations shall be conducted in accordance with FC Chapter 33.

1407.3 Demolition using explosives. Fire hoses and nozzles for use by demolition personnel, connected to an approved water supply under pressure, shall be provided and maintained at the demolition site whenever explosives are used for demolition. Such fire hoses, nozzles and water supply shall be available prior to explosives arriving at the site. Such fire hoses and nozzles shall be capable of a continuous flow of 180 gallons (681 L) per minute with a minimum reach of 35 feet (10 668 mm) from the nozzle and be capable of being brought to bear anywhere on the construction site. Hose shall be pressure tested to withstand at least 600 pounds per square inch gauge (psig)(2413 kPa).

SECTION FC 1408 CONSTRUCTION SITE FIRE SAFETY MANAGER

1408.1 Fire safety manager. Where a site safety manager or site safety coordinator is required by the Building Code, the owner shall designate a person to be the fire safety manager for the construction site. Such person shall hold a certificate of fitness as a construction site fire safety manager. The fire safety manager may be the site safety manager or site safety coordinator required by the Building Code, except that a separate fire safety manager shall be designated for a building under construction when such building reaches a height of twenty stories or more than 250 feet (76 200 mm), has a lot coverage of 200,000 square feet (1860 m²) or greater, or as otherwise prescribed by rule. For purposes of this section, below grade stories shall be used to determine number of stories and building height.

Exception: Construction sites at which an existing building is undergoing alteration, the alteration work is limited to the façade, and no hot work is being performed.

1408.1.1 Fire safety manager duties. The fire safety manager shall be responsible for ensuring compliance with the requirements of this code, including this chapter, and the rules. The fire safety manager shall conduct an inspection of the construction site and all fire safety measures on at least a daily basis, and maintain a record of same in a bound log book or other approved system of recordkeeping. Where fire watch service is provided, the fire safety manager shall be responsible for the general supervision of the fire guards.

1408.2 Pre-fire plans. The fire safety manager shall develop and maintain at the construction site an approved pre-fire plan, and make it available for examination by any representative of the department. The department shall be notified of any changes in site conditions materially affecting the procedures set forth in such plan.

1408.3 Training. The fire safety manager shall ensure that construction site personnel are acquainted with the operation of portable fire extinguishers and other fire protection equipment on the construction site.

1408.4 Fire protection devices. The fire safety manager shall ensure that all fire protection equipment and systems are readily available and periodically inspected and tested, and maintained in accordance with this code, the rules and the Building Code.

1408.5 Hot work operations. The fire safety manager shall be responsible for supervising the issuance of authorizations for hot work operations in accordance with FC Chapter 26.

1408.6 Impairment of fire protection systems. The fire safety manager or impairment coordinator shall comply with the requirements of FC901 in the event of impairment of any fire protection system.

1408.7 Temporary covering of fire protection devices. Coverings placed on or over fire protection devices to protect them from damage during construction processes shall comply with the requirements of FC Chapter 9 and shall be immediately removed upon the completion of the construction processes in the room or area in which the devices are installed.

SECTION FC 1409 FIRE ALARM REPORTING

1409.1 Emergency telephone. A telephone not requiring a coin to operate, or another approved, clearly identified means to notify the department, shall be provided on site in an approved location. The street address of the construction site and the emergency telephone number of the fire department shall be posted adjacent to the telephone or other approved device.

SECTION FC 1410 ACCESS FOR FIREFIGHTING

1410.1 Required access. Approved vehicle access for fire apparatus shall be provided to all construction sites. Vehicle access shall be provided to within 100 feet (30 480 mm) of temporary or permanent fire department connections. Vehicle 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.

1410.2 Key boxes. Key boxes shall be provided as required by FC Chapter 5 and the Building Code.

SECTION FC 1411 MEANS OF EGRESS AND ELEVATORS

1411.1 Stairways. Stairways at construction sites shall be provided, maintained, and made available for department use in accordance with the construction codes, including the Building Code. Stairways providing egress from the building or structure under construction or alteration, and other components of the means of egress, shall be given construction priority.

1411.2 Maintenance. Required means of egress shall be maintained during construction, alteration and demolition in accordance with this code and the Building Code.

1411.3 Elevators. Elevators at construction sites shall be provided, maintained, and made available for department use in accordance with the construction codes, including the Building Code.

SECTION FC 1412 WATER SUPPLY FOR FIRE PROTECTION

1412.1 Water supply. An approved water supply for fire protection, either temporary or permanent, shall be made available prior to hazardous materials or combustible material arriving at the site. Any water source intended for firefighting operations, including standpipe outlets, street hydrants and yard hydrants, shall not be used for construction, alteration or demolition purposes, unless approved.

SECTION FC 1413 STANDPIPES

1413.1 Standpipe systems. Standpipe systems for use at construction sites shall be provided, maintained, and made available for department use in accordance with this code, and the construction codes, including the Building Code.

1413.2 Demolition operations. Where a building or structure with an existing standpipe system is being demolished, such system shall be maintained for the use of the department in accordance with the construction codes, including the Building Code.

SECTION FC 1414 SPRINKLER SYSTEM

1414.1 Sprinkler systems. Sprinkler systems for use at construction sites shall be provided, maintained, and made available for department use, in accordance with this code, and the construction codes, including the Building Code.

1414.2 Completion before occupancy. In buildings or structures where a sprinkler system is required by this code or the construction codes, including the Building Code, it shall be unlawful to occupy any portion of a building or structure until the sprinkler system installation has been tested and approved.

1414.3 Operation of valves. Sprinkler control valves shall be operated only by authorized personnel. Such operation shall be under the general supervision of the fire safety manager where one is required pursuant to FC1408. When the sprinkler system valves are being regularly closed and opened to facilitate connection of newly completed or disconnected segments, the sprinkler control valves shall be inspected at the end of each work day to ascertain that the system is in good working order.

SECTION FC 1415 PORTABLE FIRE EXTINGUISHERS

1415.1 Where required. Buildings or structures under construction, alteration or demolition shall be provided with not less than one approved portable fire extinguisher in accordance with FC906 and sized for not less than ordinary hazard as follows:

1. At each stairway on all floor levels where combustible materials are being stored or combustible waste is being generated.
2. At the entrance of each storage and construction shed.
3. Additional portable fire extinguishers shall be provided where flammable and combustible liquids are stored, handled and used.
4. Cranes fueled by liquid motor fuel or flammable gas shall be provided with a portable fire extinguisher with a minimum 10-B:C rating located either in the crane's cab or in its immediate vicinity.

SECTION FC 1416 INTERNAL-COMBUSTION-POWERED EQUIPMENT

1416.1 Conditions of use. Internal-combustion-powered construction equipment shall be used in accordance with the following requirements:

1. Equipment shall be located so that exhausts do not discharge against combustible material.
2. Exhausts shall be piped to the outdoors.
3. Equipment shall not be refueled while in operation.
4. Fuel for equipment shall be stored in an approved area, and shall be moved in approved containers not to exceed 5 gallons (19 L).

SECTION FC 1417 SAFEGUARDING ROOFING OPERATIONS

1417.1 General. Roofing operations utilizing heat-producing systems or other ignition sources shall be performed by a competent person. Roofing operations involving hot work shall comply with the requirements of FC Chapters 26, 35 and 38, as applicable.

1417.2 Tar kettles. Tar kettles shall be handled and used in accordance with FC303.

1417.3 Portable fire extinguishers for roofing operations. Portable fire extinguishers shall be provided in accordance with FC906. There shall be not less than one multi-purpose portable fire extinguisher with a minimum 3-A 40-B:C rating on the roof being covered or repaired.

1417.4 Prohibited operations. It shall be unlawful to install any roofing material using a torch on a roof of combustible construction, or otherwise engage in roofing operations on roofs of combustible construction using hot work equipment.

SECTION FC 1418 POWDER-ACTUATED TOOL LOADS

1418.1 Storage, handling and use. Small arms ammunition shall be stored, handled and used for powder-actuated tool loads at a construction site, as follows:

1. The main store of powder-actuated tool loads shall be kept in an approved locked metal box.
2. The powder-actuated tool load storage box shall be kept away from heat and shall not be stored in the same storage area or storage facility containing compressed gases or flammable liquids.
3. The storage area or storage facility in which the locked metal powder-actuated tool load box is stored shall bear a permanent sign bearing the words "DANGER-AMMUNITION" in 2-inch (51-mm) white letters on a red background.
4. Powder-actuated tools shall not be used in an explosive atmosphere.
5. The certificate of fitness holder shall establish a safe zone behind a work area in which powder-actuated tools are to be used by evacuating the area or placing a barrier constructed of ½ inch (12.7 mm) steel plate.
6. At least one portable fire extinguisher having a minimum 2-A rating shall be provided in the area where powder-actuated tool loads are stored.
7. Storage of powder-actuated tool loads shall comply with the requirements of NFPA 495. Storage shall be limited to not more than seven hundred fifty thousand powder-actuated tool loads per premises unless larger quantities are authorized by the department.

1418.1.1 Supervision. Powder-actuated tools shall be used only by a certificate of fitness holder. Powder-actuated tools shall be handled only by a certificate of fitness holder. Storage of powder-actuated tools shall be under the general supervision of a certificate of fitness holder.

SECTION FC 1419 FIRST RESPONDER BOX

1419.1 First responder box. The department may require that a box be provided at a construction site for first responder use that contains keys as set forth in FC506.2.2, the pre-fire plan, permits, logbooks and such other documents required by this code or the rules to be maintained on the premises. Such box shall be in an approved location and, if locked, shall be openable by use of a citywide standard key.