

Welcome and thank you for the opportunity to address the Technical Meeting of the Special Riggers Association of NYC on supported and suspended scaffolding code revisions.



Just a reminder that the material presented today is copyrighted by DOB and cannot be used without our permission.



Another reminder that this presentation and related handouts should not be used as substitutes for codes and regulations. The full text of those codes and regulations are all available on our website and should be consulted.

Type of Chapter 33 Work	Trigger	2008 Code (BC 33)	2014 Cod (BC 33)
Non-Site Safety Jobs: New Buildings, Alterations, & Partial Demolitions	Construction docs submitted <i>before</i> Dec 31, 2014	~	
	Construction docs submitted <i>on or after</i> Dec 31, 2014		\checkmark
Site Safety Jobs: New Buildings, Alterations, and Partial Demolitions	Site safety plan approved before Dec 31, 2014	✓	
	Site safety plan approved on or after Dec 31, 2014		~

This slide and the following deal with the effective date of Chapter 33 of 2014 NYC Building Code.

1. Chapter 33 of the 2014 NYC Building Code should be followed for all <u>site safety sites</u> where the Site Safety Plan was <u>approved</u> on or after December 31, 2014.

Note: An exception has been made to allow contractors on older filings to take advantage of the Chapter 33 of the 2014 NYC Building Code and the revision to 1 RCNY 3310-01 (SSM duties rule), provided the SSP is amended to include notes to this effect, i.e., that SSM oversight shall be in accordance with 1-RCNY 3310-01.

2. Chapter 33 of the 2014 NYC Building Code should be followed for all **NON-site safety sites** where the underlying work application (NB, ALT, etc.) is <u>filed</u> on or after December 31, 2014.

Effective Date Chapter 33: Demolition Sites				
Type of Chapter 33 Work	Trigger	2008 Code (BC 33)	2014 Code (BC 33)	
Full Demolitions: (Non-Site Safety & Site Safety Jobs)	Demolition permit issued before Dec 1, 2014	\checkmark		
	Demolition permit issued on or after Dec 1, 2014		\checkmark	
2014 Construction Code: Chapter 33 Key Revisions 4				

Chapter 33 of the 2014 NYC Building Code should be followed for all <u>FULL demolition sites (DM)</u> where the DM application is <u>permitted</u> on or after December 31, 2014.



- Presentation covers only **key** changes to Chapter 33 specifically related to suspended and supported scaffolds and related work and is not all inclusive. There is no substitute for reading the full text of Chapter 33. Section 3314 deals with supported and suspended scaffolds.
- DOB website contains a 300-page document covering all Chapter 33 changes in <u>detail</u>, in addition to a <u>full version</u> of the 2014 Construction Codes. The web address and links appear on this slide.

www.nyc.gov/buildings

Codes & References > 2014 Construction Codes

- This presentation, with related talking points, will be made available to the public and industry on our website in a few days.
- Handouts have been provided for you of relevant rules and

industry notices and I encourage you to pick them up on your way out.



It is important at the start to highlight this broad mandate to safeguard public and property affected by a contractor's operations.

The obligation to safeguard is placed squarely upon the general contractors, construction managers, and subcontractors.



This new section makes clear that all equipment "affecting public or property" must be used in accordance with manufacturer's specification, when those specifications exist.

Where there is a discrepancy between a code requirement and the manufacturer's specification, the stricter standard shall apply.

Contractors must review manufacturer's specifications and make certain they are adhered to.

Examples of typical construction equipment: supported scaffolding frames and hardware; suspended scaffold hoist motors, outriggers, platforms, suspension rope, material hoists, etc.



This new section codifies the contractor's obligation to report accidents and <u>damage</u> to adjoining property to DOB. Immediate notification is required.

EOC (Emergency Operations Center) Hotline #: 212-566-3199



Here is a clear definition of "accident". This should help guide the contractor and site safety manager in their duty to notify.

When in doubt, NOTIFY!



This section has been revised and the requirements of Rule 3310-01(d) have been added. This section specifies when the SSM must notify the Department directly of various site conditions.

The conditions requiring notification have not changes, except that the requirement to notify DOB in the event of an accident has been cross referenced to the definition of an accident, which we just went over.



The phrases "competent person" and "qualified person" are often referred to in the code.

Here is the definition of competent person, same as OSHA definition.

"One who is capable of identifying existing predictable hazards in the surroundings or conditions that are unsanitary, hazardous or dangerous, and who has **<u>authorization to take prompt corrective</u>** measures to eliminate such hazards."

What mainly differentiates a competent person from a qualified person is that the competent person has the **authority to take prompt corrective action**, which includes stopping the job.



Here is the definition of qualified person, same as OSHA definition.

"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."



This section has been rewritten to require horizontal safety netting during façade work <u>only when "unique hazards exist" and when</u> required by the commissioner.

This brings the code in line with current practice and acknowledges the practical difficulty in maintaining horizontal jump nets during façade or curtain wall installation and repair.

BC 3309.10: Roof Protection



This section governing protection of adjoining roofs and related rooftop structures has been revised. 4 important changes:

- 1. Standard roof protection is required when work is <u>48</u>" or more above adjoining roof.
- 2. Specifications are now provided for standard roof protection: 2" flame-retardant foam; 2" flame-retardant planks, flame-retardant plywood (thickness not specified).
- 3. Standard roof protection must extend a minimum of <u>20 feet from</u> edge of building being constructed or demolished.
- 4. Adjoining roof protection shall be secured to prevent dislodgement by wind.

BC 3309.13: Overhead Protection—Adj Spaces and Equipment

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 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.



This new sections codifies current practice and applies not to protection of roofs and related structures (covered by 3309.10) but to adjoining <u>equipment</u> and <u>spaces</u>, such as adjoining yards, mechanical equipment located on adjoining walls or in adjoining yards, etc.

The protection shall extend a minimum of 20 feet from the area of work.

NOTE: This section applies only to <u>unenclosed perimeters</u> associated with the construction or demolition of "major buildings" that require a <u>site safety plan</u>.

NOTE: Types of protection are not specified, but typical protection is my means of catchalls, horizontal nets, and supported scaffolds and wood decking.



This definition is important as it is one of the triggers for site safety program requirements.

For typical façade alterations, the threshold for needing a SS Program (SSP + SSM) is when the scope of work is considered a façade alteration requiring **permit** and requiring **SWS**, and the building is a major building of 15 stories/200 feet or greater.

Remember, it is the building height/stories and **not** the location of the work on the facade that determines the need for SS Program.

See Rule 101-14 for façade work exempt from permit. This rule has been provided as a hand out. Many applications are filed for scopes of work that are technically exempt from permit and would therefore be exempt from SS Program requirements.

BC 3310.8.3: SSM-SSC Inspection Duties

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.



This section has been revised to cross reference Rule 3310-01 that specifies the type and frequency of SSM inspections. This rule was revised in February 2015 and now contains duties of the SSM/QPSS specifically related to façade jobs. We will discuss this in next slide.

The revised rule has been provided as a hand out.



1 RCNY 3310-01 was revised and promulgated in February of 2015.

The key changes are the following.

- Modified the requirements to have a full-time SSM on site for typical façade alterations (rehabs). Reduction in SSM via CCD-1 will no longer be required. The rule allows for de facto reduction.
- Set a new requirement for a full-time Qualified Person for Site Safety (QPSS) whenever the site is not covered by a full-time SSM.
- Set out detailed inspection duties of the SSM/QPSS for façade jobs

NOTE: SSM is required to be on site as specified in the rule (not full time). QPSS must **always** be on site when work is in progress.

NOTE: The full-time QPSS must fulfill all of the duties of the SSM, in the SSM's absence.



When is a SSM required to be on site of a typical façade job?

(i) The site safety manager must 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 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.

(B) Mast climber installation or removal

(C) Other work as directed by the commissioner.

(iii) The site safety manager must visit the site within 24-hours of the issuance of a hazardous violation by the department.

(iv)The 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

Qualifications of the QPSS

Qualification of QPSS

(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.



Qualification of QPSS

(i) Complete the orientation and training required by Section 3310.10 of the Building Code (job-site orientation and OSHA 10)

(ii) Beginning July 1, 2016, completed a department approved site safety manager training course that is least 40 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 (32H)

(iv) Beginning July 1, 2016, completed the training required by Section 3314.4.5.3 of the building code for suspended scaffold supervisors (32H)

(v) Beginning July 1, 2016, completed OSHA 30

(vi) If the QPSS is not a licensed rigger or a rigging foreman, he must **be** approved by the primary site safety manager of record on the PW-2.



The following notes should be included on all SSPs.

A. This site safety plan submission is in compliance with the 2014 Building Code, Chapter 33

B. Site safety management is in accordance with 1 RCNY 3310-01, revised

C. 1 RCNY 3310-01 includes a detailed list of inspection duties specific to typical façade jobs that will be performed by the SSM and the Qualified Person For Site Safety (QPSS)

D. The contractor of record will designate the QPSS and alternates in a signed letter that will be kept on site and available upon request.

E. The designated SSM will endorse the chosen QPSS and alternates in a signed letter to be kept on site and available upon request.

Exception: Designated SSM does not need to endorse the QPSS when that QPSS is a licensed rigger or the rigger's true designated foreman.

NOTE: Every façade SS job requires the designation of SSM onPW-2



- As of July 2015, Site Safety Plans for typical façade jobs may be filed as Professionally Certified A3 applications.
- The A3 may be filed using efile or Hub Self Service
- Standard fees apply
- BEST review is not required
- See recently published Industry Notice (available as a hand out or on DOB website)



The site safety log requirements from Rule 3310-01(b) have been incorporated into this section, but the requirements remain basically the same with two significant changes:

- 1. SSM/QPSS logs must now be completed by the <u>end of day</u>, <u>rather than the following day</u>.
- 2. SSM must sign the log **upon arrival and <u>departure</u>**, to document his on-site presence, if it is less than full-time.

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BC 3314.4.4.6: Scaffolds—Wind Restrictions



This is a new section that provides a wind speed threshold above which scaffold use on the exterior or on the interior near an upenclosed perimeter must cease. This applies to both suspended

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unenclosed perimeter must cease. This applies to both suspended and supported scaffolds.

The threshold for sustained winds or wind gusts has been set at greater than 30 MPH, the same as the requirement for operation of a crane.



For a suspended scaffolds to be exempt from permit, the suspended scaffold must comply with the following:

- 1. 2-point scaffold suspended by C-Hooks; OR
- 2. The scaffold must be used in conjunction with a construction, alteration, or demolition permit; AND
- 3. The site must be **closed to the public** and enclosed with a fence; AND
- 4. Installation, use, or removal of the scaffold must take place within the closed site, or over an area protected by a SWS or roof protection.

NOTE: This section governs permit requirements NOT <u>design</u> requirements.

NOTE: A similar exemption to permit is provided for unguided material hoists, provided the capacity is 1 ton or less. See Chapter 33, Section 3317.2.

However, the material hoist must be operated completely within the property lines to claim this exemption.

Permit Exception: Power-operated, non-guided 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.



This section establishes that all suspended scaffolds shall be designed by a **registered design professional**, with the following exceptions.

- 1. Non-adjustable single-tier suspended scaffolds 40 sq. feet or less in area (your typical iron worker "floats").
- 2. Two-point suspended scaffolds can be "designed" by a licensed rigger provided

A. Scaffold is not anchored to building structure other than by typical "tiebacks", AND

B. Scaffold will not be loaded or designed for loads in excess of 75 PSF, AND EITHER

C. Scaffold is suspended by C-Hooks, or

D. Scaffold is suspended on outrigger beams with a shore height under 15 feet.

3. A licensed sign hanger may "design" a two-point, single tier, suspended scaffold if the requirements of a, b, c, d above are met and scaffold is used exclusively for sign hanging.



Supervision of the Installation and Use of Suspended Scaffolds:

1. A licensed sign hanger may supervise the installation and use of a suspended scaffold utilized exclusively for sign hanging.

2. A licensed rigger, the rigger's designated foreman, OR a "**competent person**" designated by the contractor may supervise the installation and use of a suspended scaffold in conjunction with:

New Building Construction

Full Demolition

Vertical or Horizontal Enlargements

Façade Work on a Major Building with a site safety plan

(Remember, if you opt for "competent person" to oversee rigging, then an SSM is required to be on site throughout the Installation, use, and removal of the suspended scaffolds and hoists)

3. For all other work, the installation and use of the suspended scaffold must be supervised by a licensed rigger or rigger's designated foreman.

For all adjustable suspended scaffolds, the licensee, rigging foreman or "competent person" supervising the installation must possess the requisite 32H supervisor training and the installation crew must possess the 16H crew training.

Training is NOT required for licensed design professionals provided they perform no work and do not operate the scaffold, but merely inspect the façade.



Suspended Scaffold Installation Inspection:

1. The suspended scaffold and related equipment and support structure must be inspected prior to installation and at the completion of installation by the following persons:

Licensed rigger/sign hanger/designated rigging foreman supervising the installation; OR

A qualified person designated by the scaffold designer (if the installation is supervised by a competent person); such qualified person must be a registered design professional or an employee of the registered design professional.

2. Following installation, the inspector must issue a sign-off letter to be made available on site.

Note: Inspections are not required for non-adjustable suspended scaffolds that do not require design (AKA "floats").



This section establishes a requirement to inspect the structure that will support the rigging hardware and ultimately the suspended scaffold itself. The inspection must be performed by a qualified person, the definition of which was previously given. The section also further defines who shall designate the qualified person. It should be noted that this is a **pre-installation inspection**.

- 1. For suspended scaffolds installed and supervised by a licensed rigger, the licensed rigger must designate the qualified person. Obviously, the designated rigging foreman would be the obvious choice here.
- 2. For suspended scaffolds installed by other than a licensed rigger (such as a competent person), the scaffold designer (design professional) must designate the qualified person.
- EXCEPTION: The one exception is when parapet clamps are used as a suspension device (not simple tiebacks). In this case, due to the eccentric loads imposed on the parapet by the clamps, a licensed design professional (PE or RA) shall inspect the parapet. No change from 2008 NYC Building Code.
- This code section will supersede 1 RCNY 104-20 (d) (2), which calls for a pre-use (not pre-installation inspection) by the licensed rigger only.



A question had been asked about whether the a design professional had to check the manufacturer's calculation for corner or angle scaffolds.

According to this section, the answer is yes.

3314.16.3: 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.



Suspended Scaffold Pre-Shift Inspection

1. A pre-shift suspended scaffold inspection <u>checklist</u> must be developed by the licensed rigger/sign hanger who installed the scaffold, or by the scaffold designer.

2. The checklist must be kept on site.

3. Suspended scaffolds must be inspected prior to the start of each shift in accordance with the checklist by the individual supervising the use of the suspended scaffold.

Note: Inspections are not required for a non-adjustable suspended scaffold that does not require design ("floats").



The following provisions apply to hoisting or lowering on the outside of a building.

1. A licensed sign hanger/designated sign hanging foreman may supervise the hoisting or lowering of a sign.

2. A licensed rigger/designated rigging foreman <u>or</u> a competent person designated by the contractor may supervise the hoisting or lowering of articles during the course of:

New Building Construction

Full Demolition

Vertical or Horizontal Enlargement;

Façade work on a Major Building with a site safety plan

3. <u>However</u>, boilers and tanks, tower crane

assembly/jumping/disassembly, and industrial rope access must always be supervised by a licensed rigger/designated rigging foreman.

Where the crew is not employed by a licensed rigger/sign hanger, beginning July 1, 2016, all members of the crew must possess national rigging certification or have completed DOB approved rigging training course.



This section has been revised to require notification to DOB of <u>both</u> the installation and <u>removal</u> of **all** suspended scaffolds.

Prior to this, notification was required only upon installation and every 60 days there after.

The notification can be made by the licensee who is supervising the installation or removal of the scaffold, or if a competent person is supervising, the scaffold designer can make the notification.



The definition of a critical pick has been revised:

- 1. An article that is at or above 95% 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;
- 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 the use of multiple power-operated hoisting devices (tandem pick); or
- 7. A pick that requires out of the ordinary rigging equipment, methods, or setup.

Critical Picks shall be supervised by a licensed rigger (or a licensed sign hanger for sign hanging work), with the crew employed by the licensee; or performed in accordance with a plan developed by a licensed master rigger or a New York State licensed professional engineer.

Prior to the pick, the master rigger, professional engineer, or a registered design professional employed by the engineer must visit the site to verify compliance with the rigging plan.



This section covers the supported scaffold permit exemptions.

1. The scaffold is not an outrigger scaffold (thrust out); AND

2. No hoisting equipment with a manufacturer's rated capacity greater than 2,000 pounds (907kg) will be located on the scaffold; AND

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

4. The scaffold is less than 40 feet (12 192mm) in height (height as established in 3314.1.1.). The height of a supported scaffold includes temporary construction equipment it stands upon (such as a SWS) but does NOT include any permanent structure.



A supported scaffold will NOT require design, if it meets all of the following 6 conditions.

1. The scaffold is not an outrigger scaffold (thrust out); AND

2. No hoisting equipment with a manufacturer's rated capacity greater than 2,000 pounds (907kg) will be located on the scaffold; AND

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

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 (**not materials**); AND

6. The scaffold is a light duty scaffold, a medium duty scaffold, or a heavy duty scaffold, not an "Extra Heavy Duty" scaffold with loading in excess of 75 PSF.



This is a new section that codifies current practice and makes clear that a "competent person" designated by the contractor (with requisite 32H supported scaffold training) must supervise the installation and removal of supported scaffolds.



This is a new section that codifies current practice and requires the use of a supported scaffold to be supervised by a competent person designated by the scaffold controlling entity.

The Scaffold Controlling Entity, a new term, is defined in the code as the contractor or other entity that exercises responsibility for the site where the supported scaffold is located.

