



Seattle Department of Construction & Inspections

Final Draft 403 Highrise Presubmittal Notes
(with SDCI comments)
As returned to SDCI for Final Approval on 5/30/2023

FOR REFERENCE, STRUCT. BUILDING PERMIT
PERMIT #6939048-PH
Ph.I of II, FOUNDATIONS THOROUGH SUPERSTRUCTURE
JUNE 9, 2023

HIGH-RISE PRESUBMITTAL CONFERENCE (2018 SBC)

Date: March 20, 2023

PROJECT INFORMATION		APPLICANT INFORMATION	
Project Name: OneX Towers		Contact Person: Jodi Patterson-O'Hare	
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PROVIDE BRIEF DESCRIPTION OF PROJECT. INCLUDE OVERALL SIZE, NUMBER OF STORIES CONSTRUCTION TYPE AND OCCUPANCIES:

- The project is a 22-story high-rise residential project in Seattle's University District.
- The project consists of two residential towers, each with a mix of student apartments and market-rate apartments, over ground-level retail & support spaces.
- On-site, there is an open central courtyard area at street level between the two towers, with landscaped and hardscaped areas.
- There is an underground 2-story parking garage for approx. 116 vehicles that extends under the entire site... under both towers and the central courtyard area.
- Project gross floor area is approx. 538,000gsf, including approx. 70,000gsf in the underground garage.
- The project is being designed to comply with the 2018 Seattle Building (& related) Code(s), for Type IA construction. Occupancy types include (R-2) Residential, (S-2) Parking & Storage, and (B) Retail (tenant space) and (A3), (A2) Assembly.

The following section requires the applicant to demonstrate to the City that this project is in compliance with the high-rise building section, 403, of the 2018 Seattle Building Code. Be aware that Seattle has a significant number of amendments to the International Building Code – full text of each section is NOT reprinted here and can be found at: [http://www.seattle.gov/sdci/codes/codes-we-enforce-\(a-z\)/building-code#2018seattlebuildingcode/](http://www.seattle.gov/sdci/codes/codes-we-enforce-(a-z)/building-code#2018seattlebuildingcode/) You are required to comply with all of the Seattle amendments.

Note: The use of a code alternate or code modification request requires an additional form unless the desired Code Alternate is published in the Seattle Building or Fire Code. The form can be found at: <http://www.seattle.gov/sdci/permits/forms>

* Seattle amendment to IBC

Project Name: []
Permit number: []

HIGH-RISE BUILDING CODE REQUIREMENTS - * DENOTES SEATTLE AMENDMENT IN SECTION

Section 403 Highrise Buildings	
403.1.1.1* Presubmittal Conference	<i>Note: At least 60 days prior to structural application-arrange a presubmittal conference; provide documentation /appropriate analyses and schematic drawings two weeks prior to conference; approved predesign meeting minutes are required prior to permit application and shall be inserted into plans as part of the permanent permit record</i>
403.1.1.2* Smoke Control Presubmittal Conference	<p><i>Note: At least 60 days prior to architectural application, arrange a second presubmittal conference to review the conceptual smoke control design (see SBC 909.1.1). Provide a draft 909 Concept Report two weeks prior to the smoke control presubmittal conference.</i></p> <p><i>(Question asked in our original 403 Application... is a 909 Smoke Control meeting required for this project? If so, is the 60d advance timing req'd prior to a phased structural application (assume no... but prior to architectural application)?)</i></p> <p><i>Meeting Comments:</i></p> <ul style="list-style-type: none"> - Yes, 909 meeting is required. - 909 Mtg req'd prior to Arch'l permit application, not prior to phased Struct permit application. - Ok. RR/SDCI 5/23/23
403.2.3* Structural Integrity of enclosures.	<p><i>Key Items: All fire service access elevators; all exit enclosures and elevator hoistway enclosures in risk category III or IV buildings; and all exit enclosures and elevator hoistways in buildings more than 420 feet in height shall comply with Sections 403.2.3.1 through 403.2.3.4.</i></p> <p><i>Proposal: Buildings are approx. 240' tall, and the building is Risk Category II based on a total occupant load under 5,000. There will be fire service elevators. All exit enclosures and elevator hoistways shall comply with Section 403.2.3.1 thru 403.2.3.4.</i></p>
<p>Conference discussion & decisions:</p> <ul style="list-style-type: none"> - (This section is about wall construction – impact resistance; How does this apply?). <p><i>Follow-up:</i></p> <ul style="list-style-type: none"> - Buildings are less than 420 ft. tall and are in Risk Category 2; not applicable. - Perimeter core walls around elevators and 1 stairway in each tower are solid concrete; Other walls around elevator & stair shafts will be 2-hr rated shaftwall construction with 2 layers of GWB on exterior (of shaft) side. <p><u>FSA elevators are within the concrete cores; requirement is deemed satisfied per SBC 403.2.3.3. RR/SDCI 5/23/23</u></p>	
403.3* Automatic sprinkler system	<p><i>Key Items: Provide a sprinkler system in accordance with Section 903.3.1.1 and Seattle Fire Code (SFC) Section 914.3.1. (and as modified under Section 914.3.1.2 when applicable). Provide a secondary water supply where required by SFC Section 914.3.2. Describe proposed sprinkler system and secondary water supply. Fire pump rooms not directly accessible from the outside are not required to be accessible through an enclosed passageway from an interior exit stairway or</i></p>

* Seattle amendment to IBC

	<p>exterior exit. See SFD Administrative Rule 09.03.20. High-rise building sprinkler systems shall be combination standpipe/sprinkler systems incorporating the following features:</p> <ol style="list-style-type: none"> 1. Each floor sprinkler system shall be connected between standpipe risers. 2. Shut-off valves, water-flow devices and check valves (or pressure reducing valves) shall be provided on each floor at the sprinkler system connection to each standpipe. 3. Two four-way fire department connections serving the combination system shall be provided on separate streets well separated from each other. 4. When a mid-level fire pump is required to meet pressure requirements, two pumps with the same rating shall be installed. 5. Dry-pipe sprinkler systems serving parking garages may use a separate two-way fire department connection. The dry-pipe sprinkler system shall be supplied by the on-site water tank. 6. The standpipe risers in each required stair shall be a minimum pipe size of 6 inches. 7. Two 2½-inch hose connections shall be provided on every floor level landing in every required stairway. If pressure reducing valves (PRV) are required, each hose connection shall be provided with its own PRV. 8. The system shall be designed to provide a minimum flow of 300 gpm at a minimum pressure of 150 psi [maximum 205 psi at each standpipe connection] in addition to the flow and pressure requirements contained in NFPA 14. <p>See attached "Seattle Requirements for High-Rise Secondary Water Supply"</p>
	<p>Proposal: A design build contractor will be responsible for the sprinkler system design. Schematic plans are not yet available. The building will be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.</p> <ol style="list-style-type: none"> 1. Sprinkler system will be interconnected between (2) standpipes on each floor. 2. Shut-off valves, water-flow devices, and check valves (or pressure reducing valves) will be provided on each floor at the sprinkler system connection to each standpipe. 3. Two four-way fire department connections serving the combination system will be provided on separate streets well separated from each other. 4. A mid-level fire pump will not be required for this project, 5. The dry-pipe sprinkler systems will be supplied by the on-site water tank. 6. The standpipe risers in each required stair will be a minimum pipe size of 6 inches. 7. Two, 2 -1/2 inch hose connections will be provided at each landing as required by the SBC. Standpipe outlet to be on main or intermediate landing, consistent on both stairs and from floor to floor. If pressure reducing valves (PRV) are required, each hose connection shall be provided with its own PRV. 8. The system will be designed to provide a minimum flow of 300gpm at a minimum pressure of 150 psi [maximum 205 psi at each standpipe connection] in addition to the flow and pressure requirements contained in NFPA 14.
<p>Conference discussion & decisions:</p> <ul style="list-style-type: none"> - Usable water supply in Fire Water Tank = vertical dim – (sub-dims for various other devices, inlets, openings, etc). SFD wants 33,000 gal. usable total capacity (below the line of these other openings/penetrations Calcs are to take into account the location of overfill pipe, location of the pump inlet screen, the required submergence depth for pump operation of the impellers, etc). Do calcs to confirm vault volume minus unusable area at top meets min. vol. reqmt. These need to be provided at Phase 1 submittal 	

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- Clarify FDC locations as part of Ph.1 submittal... anticipated locs for review.

Follow-up:

- Calcs will be provided showing 33,000 gal. capacity for vault.
- FDC Connection locations will be shown on Phase 1 Permit documents.

Changes JKC/SFD 519/2023

No exception taken. RR/SDCI 5/23/23

**403.3.2*
Water supply to
required fire pumps.**

Key Items: In Type IV-A and Type IV-B buildings that are more than 120 feet in building height, required fire pumps shall be supplied by connections to not fewer than two water mains located in different streets.

Exception: Two connections to the same main shall be permitted provided that the main is valved such that an interruption can be isolated so that the water supply will continue without interruption through not fewer than one of the connections.

Proposal: Proposed Construction type will be Type IA

Conference discussion & decisions:

- This requirement is N/A due to proposed Const. Type IA.

Ok. RR/SDCI 5/23/23

**403.4.2
Fire alarm systems**

Key Items: Fire alarm systems shall comply with Section 907.2.12. Describe proposed fire alarm system. Fire alarm interaction with smoke control system will be discussed at the smoke control presubmittal conference.

Proposal: A digital addressable fire alarm system will be installed to comply with Section 907.2.12. This will include fire alarm control rooms off the lobby of each tower with interconnection monitoring and communication.

Conference discussion & decisions:

- (FAS vendor not on team yet).
- City not typically requiring 2 separate FCC's in recent projects. City to discuss internally and advise if two FCC's are acceptable.

Follow-up:

- SFD confirms that either 1 or 2 FCC's would be acceptable for the project.
- If only 1 FCC provided, both towers will be required to have the same Address.
- For Addressing flexibility, project proposes to stay with 2 FCC's, one at L1 of each building. in this case, the tower are require to have separate addresses. JKC/SFD 5/19/2023

No exception taken. RR/SDCI 5/23/23

**403.4.4
Emergency
voice/alarm
communication
systems**

Key Items: An emergency voice/alarm communication system shall be provided in accordance with SFC Section 907.5.2.2.

Proposal: A digital addressable voice fire alarm system will be installed to comply with Section 907.5.2.2. This will include fire alarm control rooms off the lobby of each tower with interconnection monitoring and communication.

Conference discussion & decisions:

- Every floor to be separately alarmed.

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<p>—Annunciators req'd per code / per floor to alert SFD of any untenable situations/locations.FSAE elevator lobbies and machine rooms require a fixed temperature, 135F, heat detector. Detectors are to annunciate individually with red LED's at an annunciator panel located adjacent, or integrated into, the FACP. The purpose is to alert fire fighters of an untenable situation. JKC/SFD 519/2023</p> <p><u>No exception taken. RR/SDCI 5/23/23</u></p>	
<p>403.4.5 Emergency responder radio coverage</p>	<p>Key Items: Emergency responder radio coverage shall be provided in accordance with SFC Section 510. For information on emergency responder radio coverage systems, see SFD Client Assistance Memo (CAM) 5123.</p> <p>Proposal: An 800MHz distributed antenna radio system for emergency responder coverage will be installed per SFC section 510.</p>
<p>Conference discussion & decisions:</p> <ul style="list-style-type: none"> - DAS system to be full coverage. <p><u>Ok. RR/SDCI 5/23/23</u></p>	
<p>403.4.6 Fire command (Center)</p>	<p>Key Items: Dedicated fire command center – provide details on the plans submitted for the pre-submittal conference. Requirements include (but are not limited to) approved location nearby, accessible to the fire service access elevators and minimum room size per SBC 911.1.6. See SFC Section 508.</p> <p>Proposal: Fire Command Centers are planned at the ground floor (main lobby) level of both towers in the project, close to the elevator core, and with interconnecting monitoring and communication. Both FCC rooms will be built to the requirements referenced and have a minimum area of 200 SF each.</p>
<p>Conference discussion & decisions:</p> <ul style="list-style-type: none"> - To be evaluated by City relative to 2 separate FCCs (by SFD). <p><i>Follow-up:</i></p> <ul style="list-style-type: none"> - (See item 403.4.2.above) - SFD confirms that either 1 or 2 FCC's would be acceptable for the project. - If only 1 FCC provided, both towers will be required to have the same Address. - For Addressing flexibility, project proposes to stay with 2 FCC's, one at L1 of each building. - Proposed locations of the 2 FCC's on the supplementary submittal appear acceptable. To be confirm at the review of the plans.JKC/SFD 5/19/2023. <p><u>No exception taken. RR/SDCI 5/23/23</u></p>	
<p>403.4.8 Emergency power systems</p>	<p>Key Items: Provide an emergency power system complying with Chapter 27 and Section 403.4.8. Include size, location and type of generator, fuel tank fill location, and vent terminations. See Director's Rule 8-2005 on protected above ground fuel tanks. System supervision with manual start and stop features shall be provided at the fire command Center. Provide a 2 hr. separation unless meeting the requirements for the exception for rooms within sprinklered parking garages per Section 909.11. Also see attached "Seattle Requirements for Generator Fuel Tanks" Provide location on the plans submitted for the pre-submittal conference.</p> <p>Proposal: Emergency life safety backup power will be provided via a diesel fueled generator complying with Chapter 27 and Section 403.4.8 The fuel tank will be an integrated belly tank with remote fuel fill station complying with DR-8-2005. Currently we are designing for a 1000kw generator with a 750 gallon UL 2085 rated tank. Note to project team- DR 8-2005 was withdrawn with the adoption of the 2015 SFC. Fuel tank type must comply with SFC Section 603. Fuel tank vents and fuel fill must comply with SFC Chapter 57. All are required to be on the ARCHITECTURAL plans.</p>

* Seattle amendment to IBC

	<p>See Appendix of this Form for minimum requirements of the submittal. JKC/SFD 5/19/2023</p> <p>Fuel tank vents and fuel fill systems also will comply with Chapter 13 of the SMC, Section 603.3 of the SFC, and other applicable sections of chapter 50 and 57 of the SFC and be shown on the mechanical plans. JKC/SFD 5/19/2023</p>
<p>Conference discussion & decisions:</p> <ul style="list-style-type: none"> - Directors Rule struck w/ 2015 code adoption... not applicable any longer. - UL 2085 has 3000gal max size. (OK). - Architectural Permit submittal to show where fuel filler and venting locations are. (OK). - Proposed Generator radiator exhaust loc OK at alley. Intake direct from garage OK. - 1hr walls to be provided around all other garage storage/bike/etc rooms.(OK) <p>No exception taken. RR/SDCI 5/23/23</p>	
<p>403.4.8.4* Emergency power loads</p>	<p>Key Items: Provide emergency power to exit signs & means of egress illumination; elevator car lighting; emergency voice/alarm communication; fire alarm and detection systems; emergency responder radio coverage system, power and lighting for mechanical equipment rooms and fire command center; lighting for elevator cars, machine rooms, machine spaces and control rooms; Ventilation and cooling equipment for elevator machine rooms, machine spaces and control rooms; fire pumps; smoke control system; all fire service access and occupant evacuation elevators and one elevator per group per Section 3016.9. All elevators shall be transferable to an emergency power system.</p>
	<p>Proposal: Emergency power for 403.4.8.4 life safety systems will be supplied via a diesel Emergency generator including elevator power per Section 3016.9. Lighting, Exit signs, Voice Communication system, and other systems / components referenced will be on emergency power. Stairwell pressurization systems, fans and all associated components will be on emergency power. Elevator machine room ventilation, where required, and cooling/heating systems will be on emergency power.</p>
<p>Conference discussion & decisions:</p> <ul style="list-style-type: none"> - Emergency Generator is correct reference here, not "Backup Generator". Sump pumps, roof hatches, hoistway lighting all to be on Emergency Power. - NEC 700.16 - .17 – branch circuit redundancy req'd for Emergency Circuits... clarify approach. - <p>Clarification: Emergency power for 403.4.8.4 life safety systems will be supplied via a diesel emergency generator. This will include elevator power per section 3016.9, egress lighting, elevator hoist way lighting, exit signs, emergency voice/alarm communication system, fire alarm and detection, emergency responder radio system, power and lighting for mechanical equipment rooms and fire command center, lighting for elevator cars, elevator machine rooms, ventilation and cooling for elevator machine rooms, fire pumps, smoke control system, sump pumps, roof hatches, stairwell pressurization, and elevator shaft pressurization. Redundancy for emergency branch circuits will be provided to meet the requirements of NEC 700.16-.17 via a combination of multiple circuits covering areas of egress lighting and UL listed switching devices and/or battery backup.</p> <p>No exception taken. RR/SDCI 5/23/23</p>	
<p>403.5.1*</p>	<p>Key Item: Exit stairways shall be separated by not less than 30 feet or one-fourth the diagonal dimension whichever is less measured as straight line between nearest</p>

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Remoteness of interior exit stairways	<i>points of the outer faces of the walls of the exit enclosures. Pressurization shafts are considered to be part of the stair enclosure and are subject to the separation requirements. Primarily R occupancy buildings are allowed 15 feet.</i>
	Proposal: Exit stairway configuration will comply with the separation requirements referenced.
Conference discussion & decisions: <ul style="list-style-type: none"> - Looks OK. No comments. <u>Ok. RR/SDCI 5/23/23</u>	
403.5.2 Additional exit stairway	Key Items: For buildings other than Group R-2 that are more than 420 feet(128 m) in building height, one additional exit stairway meeting the requirements of Sections 1011 and 1023 shall be provided in addition to the minimum number of exits required by Section 1006.3. Amenity assembly spaces above 420 ft associated with, and ancillary to the Group R-2 occupancy do not require an additional stair. An occupant evacuation elevator per Section 403.6.2 may be provided in lieu of a required additional exit stairway per 403.5.2.
	Proposal: Not applicable. Buildings are primarily (R2) occupancy and less than 420 feet height.
Conference discussion & decisions: <ul style="list-style-type: none"> - This section Not Applicable due to proposed Occupancy Type (R2). <u>Ok. RR/SDCI 5/23/23</u>	
403.5.3* Stairway door operation	Key Items: Stairway doors must be capable of unlocking upon signal from fire command center and must unlock upon activation of fire alarm anywhere in building. Where stairway doors are not locked from the stairway side, wiring and/or conduit shall be installed to facilitate potential future installation of locking hardware.
	Proposal: Any locked egress stairway doors will be fire alarm controlled to unlock on alarm. Egress stairway doors without electronic locks will have rough in provisions in the event of future locks being added.
Conference discussion & decisions: <ul style="list-style-type: none"> - OK, no comments. <u>Ok. RR/SDCI 5/23/23</u>	
403.5.3.1* Stairway communications system	Key Items: In required stairways a telephone or other two-way communication system connected to an approved constantly attended station shall be provided at not less than every fifth floor in each exit stairway.
	Proposal: Emergency two-way communication stations will be installed in the egress stairway every fifth floor as well as elevator lobbies. A master station will be installed at an attended location and also connected to a 24/7 monitoring service.
Conference discussion & decisions: <ul style="list-style-type: none"> - OK, no comments. <u>Ok. RR/SDCI 5/23/23</u>	
403.5.4* Smoke control in exit stairways	Key Items: Provide a smoke control system complying with Section 403.5.4. Every required exit stairway serving floors more than 75 feet above the lowest level of fire department vehicle access shall comply with Sections 909.20.5 and 1023.11. Smoke control system concepts to be further described and discussed in the smoke control presubmittal conference.

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	<p><i>For high-rise buildings that have a simple shaft configuration and utilize shaft pressurization for smoke control (i.e., no building-wide smoke control system), shaft pressurization fan status and controls using switches in accordance with Section 909.16.2 (or equivalent) may be installed on the main fire alarm control panel (FACP) in lieu of installing a dedicated fire-fighter's smoke control panel. The building graphics normally provided on the smoke control panel shall be laminated and mounted in the vicinity of the FACP for quick reference by emergency responders. See SDCI Director's Rule: Testing of Stairway and Hoistway Pressurization Systems in High Rise Buildings</i></p>
	<p>Proposal: Smoke control in exit stairways will be provide by stairwell pressurization system for both stairwells in each tower. Each stairwell will be pressurized from the roof. Stairwell pressurization systems shall be provided with fans, motorized dampers, and duct smoke detectors (2 per system) and be provided with emergency power. Stairwell pressurization systems will deliver air via supply shaft and will inject air at intervals along the vertical stairwell enclosure. Stairwell pressurization relief vents will be provided at the top of each stairwell enclosure and be fitted with motorized dampers and backdraft dampers. Pressurization equipment will be activated by a fire alarm signal. Pressurization system will be independent of any other building ventilation systems. The stairway pressurization system will be monitored and activated via the building fire alarm system.</p>
<p>Conference discussion & decisions:</p> <ul style="list-style-type: none"> - <i>Details to be discussed in 909 Conference.</i> <p><u>No exception taken. RR/SDCI 5/23/23</u></p>	
<p>713.14* Smoke control in elevator hoistways</p>	<p>Key items: Provide hoistway opening protection with one of the following: enclosed elevator lobbies complying with Section 713.14.3; additional doors at each hoistway door opening per 713.14.3 item 3 or elevator hoistway pressurization complying with Section 909.21. Describe which option is being proposed. Pressurization concepts to be further described and discussed in the smoke control presubmittal conference.</p>
	<p>Proposal: Elevator lobby doors complying options 1, 2, or 3 of section 713.14.3, are provided at elevator lobbies above level 1. Elevator hoistway pressurization is not required and is not being provided in either tower.</p>
<p>Conference discussion & decisions:</p> <ul style="list-style-type: none"> - <i>Clarify how reqmts for Fire Svc Elevs is being complied with.</i> - <i>Size/area of lobbies = min. 150sf.</i> - <i>Path reqmts need to comply from exit stairways... confirm method of compliance.</i> - <i>Include in Draft notes – may need to refine subject to review.</i> <p><i>Follow-up:</i></p> <ul style="list-style-type: none"> - <i>Project has revised its proposal to using Elevator Hoistway Pressurization for smoke control in elevator hoistways. Elevator Lobby doors as originally proposed will be removed.</i> - <i>To be discussed in more detail in 909 Meeting.</i> <p><u>Ok. RR/SDCI 5/23/23</u></p>	
<p>403.5.5 Luminous egress path markings</p>	<p>Key Items: Luminous egress path markings shall be provided in accordance with Section 1025.</p>
	<p>Proposal: Luminous egress path markings will not be provided, in accordance with Sec. 1025.</p>

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Conference discussion & decisions: <ul style="list-style-type: none"> - Clarified no luminous egress path markings proposed per Sec.1025 (due to R2 occupancy) - OK, no comments. <u>Ok. RR/SDCI 5/23/23</u>	
403.5.8* Stairway termination	<p>Key Items: All required interior exit stairways shall terminate at a roof in a penthouse with a door complying with Sections 1010.1.1 and 1010.1.2. The building official is permitted to approve an alternate design at the pre-design conference. The intent is for all required stairways to have at least one door or approved penthouse alternate roof hatch that opens directly to the exterior on a roof level, and that all other roof levels may be accessed via stairs, ships ladders or alternating tread devices.</p> <p>See attached "Seattle High-rise Requirements for a Roof Hatch When Approved as a Penthouse Alternate"</p>
	<p>Proposal: Proposed approach is for one stairway in each tower to extend to a roof penthouse with door opening out to roof, and one stairway in each tower to stop at the top floor and have a roof hatch opening onto roof level. Roofs are considered non-occupied (except for maintenance)</p>
Conference discussion & decisions: <ul style="list-style-type: none"> - OK. - Must also provide stair access to Mech Rm (Mech penthouse) roof level. Use of catwalk on roofs from exit stairs to Mech Rm roof is OK, typical both towers. - Access to mech room roof must be from exterior, any stair to the mech room roof needs to be adjacent of close to stair door to roof JKC/SFD 5/19/2023 <u>No exception taken. RR/SDCI 5/23/23</u>	
403.6* Elevators	<p>Key Items: Elevator installation and operation in high rise buildings shall comply with Chapter 30 and Section 403.6. Describe proposed primary and alternate recall floors.</p>
	<p>Proposal: Elevator design will fully comply with Chapter 30 and Section 403.6 of the Seattle Building Code. Each tower is served by a three-car group that serves all floors. Two of the elevators in each group are designed as the fire service access elevators. They have a 4,000 lbs. capacity and are sized to accommodate a stretcher in an open horizontal position as required by Code.</p> <p>Recommended primary recall floor is level 1 in both towers, which is at grade level. Recommended alternate recall floor is one level above, which is level 2 in both towers.</p>
Conference discussion & decisions: <ul style="list-style-type: none"> - Each Fire Service elevator to have separate machine rooms. (This is as proposed – each Fire Service elevator is in a separate shaft from others). - Need to identify the FSAE's on the architectural submittal. JKC/SFD 5/19/2023 <u>No exception taken. RR/SDCI 5/23/23</u>	
403.6.1* Fire service access elevator	<p>Key Items: In buildings with occupied floor more than 120 ft. above the lowest level of fire department vehicle access, a minimum of two fire service access elevators shall be provided in accordance with Section 403.6.1. Each fire service access elevator shall be served by a different machine or control room. Indicate location of fire service access elevators, and how the water prevention requirements of Section 403.6.1.2 will be complied with. Sump capacity shall be</p>

* Seattle amendment to IBC

	3000 gph per state code requirements. Note: Separate shafts and pressurizations systems are not required for the two fire service access elevators.
	<p>Proposal: Each tower has two fire service access elevators designed in accordance with Section 403.6.1 of SBC. Elevators 1 and 2 in the North tower and Elevators 4 and 5 in the South tower are the designated fire service access elevators. The elevators are traction elevators. Two machine rooms, located on the roof, are provided for each three-car group so that the equipment for the two elevators designed as fire service access elevators is in separate rooms.</p> <p>Permanent sump provisions in the pits with a capacity of 3,000 gph will be provided, complying with applicable plumbing code requirements. In addition to elevator lobby doors (with a threshold at the floor), a 2% (1/4"/ft.) slope in typical elevator lobby floor slabs, sloping away from the elevator hoistway doors, is proposed to prevent water from the building sprinkler system from entering the hoistways for the fire service elevators.</p>
Conference discussion & decisions: <ul style="list-style-type: none"> - Location of Fire Svc elevators OK as shown on plans. - Clarify sump pumps vs drains mentioned in later section. If sump, an 18" x 18" x 18" sump recess is not adequate for 3000gph volume. - At elevator lobbies, 1" of elevation change req'd. from elevator threshold to low spot (surrounding corridor) - 5% slope of floor outside of door landing areas is OK. A 1/2" threshold profile can help build up the 1" total elevation differential. <p>Follow-up:</p> <ul style="list-style-type: none"> - Sump pits in elevator shafts to be sized accordingly to accommodate 3000gph volume. Sumps will be shown in Ph.1 permit submittal. <p><u>Water protection is also required at levels below street level. RR/SDCI 5/23/23</u></p>	
403.8* Emergency operational plan	<p>Key Items: In accordance with SFC Section 404, the building is required to have a Fire Safety and Emergency Plan. SFC Section 9309 requires that a Fire Safety Director appointed by the building owner is responsible to oversee the preparedness and initial response of a building's fire and life safety systems and building occupants to a fire alarm, in addition to conducting annual emergency evacuation drills. For more information, see SFD CAMs 5963 and 5982.</p> <p>Proposal: Building owner will provide a Fire Safety and Emergency Plan and appoint a Fire Safety Director, complying with these requirements.</p>
Conference discussion & decisions: <ul style="list-style-type: none"> - Draft of Fire Safety and Emergency Plan must be available by time of TCO application. (OK). <p><u>No exception taken. RR/SDCI 5/23/23</u></p>	
Chapter 7	
712* Vertical openings	<p>Key Items: The code limits the number of stories that can be in common atmosphere with one another without the required fire barrier separation between them. The plans submitted for the predesign meeting should show all architectural floor openings including those relating to escalators. If architectural floor openings reach the threshold meeting the definition of an atrium, the atrium code requirements shall be addressed. Note any garage elevators or duct system using the provisions of Section 712. Fire alarm and smoke control systems will need to be designed to take unenclosed vertical openings into account.</p> <p>Proposal: No atrium conditions are proposed in the current building design.</p>
Conference discussion & decisions:	

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- Not limited to "Atriums". All vertical openings not enclosed in shaft construction are being considered here.
- Confirm no vertical openings between floors (atrium or non-atrium) are in the design.

Follow-up:

- Confirming that no multi-story spaces (2 stories or more) are being proposed in the design. All intra-floor vertical openings are within rated enclosures and/or will be provided with floor x floor firestopping.

Ok. RR/SDCI 5/23/23

CHAPTER 10, MEANS OF EGRESS

Chapter 10* General	Key Items: Provide an exiting plan and describe any issues requiring interpretation or a code alternate or code modification. Indicate occupancy loads and load factors for all assembly type spaces. Clearly note all locations where exit access stairways are being proposed.
Code Alternate/ Modification <input type="checkbox"/> (form attached)	Formal egress plans have not been developed yet, but schematic floor plans are included in the attached packet showing all proposed exit stair locations. Each tower has two continuous stairways that extend from top to bottom. All tower spaces above L1 are for private residents only, no publicly accessible space is provided for non-residents. No special interpretations or code alternate issues are anticipated.

Conference discussion & decisions:

- Lots of apparent rooms opening into corridors that may have doors exceeding protrusion dimension limits.
- Verify door swings/intrusion for rooms like Elec, Trash, Etc.
- Also SDCI noticed that perimeter landscape terraces (non-occupied) had no apparent corridor/door access. Operable (lockable window access through a residential unit is proposed). This will be reviewed in committee and advised on.

Follow-up:

- Ongoing plan refinements have included verification of door swings into corridors being within protrusion limits. Clarification will be shown in Architectural permit application.
- SDCI confirmed that corridor & man-door access to non-occupied perimeter landscape terrace areas is not required.
- Per SDCI: <<no dedicated/separate access for maintenance is required, and no measures for unsanctioned access by occupants beyond the requirements of SBC 1015.8 (fall prevention) – it is expected that the operable windows at these locations will comply with this section for more than 75 ft from grade (no escape mechanism) similar to the adjacent windows that are more than 72" above "other surface... on the exterior".>>

Ok. RR/SDCI 5/23/23

CHAPTER 30, ELEVATORS

3016.9* Elevator operation on emergency power - recall	Key Items: Elevators shall comply with Sections 3016 through 3019 for hoistway smoke control (lobbies, extra doors or pressurization), elevator operation on emergency power, general emergency operation requirements, and phase I and phase II recall requirements.
	Proposal: Emergency power will be supplied via diesel generator and communication between the elevator controller and automatic transfer switch. Elevator hoistway openings will be protected via elevator lobby doors, and Phase I and Phase II recall design will comply with Sections 3016 through 3019. Primary elevator recall floor is planned as Level 1 in each tower. Secondary recall floor is Level 2 in each tower.

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Conference discussion & decisions: <ul style="list-style-type: none"> - <i>OK as proposed.</i> <u>No exception taken. RR/SDCI 5/23/23</u>

3020.1* & 3020.4* Construction of Hoistways, and machine and control rooms	Key Items: <i>Construction of hoistways and hoistway enclosures shall comply with ASME A17.1 Section 2.1 as amended.</i>
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	Proposal: Elevator hoistway enclosures are provided with drains meeting the requirements of the Seattle Elevator Code. Drains shall be sized for 50 gpm per elevator hoistway enclosure.
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Conference discussion & decisions: <ul style="list-style-type: none"> - <i>Confirm sumps as referenced in earlier section, vs drains proposed here.</i> - <i>Confirm size of sump for req'd water volume.</i> <p><i>Follow-up:</i></p> <ul style="list-style-type: none"> - <i>Elevator hoistways will be provided with sumps.</i> - <i>Minimum sump sizing dimensions have been calculated as 24" x 24" x 40" deep. A 36" clear height inside the sump is needed to contain the height of the pump itself. Allowing for a grate on top of the sump, the depth is planned to be a few inches more than the 36" clear inside height.</i> <u>No exception taken. RR/SDCI 5/23/23</u>

OTHER

Other	<i>Describe any significant interpretation requests or special conditions you wish to address including any issues requiring a code alternate or code modification.</i>
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Code Alternate/ Modification <input type="checkbox"/> (form attached)	Proposal: <ol style="list-style-type: none"> While not currently planned, fluctuating market conditions could dictate that construction of the two towers be staggered to some extent. (Even if so, a continuous construction process for the entire project is currently intended (vs a 'build one – pause - build other' approach)). <ul style="list-style-type: none"> Should one tower proceed ahead of the other, a possible occupancy scenario could occur where 'tower 1' occupancy is requested, prior to 'tower 2' construction being completed. In this situation, the intent would be that all life safety systems for 'tower 1' are completed and operational prior to 'tower 1' occupancy, even if 'tower 2' construction and occupancy lags by some duration. <p>Please advise of any concerns about such an approach, should market conditions mandate such.</p>
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Conference discussion & decisions: <ul style="list-style-type: none"> - <i>Refer to Directors Rule 19-<u>20</u>17 for phased occupancy rules to be complied with in this scenario.</i> - <i>Staggered completion of the towers that are permitted under a single phase may be a challenge but are a detail that can be worked out.</i> - <i>Some Residential Residential apartment layouts appear to potentially not comply with habitable space dimensional requirement... verify.</i> <p><i>Follow-up:</i></p> <ul style="list-style-type: none"> - <i>On the question how to measure habitable space in rooms – with or without fixed features – SDCI has advised that this is addressed/clarified by SBC I1207 (below the section heading) - the habitable space shall not include built-in/fixed features, such as the kitchen cabinets. Based on</i>
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this and 2015 SBC Code Interpretation 1208.1 and 1208.3 Habitable Room Size, the example unit S351 does not comply with the minimum 190 sf. Please verify all other units for compliance with the minimum limits (190 sf, 120 sf, 70 sf). Alternatively, you may show/provide compliance with DR 9-2017 for Small Efficiency Dwelling Units (see associated three 2015 SBC Code Interpretations).

- Habitable space dimensional requirements are being addressed as residential unit layouts in the project are being refined. Clarifications / dimensions will be shown in the future Architectural permit application.

- Ok. RR/SDCI 5/23/23

Additional items as of 5/23/23:

- 1) If interior vertical circulation is provided within Retail spaces (as shown on A100, A101, stairs in south Retail), an interior accessible route shall also be provided and shown on the plans. SBC 1104.5*
- 2) Provide proportional distribution of type A units to multiple (3- and 4-) bedroom units, see SBC 11107.6*
- 3) Plumbing fixtures required at the level or, or adjacent level, for amenities, including occupied roof decks/outdoor amenities. SBC 2902.1, Table 2902.1 footnote "d", 2902.3.3.*

Seattle Requirements for High-Rise Secondary Water Supply

Water Tank: An automatic secondary on-site water supply storage tank shall be provided for high-rise buildings in accordance with SFC Sec. 904.3.2, and meet the requirements of NFPA 22 and the following:

OPTION 1 Single Fire Pump with Storage Tank Having Automatic Refill Features**Tank Refill Lines:**

Dual automatic refill lines, each capable of refilling the tank at a minimum rate of 110 percent of the fire pump(s) capacity, shall be installed. Ref: SFD Administrative Rule 9.03.20 or its successors

A manual tank fill bypass designed for and capable of refilling the tank at a minimum rate of 110 percent of the fire pump(s) capacity shall be provided. Ref: SFD Administrative Rule 9.03.20 or its successors

Tank Fill Valves and Control Systems: The two automatic refill lines shall have separate automatic tank fill valves that are listed for fire service and arranged for automatic operation. Each automatic tank fill valve shall be provided with a separate approved means of actuation such as float assemblies, pressure sensors, etc. that are supervised by the fire alarm system. The status of the valves (i.e., 'open', 'closed') shall be indicated at the valves and in the Fire Command Center (FCC).

The tank shall be kept filled, and the water level shall never be more than 4 inches below the designated fire service level. Ref: NFPA 22 - 14.4.3

Tank Level Indicators: Two tank level indicators are required, one located in the FCC and another in the immediate vicinity of the tank fill valves. The tank level indicator monitoring shall be-provided through the fire alarm system in accordance with NFPA 72.

Two separate and distinct signals shall be initiated: one indicating that the required water level has been lowered or raised (off-normal), and the other indicating restoration. Ref: NFPA 72 - 17.16.3.1

The off-normal signal shall be initiated when the water level falls three inches or rises three inches. Ref: NFPA 72 - 17.16.3.2.1

Tank Low Level Alarm: Separate and distinct tank low level audible and visible alarms shall be provided in the FCC and in the vicinity of the tank fill valves, and activate when the tank water level drops below 50% capacity. The tank low level monitoring shall be-provided

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Project Name: []
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through the fire alarm system in accordance with NFPA 72. The signaling devices shall be clearly labeled "Water Tank Low Level Alarm" or equivalent. An independent silence switch shall be provided for the tank low level alarms in the immediate vicinity of the alarm devices.

Tank Overflow Protection: An approved means to prevent the tank from overflowing into the building shall be provided. Where an automatic shutoff valve is provided, it shall be listed for fire service and have dual (redundant) means of actuation such as two float assemblies, pressure sensors, etc. that are supervised by the fire alarm system. The valve shall be supervised by the fire alarm system and status (i.e., 'open', 'closed') indicated at the valve and in the FCC.

Pump By-pass: A full size by-pass shall be installed around the storage tank and the fire pump in accordance with NFPA 20. The by-pass shall be installed on the supply side of the tank fill valves and connected to the system on the downstream side of the fire pump and any sprinkler system pressure regulating valves installed on feed mains.

OPTION 2: Two Fire Pumps and Storage Tank Without Automatic Refill Features

The primary fire pump shall be supplied by a dedicated fire service main and the secondary fire pump supplied from the storage tank. The pumps shall operate at the same rated flow capacity and at similar discharge pressures. When using Option 2, automatic refill of the tank is not required.

The means to fill the tank shall be sized to fill the tank in a maximum time of 8 hours. Ref: NFPA 22 – 14.4.2

The tank shall be kept filled, and the water level shall never be more than 4 inches below the designated fire service level. Ref: NFPA 22 - 14.4.3

Tank Level Indicator: A tank level indicator is required in the immediate vicinity of the tank fill valve.

Pump By-pass: A full size by-pass shall be installed around the primary fire pump in accordance with NFPA 20. The by-pass shall be connected to the system on the downstream side of any sprinkler system pressure regulating valves installed on feed mains.

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Seattle Requirements for High-Rise Generator Fuel Tanks

Ensure that the as a minimum the following information is provided on the on the architectural plan submittals:

1. Provide detail on plans indicating type of tank (i.e., UL-142, UL-2085, or other type of tank), type of fuel, and how much will be stored on-site.
2. Provide detail on plan (plan and elevation views) showing the location of the diesel fill connection, located on the exterior of the building, at least 5 feet from building openings and property lines in accordance with SFC Section 5704.2.7.5.2.
3. Provide details on plans indicating location (plan and elevation views) and routing of normal vent for diesel tank (manifolding of normal vents is not allowed) in accordance with SFC Section 5704.2.7.3.3.
4. Provide details on plans indicating location and routing of emergency vents diesel tanks (manifolding of emergency vents is not allowed) in accordance with SFC Section 5704.2.7.4.

Seattle Requirements for Protection of Wiring Required by Section 909.11

1. Power and control wiring that serves the pressurization and other smoke control equipment, regardless of voltage, shall have fire-resistance-rated protection (rated cable, installation in shafts, embedment, etc.) of at least two hours. **Exception:** Fire-resistance rating is not required for wiring serving a generator in an unprotected area in a garage that is separated from the rest of the building by 2 hour-rated construction.
2. Where wiring protection is provided by installing in a rated shaft, protection of wiring is required between the fire command center and the shaft.
3. Protection of wiring is not required for rooftop or penthouse wiring where installed outside the building envelope or in a penthouse that is not required to be protected.
4. Protection is not required for HVAC fans used to exhaust intermittent floors.
5. Protection is not required for the dampers on the HVAC equipment unless dedicated for shaft pressurization.
6. Wiring required to have 2-hour protection can be in a shaft with other wiring. The "independent route" requirement in Section 909.11 means separate raceway from normal power.

**Seattle High-Rise Requirements for a Roof Hatch
When Approved as a Penthouse Alternate**

1. Roof hatch dimensions shall be a minimum of 3'-0" wide x 12'-0" long.
2. Roof hatch shall be installed with a snow sensors/heating cables system.
3. Roof hatch shall be motorized with a remote pushbutton station located at the base of the top stair landing leading to the hatch.
4. Roof hatch electrical system shall be on building emergency power.
5. Provide switch in the Fire Command Center that unlocks the electro-magnetic locks on the hatch doors.
6. Interlock electromagnetic locks on hatch doors with fire alarm system to unlock automatically on any fire alarm signal.
7. Roof access shall be provided by extending the stairway or providing an alternating tread device to the roof surface. Ensure required headroom clearance is met where the stair or alternating tread device leads to the hatch.
8. Roof hatch shall be operable from the roof.