



PARKING STRUCTURES:

The Ins & Outs of the New Code and Rule



build safe | live safe

presented by

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PRESENTATION DESCRIPTION

With recent Code changes and the development of their accompanying rules, property owners are now required by law to file compliance reports for parking structures. This presentation will review different types of parking structures, the maintenance difficulties and inspection nuances, and the details of the Code requirements.

Parking structures come in many forms and materials, whether it's detached cast-in-place concrete, or a few levels below grade of an office building with concrete-encased, steel framing. In all cases, these structures are home to a caustic environment thanks to the regular exposure to oil, gasoline, and de-icing solutions that come from their primary occupants. The 2022 NYC Construction Codes go into effect Nov. 7, 2022; however, owners of parking structures are required to have it inspected by an engineer and submit compliance reports every six years as of January 1, 2022.

PRESENTATION DESCRIPTION

This presentation will go over the data that is relevant to parking structures in NYC that informed the development of the Code and Rule. In addition, different incidents that we are hoping to avoid by enacting these Code changes. This presentation will also delve into some of the details of the pending rule and how one can become a Qualified Parking Structure Inspector (QPSI). Participants will be able to identify the maintenance difficulties, inspection nuances, and the details of the Code requirements for different types of parking structures.

2022 NYC CODE

- **2022 Construction Codes go into effect Nov 7, 2022**
 - Certain provisions went into effect Jan 1, 2022 – including parking structures
- **Includes new provision for parking structure assessment and compliance filing**
- **1 RCNY 103-13 went into effect June 22, 2022**
 - Similar to FISP and Retaining Wall requirements, though with some differences
 - 1RCNY 101-7 (Approved Agencies) was also amended to include Qualified Parking Structure Inspectors (QPSI)
- **Expect to file via email at first, then via DOB NOW**
- **6 Year Filing Cycle**
 - (3) 2-year sub-cycles broken down by Community District
 - Cycle 1A started Jan 1, 2022

SERVICE NOTICE



November 23, 2021

SERVICE UPDATE

New Periodic Inspection Requirements for NYC Parking Structures

Beginning January 1, 2022, [Local Law 126 of 2021 \(Intro No. 2261-A\)](#) will require owners of parking structures to hire a NYS licensed and registered professional engineer to inspect the structure at least once every six years and file a report with the Department of Buildings documenting the results of the inspection that include:

- buildings, or portions of a building, used for parking or storing motor vehicles, including space inside or under a building
- open parking garages and enclosed parking garages as defined in the [NYC Building Code](#).

REPORT FILING REQUIREMENTS

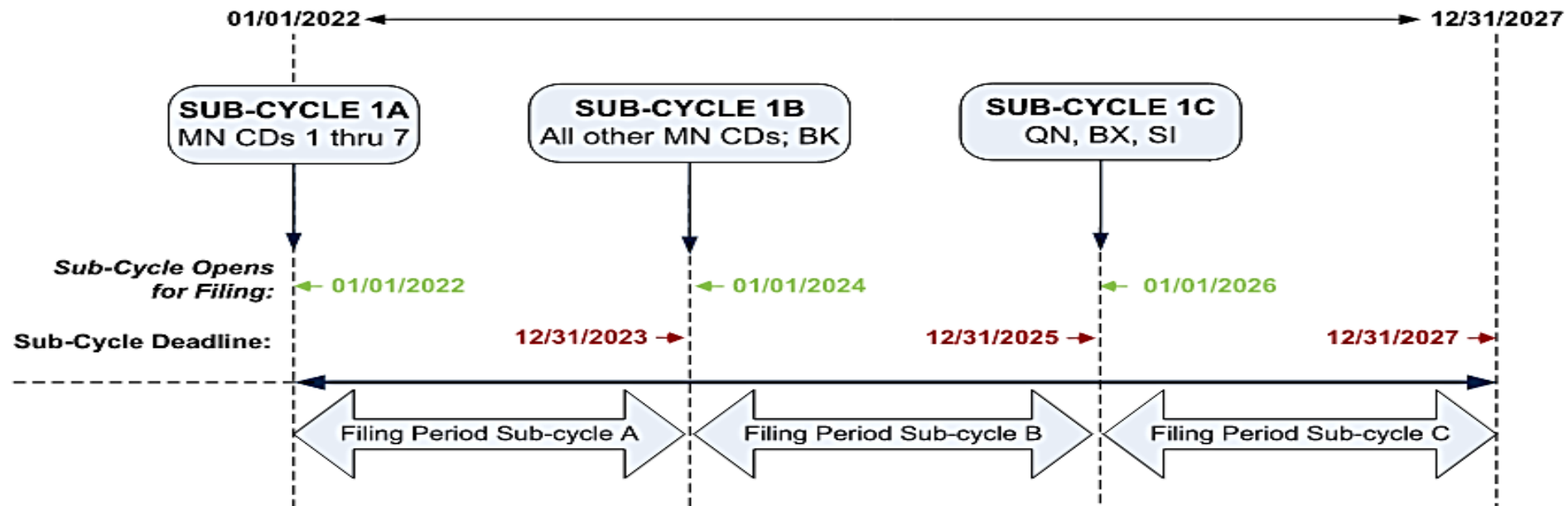
File a compliance report at least once during each six-year report filing cycle:

- A. Borough of Manhattan Community Districts 1 through 7:
 - two-year filing window starting **January 1, 2022**
- B. All Community Districts in the Borough of Manhattan not listed in (A), above, and all Community Districts in the Borough of Brooklyn,
 - two-year filing window starting **January 1, 2024**
- C. All Community Districts in the Boroughs of Queens, the Bronx and Staten Island
 - two-year filing window starting **January 1, 2026**

FILING CYCLE DIAGRAM

Parking Structure - CYCLE 1
ADMINISTRATIVE CODE 28.323
2022-2027

PARKING STRUCTURES CYCLE 1 Six Year Cycle Period



ARTICLE 323

- **Condition assessment performed once every six years**
 - To be performed by an approved professional (QPSI)
 - Prepare checklist for annual observation
 - File the report with the Department
- **Observation performed annually**
 - To be performed by non-professional assigned by the owner (super, garage attendant, etc.)
 - Not filed
 - Would need to be made available if there is an incident
- **During either assessment or observation:**
 - ***Notify DOB immediately of any unsafe conditions***

PARKING STRUCTURES: CHALLENGES

■ Locations

- Detached, dedicated use
- Basement of office or residential building
 - People don't spend a lot of time there
 - Typically not well lit
- Roof of building

■ Materials

- Concrete, steel, wood
- Material degradation
- Unique wear and tear: exposure to de-icing solutions, motor oil, traffic, often open to the elements

■ Important to decide

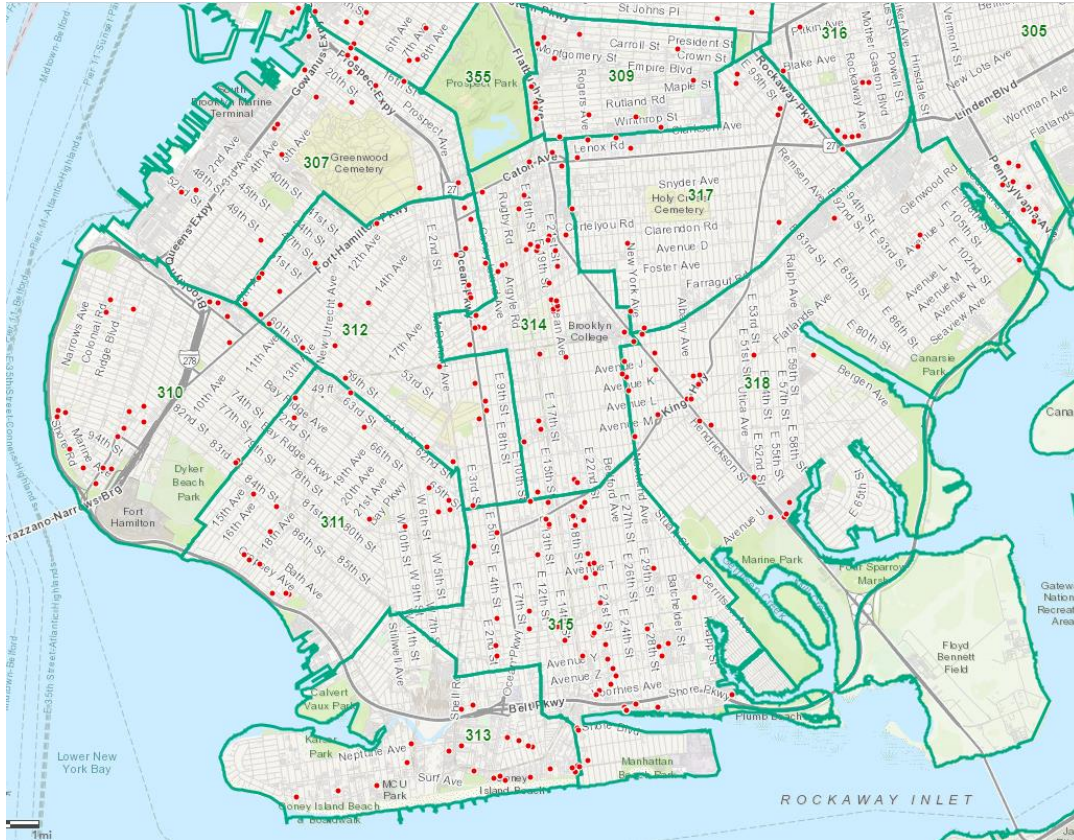
- Size, # levels, location within building

■ Ownership

WHOSE RESPONSIBILITY?

- Report filing separate issue from maintenance
- Building owner would be responsible, not parking operator
- Does anything need to change in the lease agreement?

DETERMINING THE POPULATION



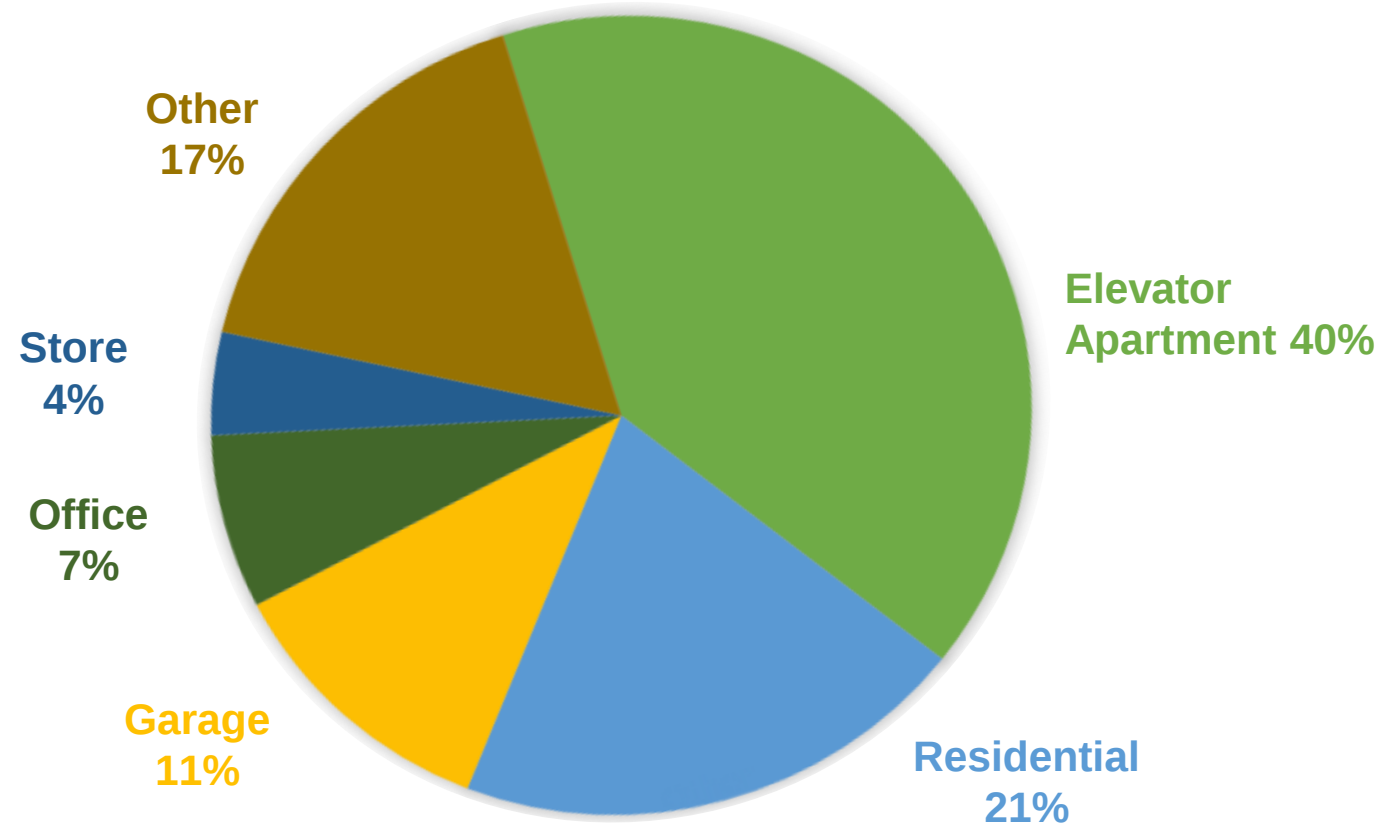
- How do we find the buildings?
- NYC has unique challenges
- An ongoing process

POPULATION



TYPES OF BUILDINGS

Distribution of Parking Structure Type



POPULATION

- Manhattan: 1410
- Brooklyn: 890
- Queens: 1060
- Bronx: 360
- Staten Island: 30

TOTAL ~ 3800

Structures not included:

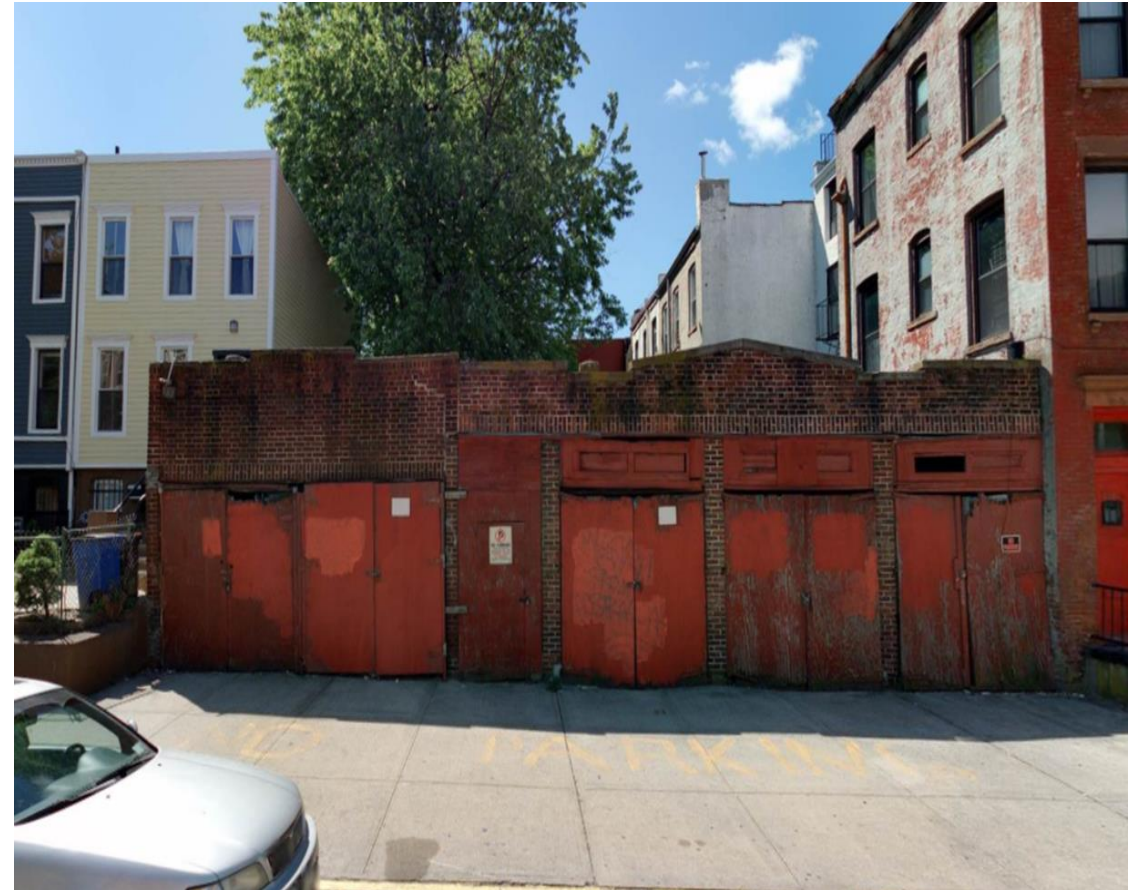
1. Unenclosed, unattached outdoor parking lots
2. Private garages serving one- and two-family homes
3. Garages with occupancy of fewer than three cars
4. Autobody repair shops, showrooms, or service stations

NYC BUILDING CODE: MAINTENANCE OF BUILDINGS

ARTICLE 301 GENERAL

§28-301.1 Owner's responsibilities. All buildings and all parts thereof and all other structures shall be maintained in a safe condition. All service equipment, means of egress, materials, devices, and safeguards that are required in a building by the provisions of this code, the 1968 building code or other applicable laws or rules, or that were required by law when the building was erected, altered, or repaired, shall be maintained in good working condition. Whenever persons engaged in building operations have reason to believe in the course of such operations that any building or other structure is dangerous or unsafe, such person shall forthwith report such belief in writing to the department. The owner shall be responsible at all times to maintain the building and its facilities and all other structures regulated by this code in a safe and code-compliant manner and shall comply with the inspection and maintenance requirements of this chapter.

NOT ALL THE SAME



CODE REQUIREMENTS

- Classification: safe, unsafe, safe with repair and/or engineering monitoring (SREM)
- Include a record of all potentially unsafe conditions of the structure
- Condition of structural framing members, any visible reinforcement, connections, and conditions of slabs and slab joints
- Must also contain the annual observation checklist to be used for subsequent annual parking structure observations
- Can only be filed by a **designated Qualified Parking Structure Inspector (QPSI)**

UNSAFE

- Remove the unsafe condition and/or provide public protection
- Notify the Department immediately
- Notify the Owner immediately if they are not present at time of discovery of the unsafe condition
- Correct the condition within 90 days or request an extension
- Once corrected, file an amended report

UNSAFE



SAFE WITH REPAIR AND/OR ENGINEERING MONITORING (SREM)

- A plan detailing the proposed monitoring program;
- The name of the engineer performing the monitoring;
- A stability analysis of the parking – typical and worst case structural framing members which shows that the structure is stable under current and expected loading conditions; and
- It is to be explicitly stated if only repairs are required with no monitoring.
- Subsequently assessed no more than 3 years from initial assessment – **file an amended report**

1 RCNY 103-13

- a) Definitions
- b) Responsibilities of qualified parking structure inspectors
- c) Condition Assessments
- d) Annual Observation
- e) Civil Penalties
- f) Full or partial penalty waivers; eligibility and evidentiary requirements

CONDITION ASSESSMENT

Describe **all components** of the load carrying systems specific to the area being used as a parking structure or **the entirety of the building** if its sole use is as a parking structure. Areas to be included are:

1. Ramps and other spaces used to access parking areas;
2. In the case of a parking structure located at a floor or floors above floors of other occupancies, the slab and columns immediately below the lowest level of the parking structure;
3. In the case of a parking structure located at a floor or floors below floors of other occupancies, the slab and beams/joists forming the ceiling of the topmost level of the parking structure;
4. Any area outside of that described in 1, 2 and 3 that may exhibit deterioration extending from or caused by the structure comprising the parking area

BUILDING FAÇADE EXCEPTIONS



If the building in which the parking structure is located is included in FISP



If the parking occupies less than 50% of the overall square footage of the building

NO FAÇADE EXCEPTIONS



If the parking occupies more than 50% of the overall square footage of the building

PHYSICAL EXAMINATION

- Methods used must permit a complete physical examination of the structure
- Including, but not limited to: sounding, load tests, optical survey, non-invasive scanning, and cores.
- The QPSI shall determine the most deleterious locations and perform physical examinations at those locations.
- Must be performed on a minimum of 10% of each structural element including, but not limited to, beams, columns, and slabs

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CASE 1: RAMPS



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CASE 2: PARKING ABOVE OTHER OCCUPANCIES

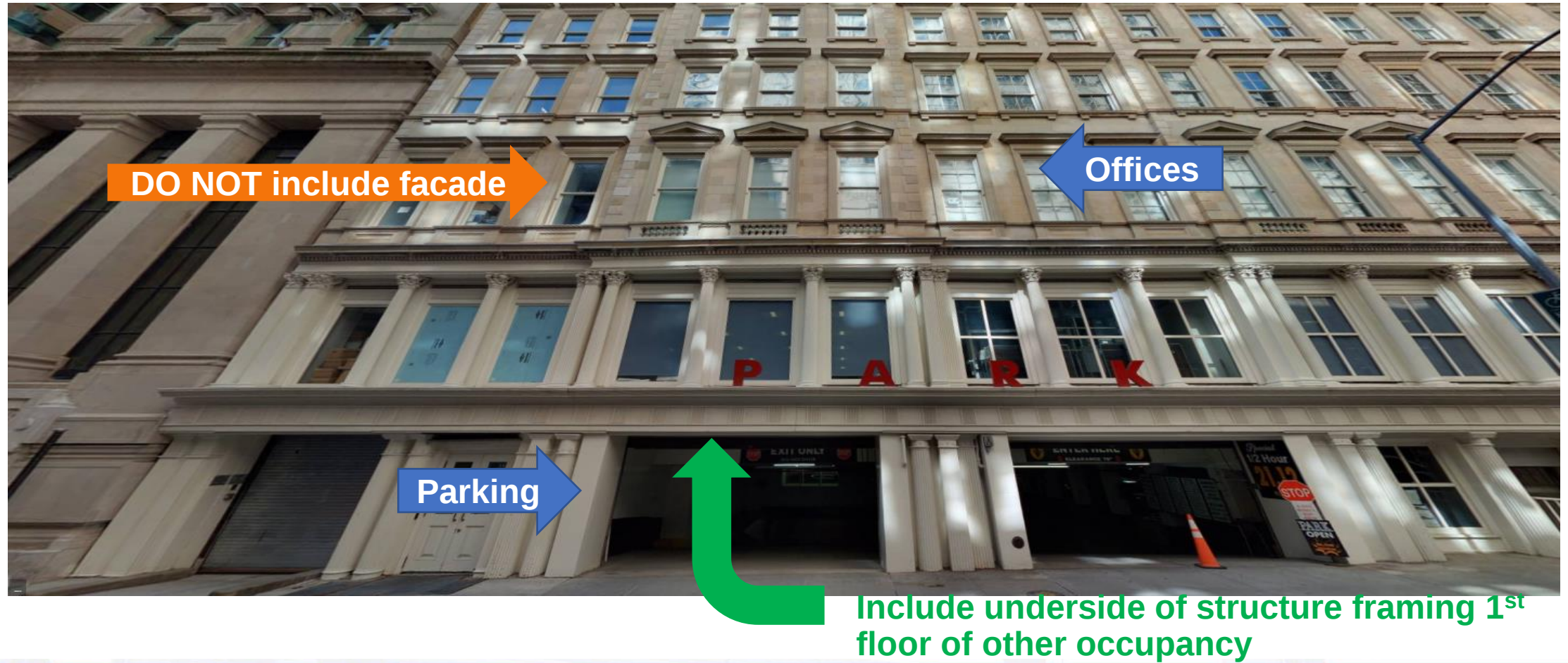


CONDITION ASSESSMENT

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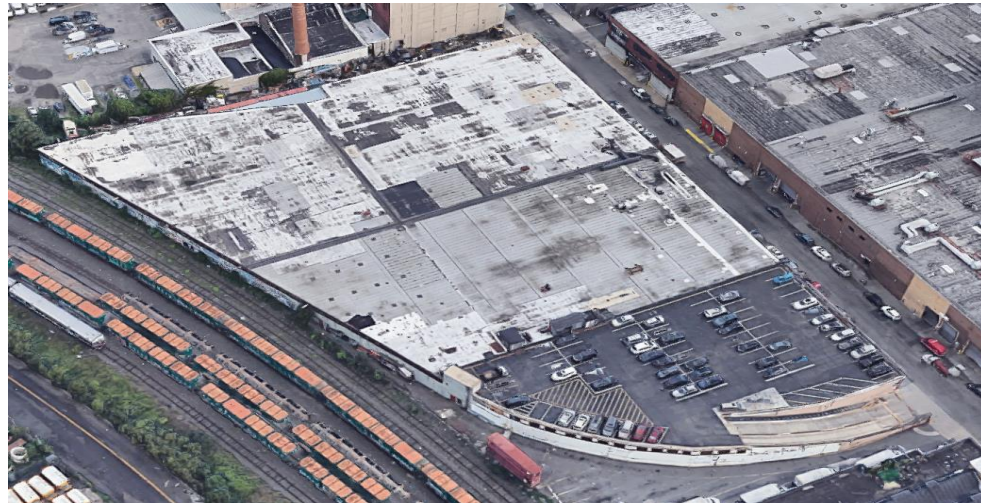
CASE 3: PARKING BELOW OTHER OCCUPANCIES



OTHER CASES



What should be included in the report?



ANNUAL OBSERVATION

- Based on the checklist prepared by the QPSI included in the most recent accepted compliance report
- Completed by the owner or someone working on behalf of the owner
- Every year in between filing submissions
- Completed checklists must be kept on site and be made available
- What should they do if they discover an unsafe condition during the annual observation?

ANNUAL OBSERVATION CHECKLIST

ANNUAL STRUCTURAL CHECKLIST

PARKING STRUCTURE NAME
INSPECTOR
OWNER

DATE
CITY, STATE

FLOORS

- ___ When was the last floor sealer application? (Typically applied every 3 to 5 years)
- ___ Are there rips, tears, debonded areas, or signs of embrittlement in the traffic topping?
- ___ Are there cracks in the floor slab? If yes, where are they located and how wide are they?
- ___ Are there signs of leaking?
- ___ Any spalls or delaminations? If yes, how big and where are they located?
- ___ Has chloride ion content testing been performed this year?

BEAMS AND COLUMNS

- ___ Are there cracks? If yes, are they vertical or horizontal and how wide are they?
- ___ Are there any signs of leaking?

STAIR/ELEVATOR TOWERS

- ___ Are there any signs of a leaking roof?
- ___ Are there any cracks in the exterior brick?
- ___ Are there any cracks in the mortar joints?

NOTES AND CORRECTIVE ACTION NEEDED:

JOINTS

- ___ Are there any signs of leaking, loss of elasticity, or separation from adjacent surfaces?
- ___ Expansion joints
- ___ Control joints
- ___ Construction joints
- ___ Tee-to-tee joints

ARCHITECTURAL SEALANTS

- ___ Are there any signs of leaking, loss of elasticity, or separation from adjacent surfaces?
- ___ Between window and door
- ___ In block masonry
- ___ Exterior sealants
- ___ Concrete walks, drives, and curb landings

EXPOSED STEEL

- ___ Is there any exposed steel? If yes, where is it located and is it rusted?

MASONRY

- ___ Are there any cracks in the brick?
- ___ Are there any cracks in the mortar?
- ___ Are there any brick spalls? If yes, where are they located and how big are they?

NOTES AND CORRECTIVE ACTION NEEDED:

BEARING PADS

- ___ Are bearing pads squashed, bulging, or out of place? If yes, where?

After answering the above questions, please consult a qualified engineer to discuss your answers.

NOTES AND CORRECTIVE ACTION NEEDED:

FILING FEES & CIVIL PENALTIES

■ Report Filing Fees

Initial Filing	\$305
Amended Filing	\$85
Subsequent Filing	\$85
Application for extension of time to complete repairs	\$65

■ Civil Penalties

Late Filing	\$1000/month
Failure to File	\$5000/year
Failure to correct unsafe conditions	\$1000/month
Failure to correct unsafe conditions	\$2000 – one time

HOW TO FILE *(pre DOB NOW)*

- Email the Parking Structures Unit at ParkingStructures@buildings.nyc.gov with the Subject Line **Request for Invoice for BIN/Address/Report Type**
 - Report Type: Initial, Amended, Subsequent, or Extension
- **OR** visit us at **280 Broadway, 4th floor**
- Bring the invoice and payment to **the Central Cashier at 280 Broadway, 1st Floor Atrium**
 - Payments can be made by credit card, checks and money orders.
- The report should be in **PDF format** with the name **BIN-Address-Report Type**
EXAMPLE: 1079215 – 280 Broadway - Initial
- Email the receipt for the payment along with the report to us with the Subject Line **Cycle 1 Report for BIN/Address/Report Type**
- **You can not submit more than one report per email. Paper reports will not be accepted.**

BECOME A QPSI!

Qualified Parking Structure Inspector

- Minimum requirements
 - PE with 3 years experience
 - Provide us with samples of parking structure related work
 - Condition assessment reports
 - Repair or design drawings
- Will need to pass an interview with the Department – typically 1 hour long

THE QPSI INTERVIEW

What we're looking for

- Technical competence
- Understanding of regulatory requirements
- Both are equally important!

SUMMARY

- **New Code and Rule**
- **Report Filing Requirements - Sub-Cycles**
- **Challenges and concerns with Parking Structures**
 - Evaluate what different types of structures might be subject
- **Population – what types of parking structures are subject**
- **Code Requirements**
 - Classification: Safe, SREM, Unsafe
 - Condition Assessment
 - Physical examination
 - Different cases
 - Annual Observation checklist
- **How to File**



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