PORT AUTHORITY NY NJ

Structural, Architectural and Supplemental Accessibility Requirements

Presentation to Port Authority External TCAP Community

June 18, 2025

AIR LAND RAIL SEA

Agenda for the Structural, Architectural and SAR Review Process Webinar

June 18, 2025
External Webinar

1) Structural Engineering – Timothy Burkholder QAD-DSU
   I. Basic Information
   II. Submittal Package
   III. Review Process
   IV. Common Comments
   V. Keys to Success
2) Architectural Design – Michael Lodespoto QAD-DSU
   I. Architectural Review Process
   II. What, Why, How We Do It
   III. Review Process
   IV. Sample Review
   V. Code and Compliance Review
   VI. Keys to Success
3) Supplemental Accessibility Requirements – Russell Kriegel EADD
   I. Commitment to ADA
   II. History of “Above & Beyond”
   III. Background
   IV. Timeline
   V. Basis/Highlights
   VI. TCAP Issues
4) Questions

PORT AUTHORITY NY NJ

Structural Engineering Design Review

Port Authority Quality Assurance Division – Design Standard Unit

Timothy Burkholder – QAD-DSU

AIR LAND RAIL SEA

Agenda for Structural Engineering Design Review Process

June 18, 2025
External Webinar

1. Design Review - QAD DSU
    I. Basic Information
    II. Submittal Package
    III. Review Process
    IV. Common Comments
    V. Keys to Success
2. Questions

Basic Information

- Reviews performed by structural engineers of the Design Standards Unit (DSU) of the Quality Assurance Division (QAD) and when necessary, by structural engineers of the Engineering Architecture Design Division (EADD).

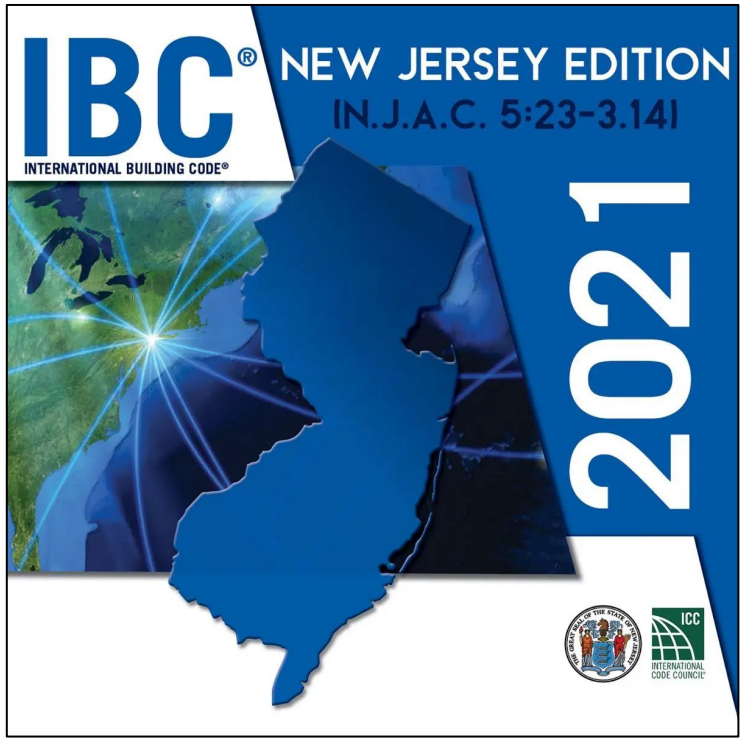
- Reviews are performed to verify that buildings and other structures are compliant with the current governing building code, referenced standards, and the Tennant Construction Review Manual (TCRM)

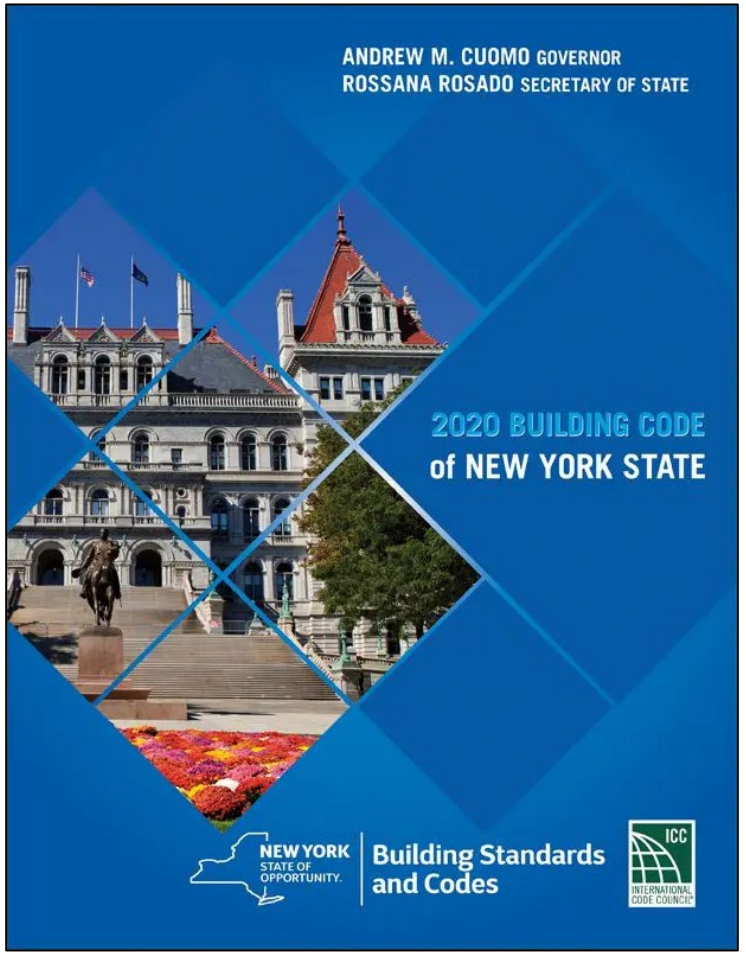
Basic Information

- Current codes are:
  - 2021 International Building Code, New Jersey Edition
  - 2020 Building Code of New York State based on IBC 2018
  - 2022 New York City Building Code based on IBC 2015
  - 2025 TCRM

Basic Information

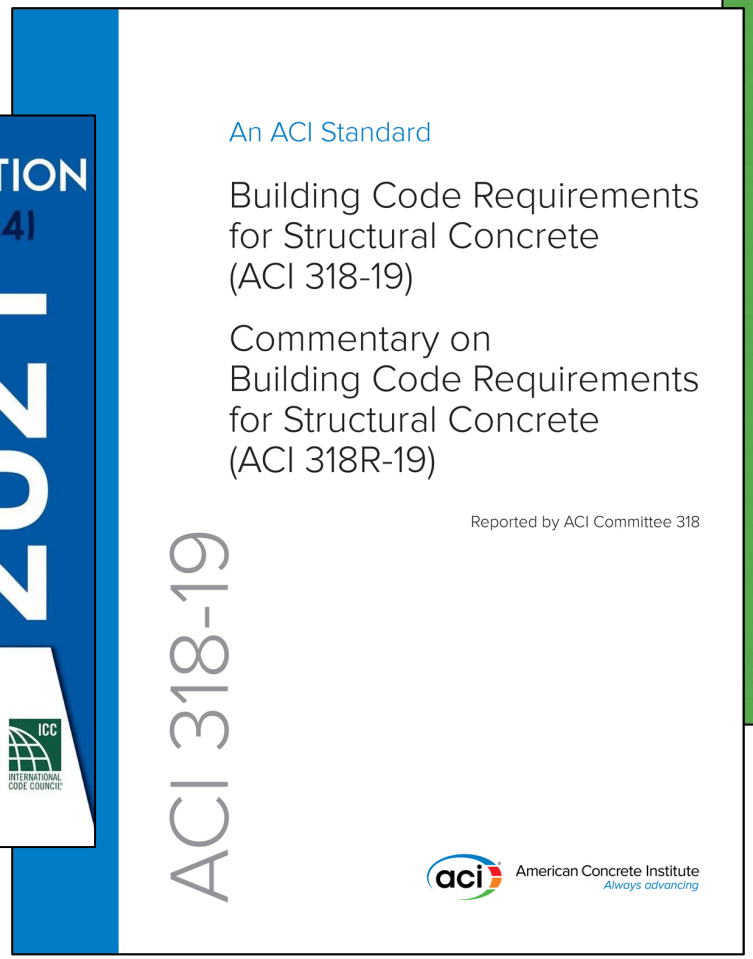
Current Building Codes

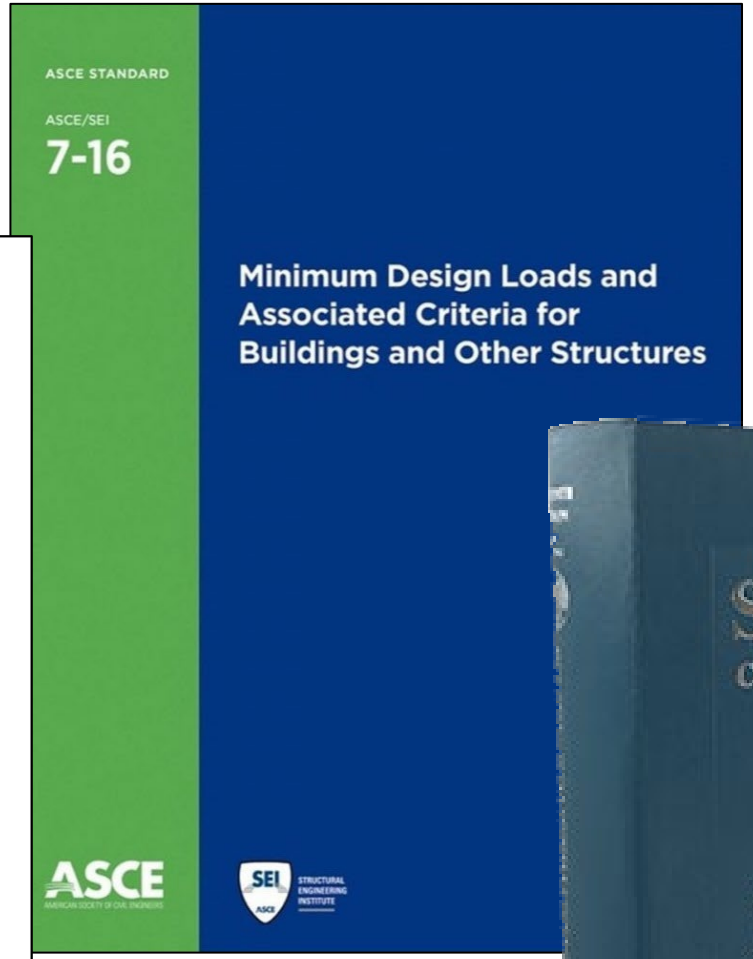


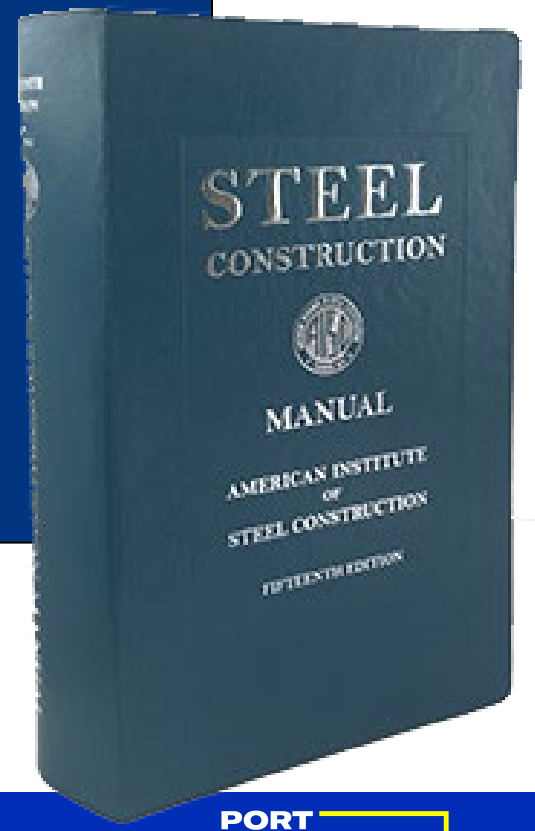


Basic Information

Referenced Standards







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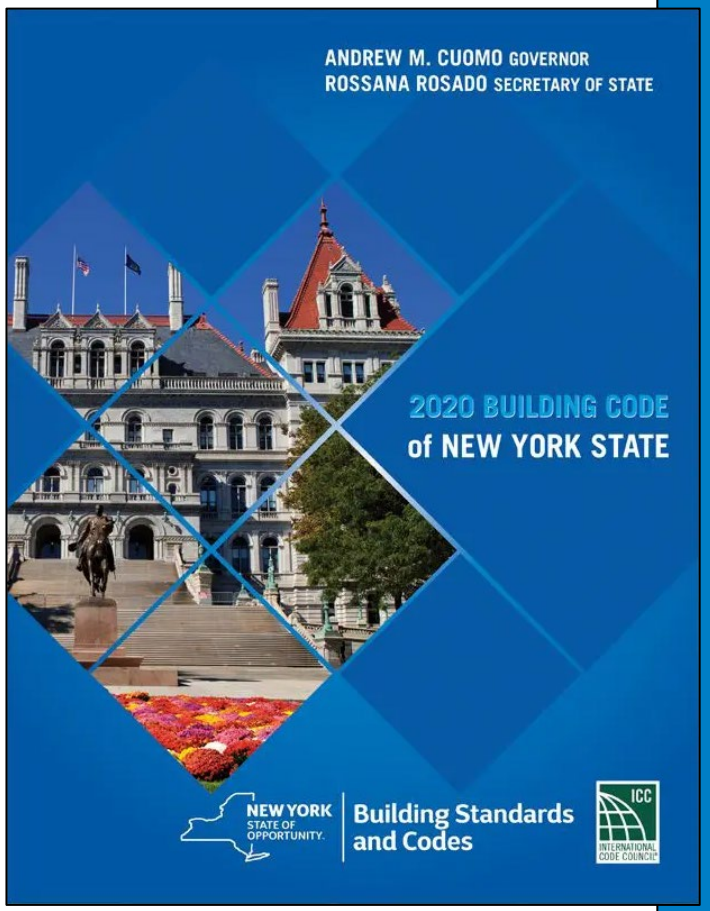
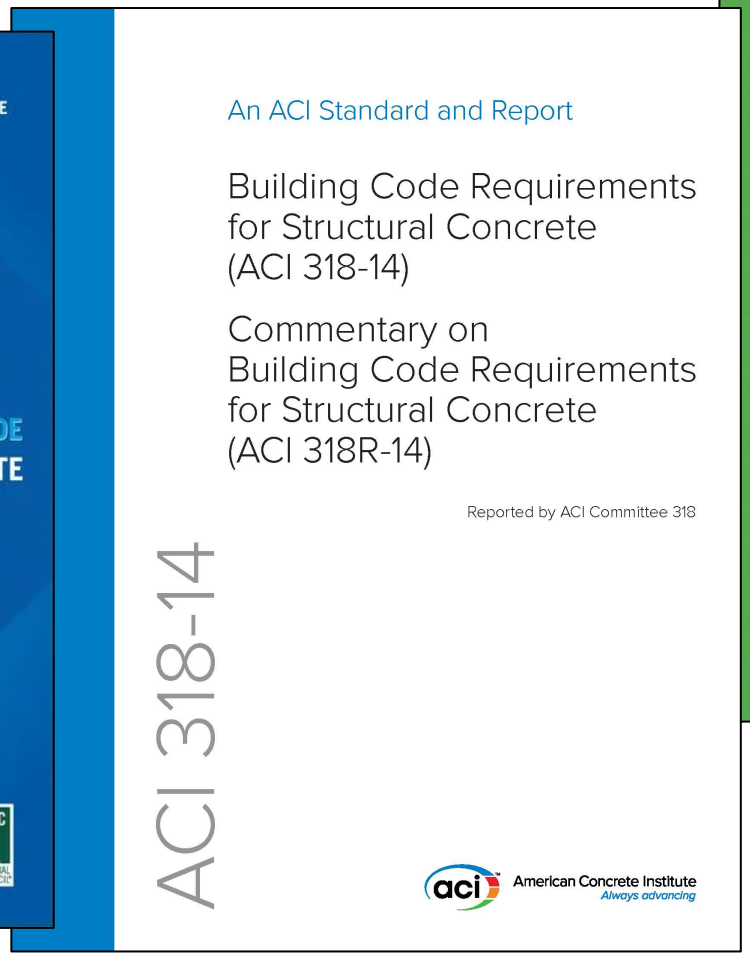
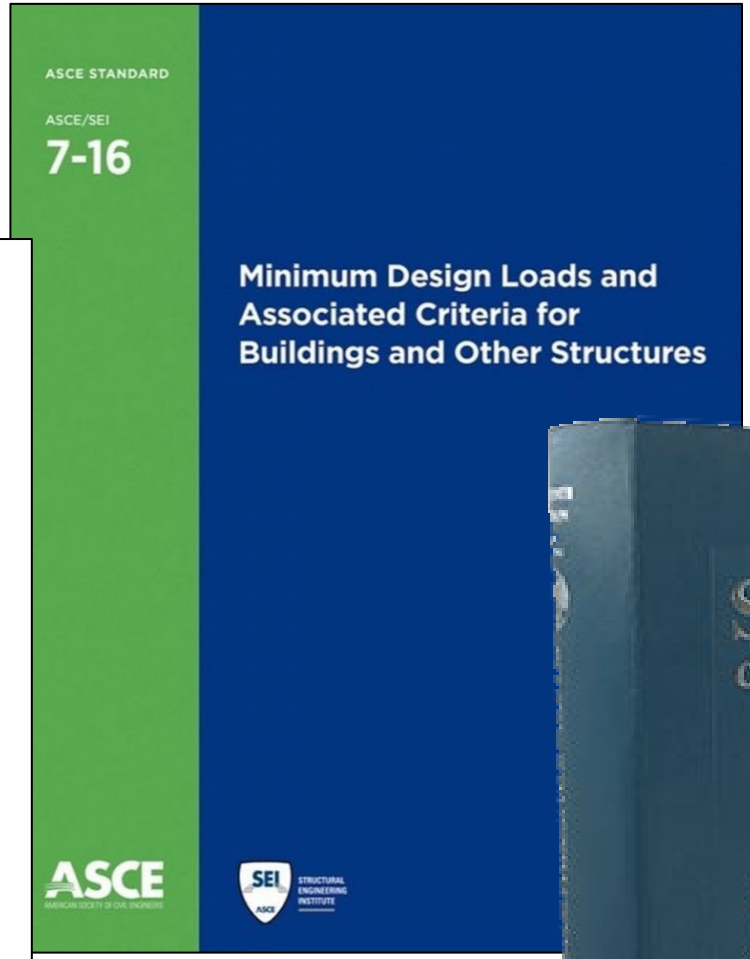
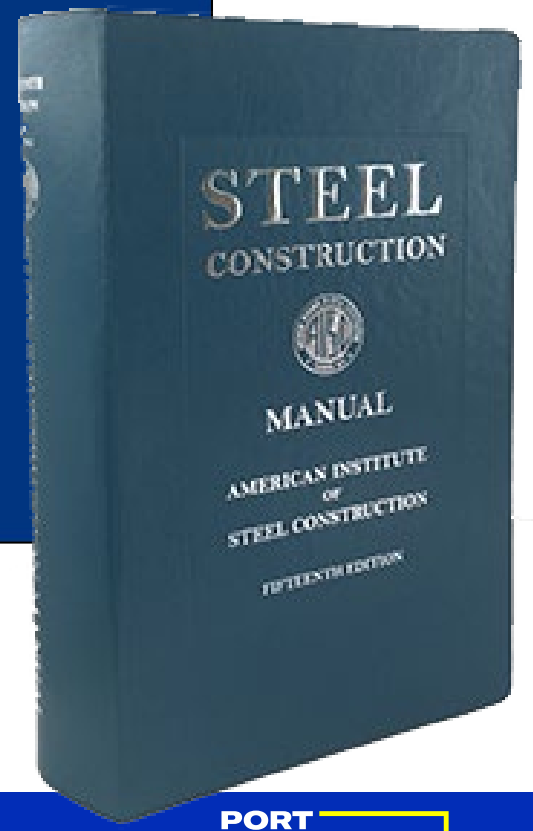
Basic Information

Referenced Standards









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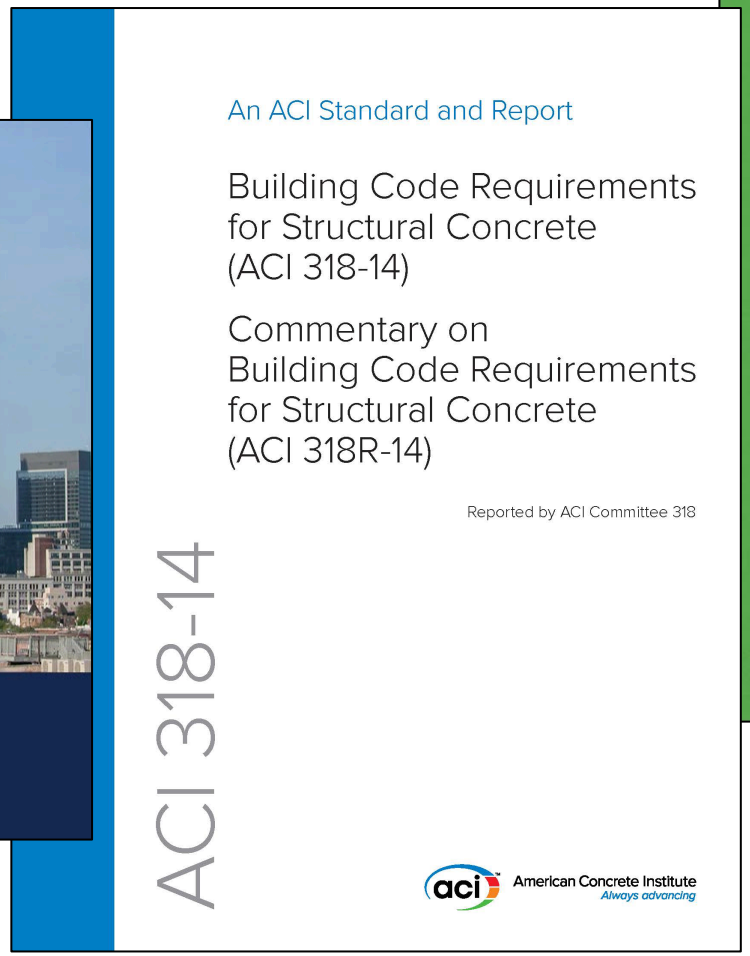
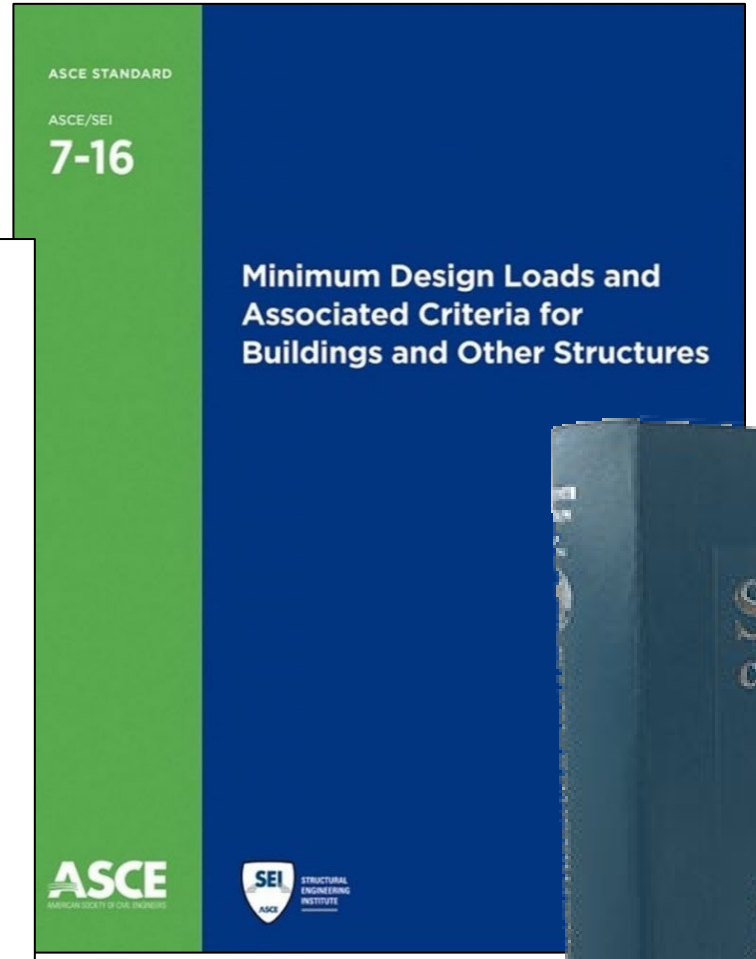
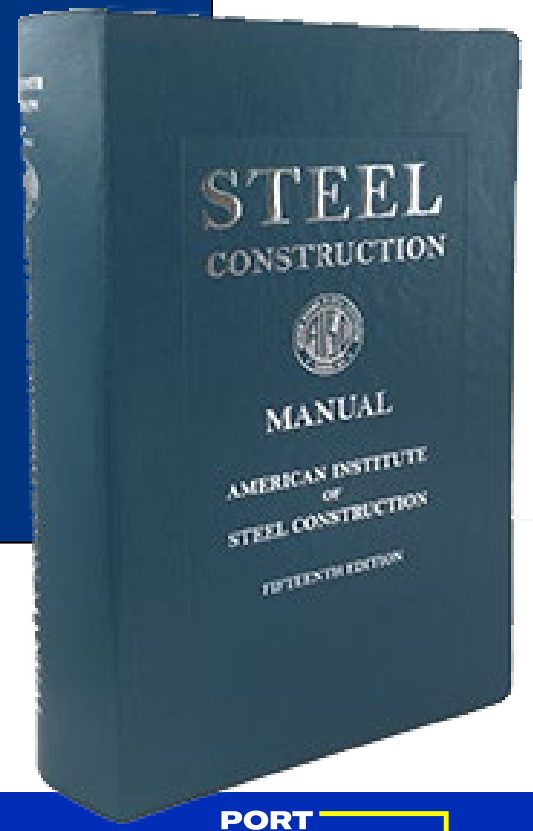
Basic Information

Referenced Standards







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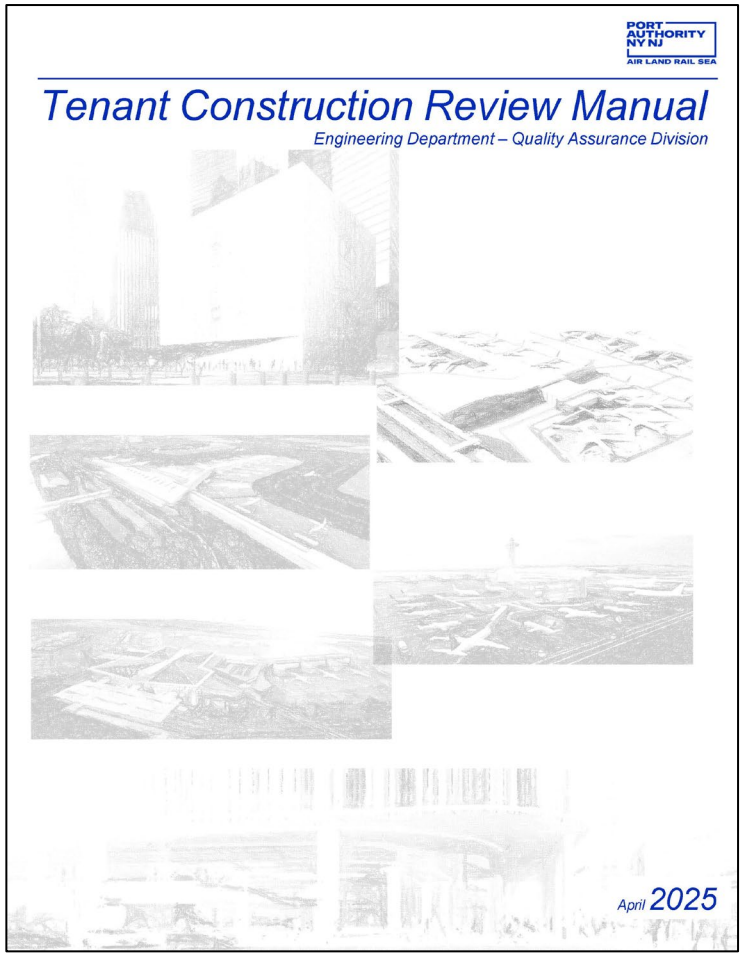
Basic Information

2025 TCRM



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Basic Information

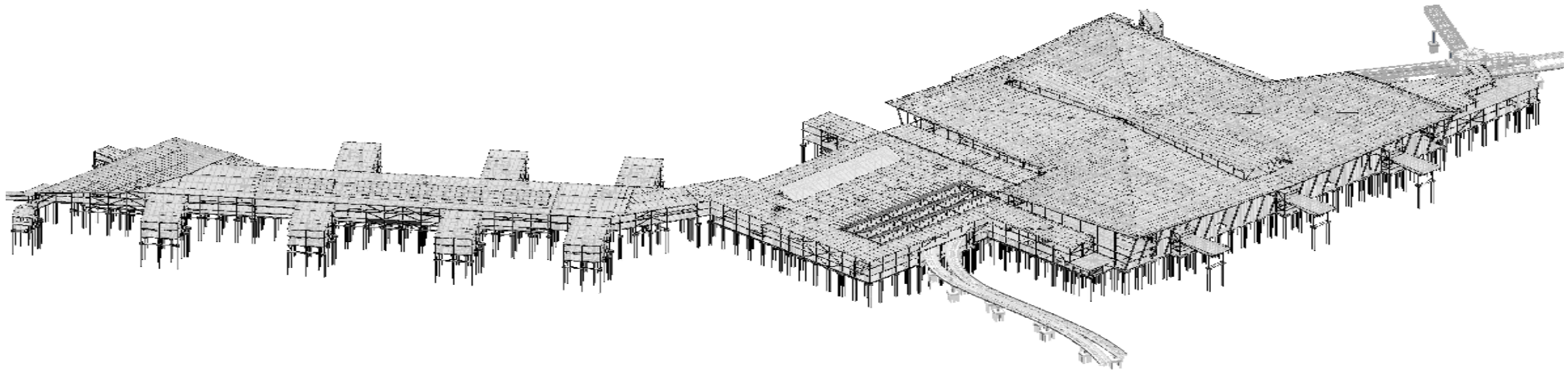
Documents Submitted for Review

- Tennant Alteration Applications (TAAs) are submitted for new construction, including building extensions, building demolitions, structural modifications for change of use, additions to existing base buildings to accommodate tenant requirements and for non-building structures (ex. marine facilities, solar installations).

- Documents may include at a minimum drawings, structural calculations, relevant reports, and technical specifications.

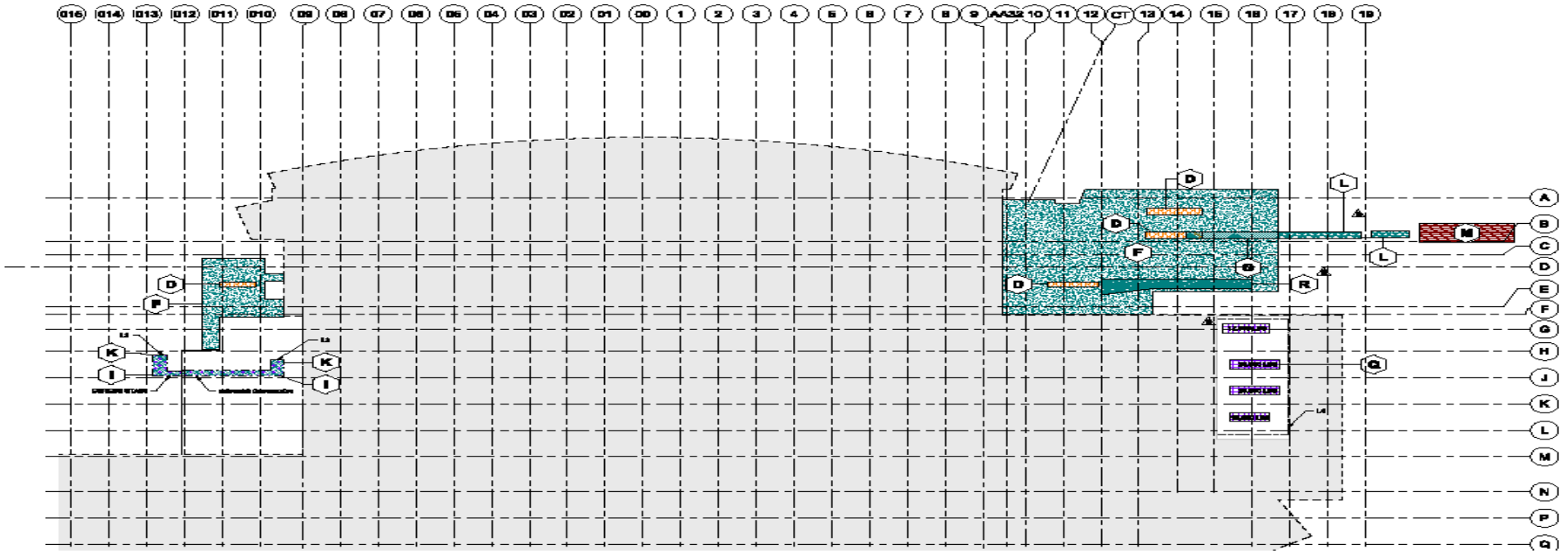
Basic Information

New Building



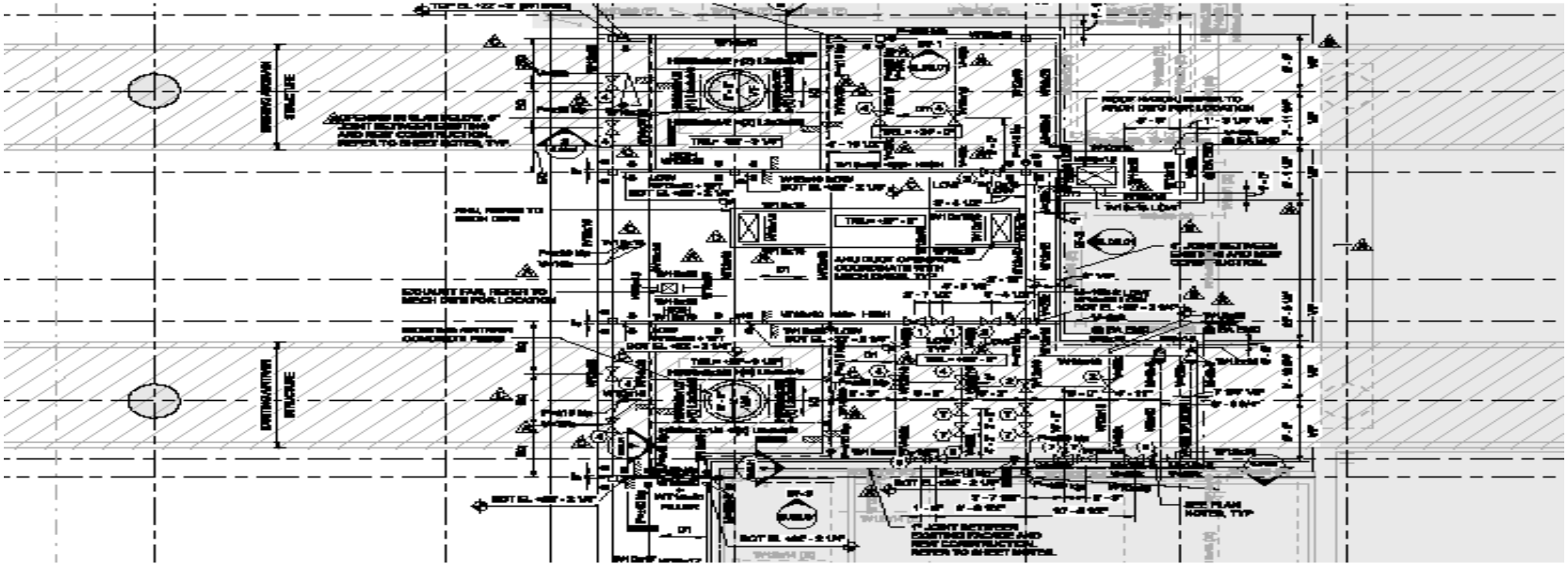
Basic Information

Extensions to Existing Building



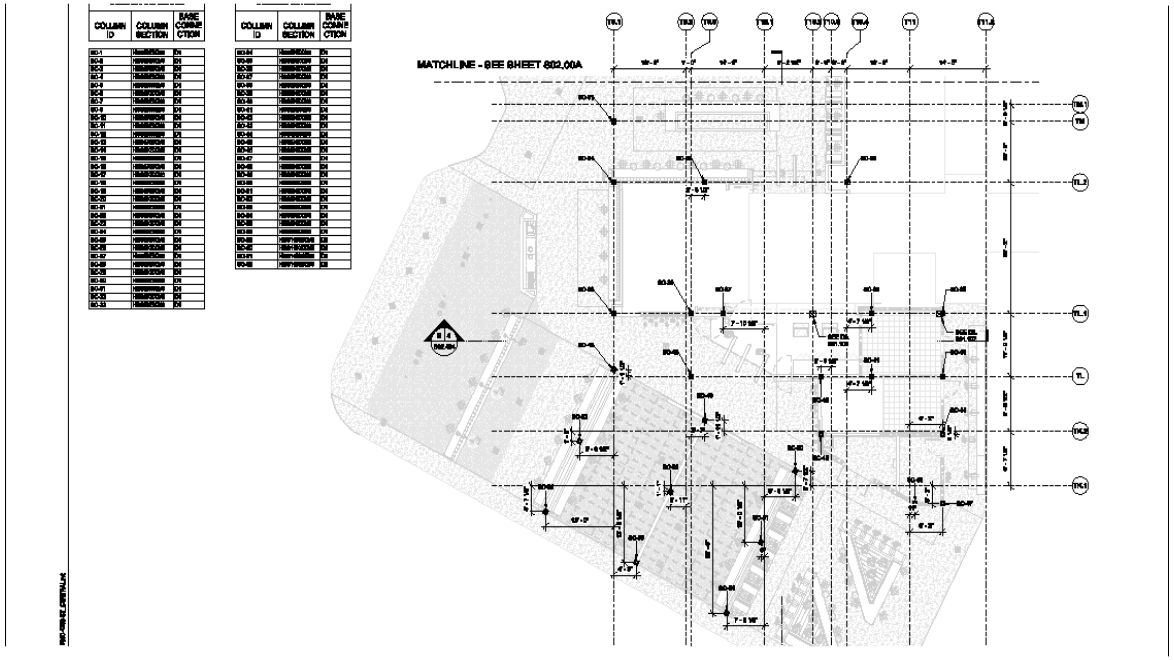
Basic Information

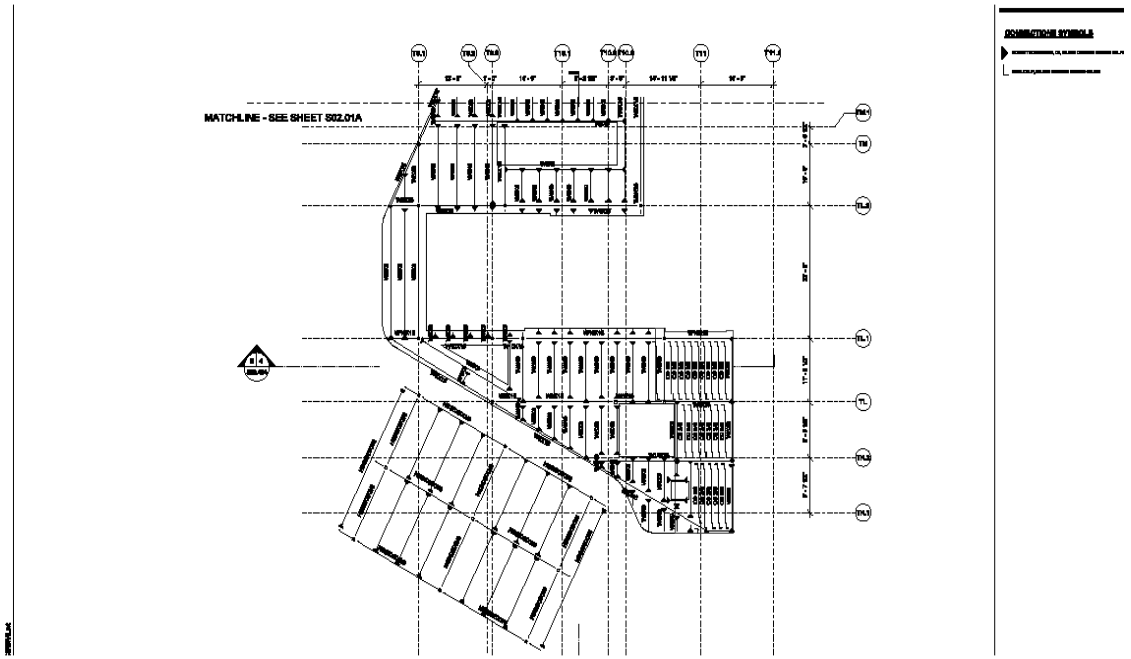
Extension Framing Plan



Basic Information

Structural Details – Tenant Fit Out – Framing Plan of Structure within Existing Building





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Submittal Package

- Provide documents necessary to demonstrate that the design submitted for review is code compliant and satisfies PA's project requirements.
- Indicate the applicable building code for the jurisdiction on the submittal documents, 2022 NYCBC (2015 IBC with NYC Amendments), 2021 IBC, New Jersey Edition or 2020 BCNYS (2018 IBC with NYS Amendments).
- List appropriate reference standards as noted in the building codes, e.g., ASCE 7-16, ACI 18 -19 or -14, AISC 360 - 16
- 2025 TCRM

Submittal Package

Checklist

- Drawings, Calculations, Reports, and Specification documents shall be signed and sealed by a licensed PE
- Provide applicable technical specifications.
- Show design criteria including wind and seismic parameters
- List required special inspections
- Verify structural drawings are fully dimensioned and all members called out
- Include column schedules with loads

Submittal Package

Checklist

- Verify with calculations that existing structure and foundation can safely support additional loads from new construction for renovations and additions. Note all assumptions made.

- Provide a narrative description of the structural system for gravity and lateral loads and foundation design. Include assumptions made and special features of the structure.

- Verify partition walls are adequate to resist horizontal loads or require bracing.

- Verify adequate support for mechanical equipment. Provide structural calculations for support of mechanical equipment exceeding 1,000 pounds.

- Provide seismic bracing for sprinkler piping systems in accordance with NFPA 13. ASCE 7-16, Section 13.6.7.2 stipulates no exceptions for sprinkler systems

Review Process

- QAD's primary function is to review for code compliance. In addition to the building codes the review also checks compliance with design standards and regulations referenced in the building code. These may include ASCE 7 for Minimum Design Criteria, ACI 318 for Concrete Design, AISC for Steel Design. Submissions are also reviewed for compliance with the general requirements of the TCRM.
- The goal of the review is to audit the design documents for compliance with code requirements and issue a recommendation for approval to construct without comments as soon as possible.
- Except for simple alteration projects it is not usual for the initial submittal to be a fully compliant set of documents.

Review Process

- The review is an audit, not a design check nor a value engineering exercise. The reviewer will generally follow a simple, but not rigid, check list. Depending on the size of the project not all items on the list will be applicable.
- There are four categories of documents that QAD reviews:
    - Calculations
    - Drawings
    - Reports
    - Specifications

Review Process

Calculations – Critical for the Review of the Structural Design.

Contents

Appendices

Review Process

Calculations – Reviewed for compliance with applicable codes and TCRM section 7.III.

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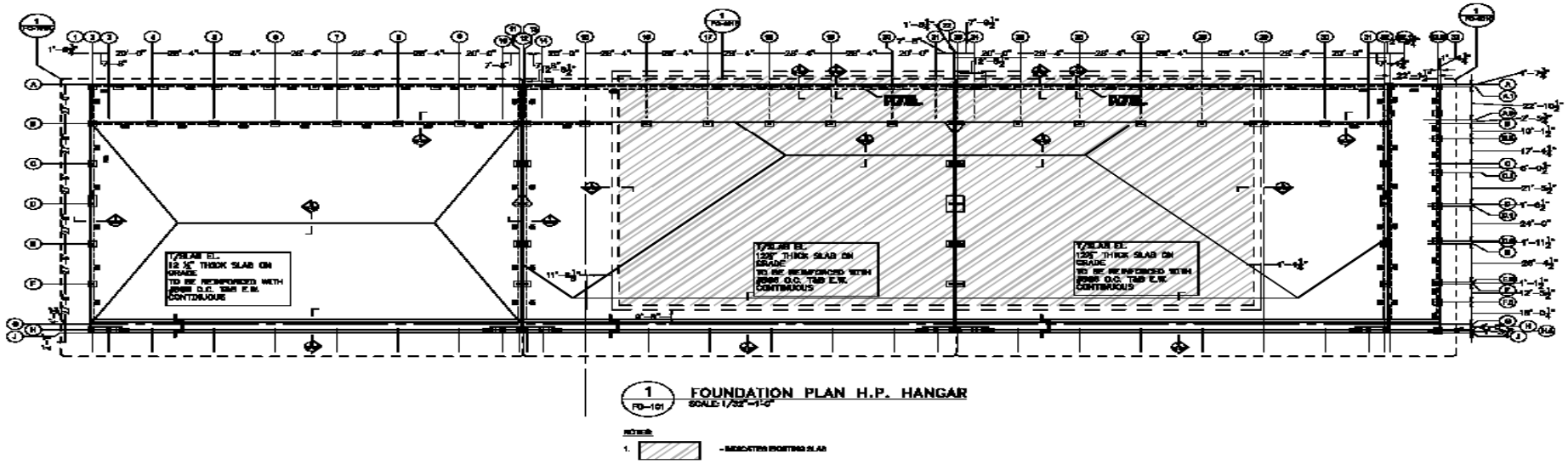
Review Process

Drawings - Illustrate structural scheme for resistance to gravity and lateral loads.



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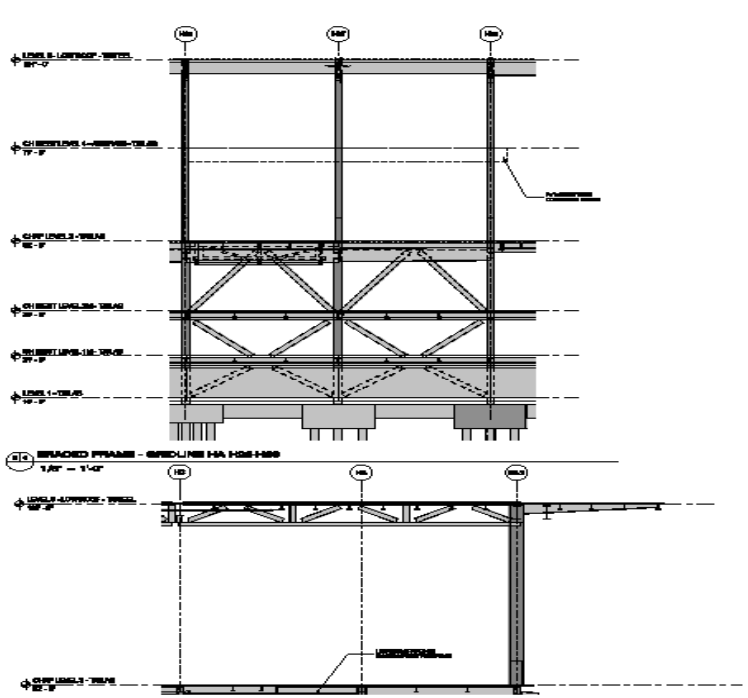
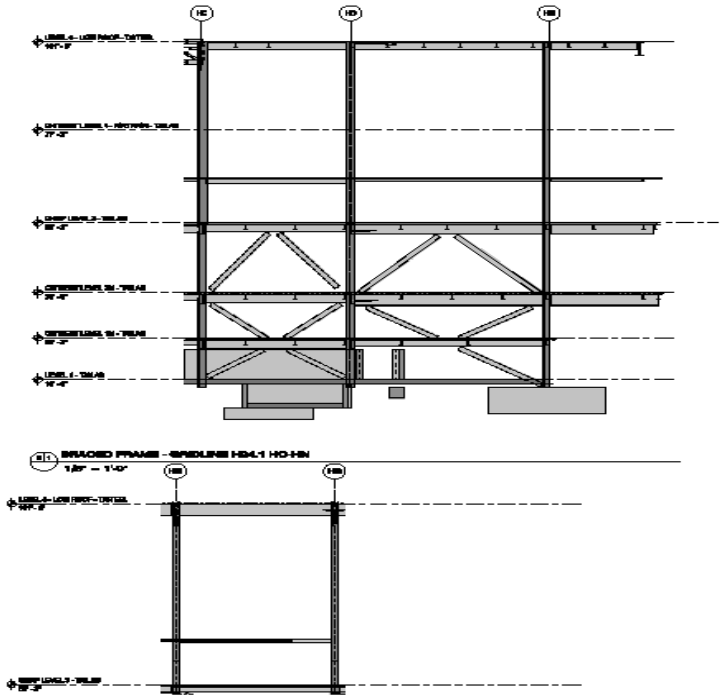
Review Process

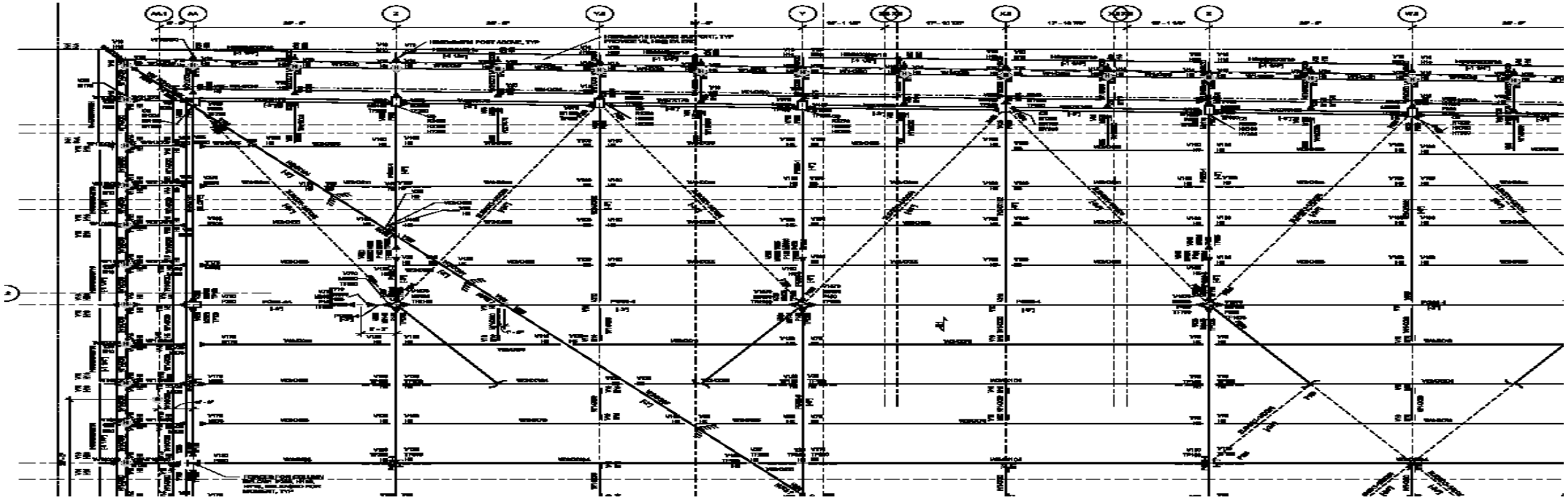
Drawings





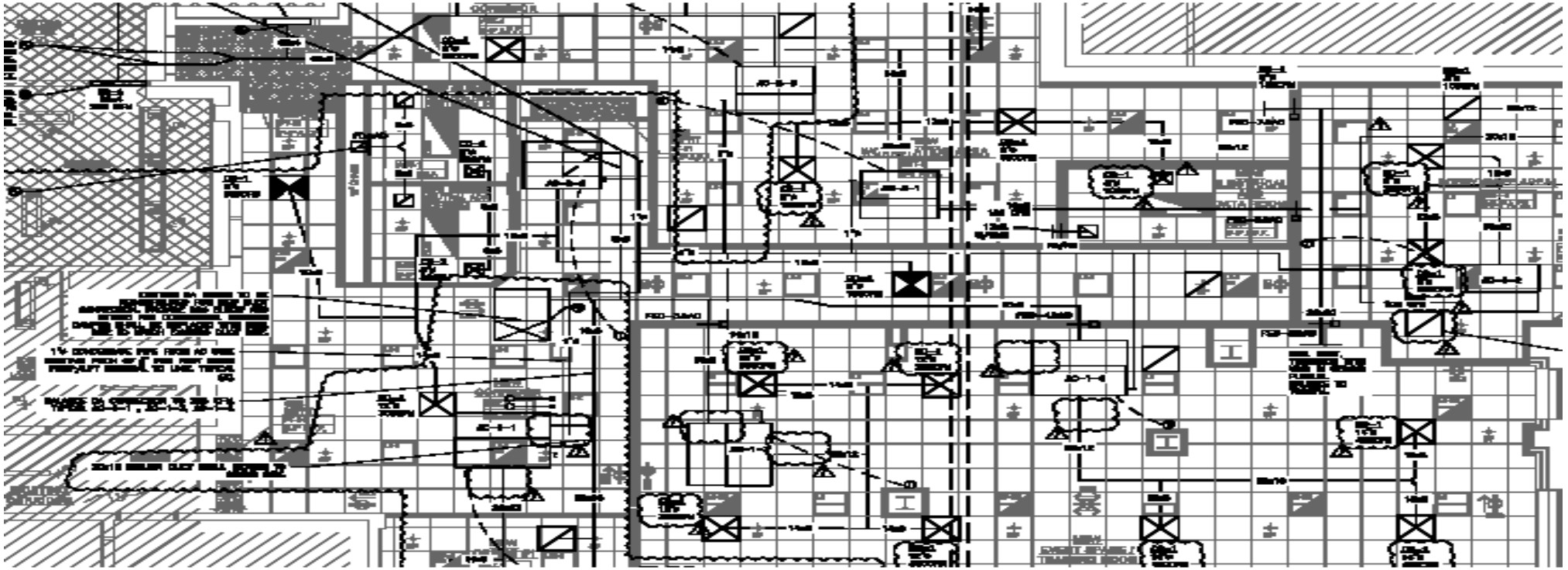
Review Process

Drawings – The building code requires structural drawings to be fully dimensioned and all members called out.



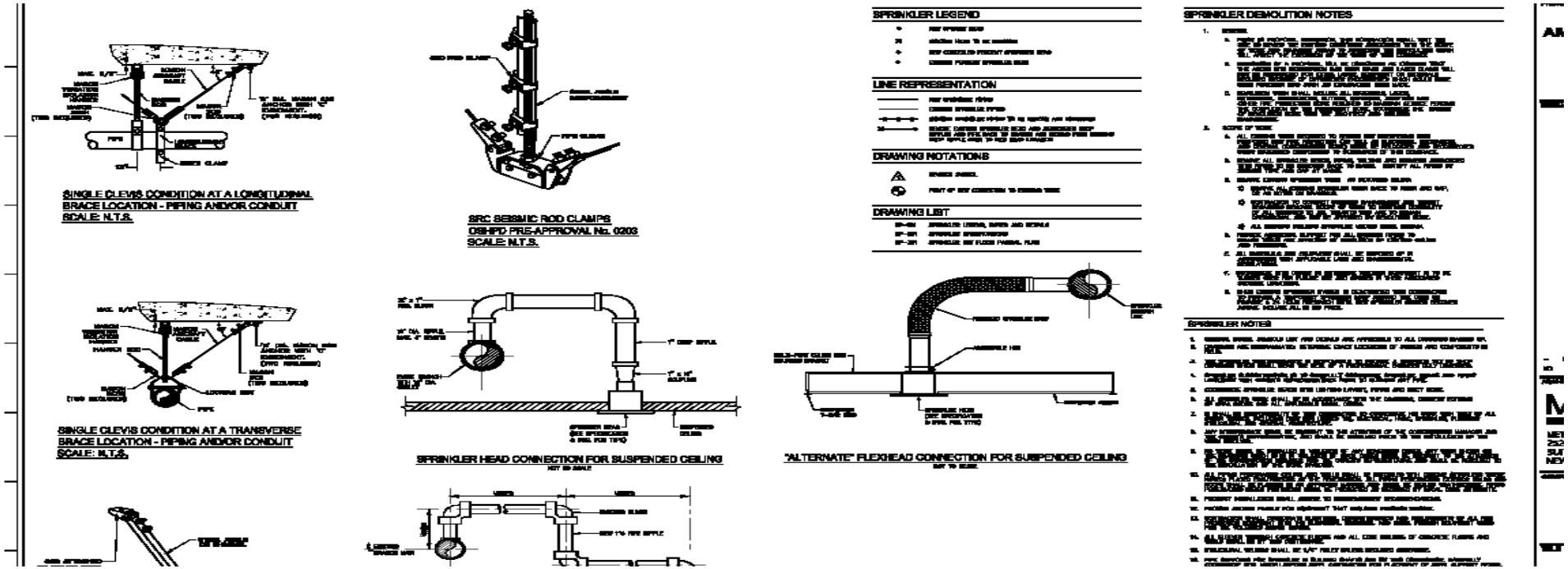
Review Process

Drawings – Structural review will include mechanical plans to verify that all equipment is properly supported.



Review Process

Drawings – Sprinkler systems are reviewed for inclusion of seismic bracing.



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Review Process

Reports – When required, reports are also reviewed for code compliance.

- Basis of Design Reports – reviewed for applicable codes and referenced standards, minimum design loads, and other design criteria
- Peer Review Reports – reviewed when required by code
- Geotechnical Reports – reviewed when required for design criteria of shallow and/or deep foundations
- Wind Tunnel Reports – reviewed when required for wind load design criteria

Review Process

Technical Specifications – Specifications are reviewed for compliance with codes and referenced standards.

2.01 MATERIALS

A. Reinforcing Bars

1. Carbon steel reinforcing bars: ASTM A 615 (AASHTO M 31), deformed, Grade 60, unless otherwise shown on the Contract Drawings. Use ASTM A 706 where welding of reinforcement is required.
2. Coated carbon steel reinforcing bars, where shown on the Contract Drawings, shall also comply with the following:
   a. Galvanized Reinforcing Bars
      (1) ASTM A 767, Class I hot-dip galvanized after fabrication and bending. Repair sheared and cut ends and damaged coating with a zinc-rich formulation conforming to ASTM A 767 and in accordance with the material manufacturer's written recommendations. Spray-on coating products will not be permitted. Any reinforcing bars with damaged coating that has not been repaired to the satisfaction of the Engineer shall be removed from the site. The maximum amount of repaired damaged coating shall not exceed 1 percent of the total surface area in any linear foot of the reinforcing bar. This limit does not include sheared or cut ends that are coated with repair material. If the damage to the coating exceeds 1 percent of the total surface area in any linear foot of the reinforcing bar, the reinforcing bar shall be removed from the site.
      (2) Reinforcing bars bent before galvanizing shall be in accordance with the minimum finished bend diameters specified in Table 2 of ASTM A 767 except as specified below:
         (a.) When bending reinforcing bar sizes No. 7 through No. 11 inclusive, increase the minimum bend radius measured to the inside face of the bend to 4.5 times the bar diameter.
         (b.) When bending reinforcing bar sizes No. 14 and No. 18, increase the bend radius to 5.5 times the bar diameter.
   b. Epoxy-coated Reinforcing Bars

      ASTM A 775. Repair sheared and cut ends and damaged coating with an epoxy patching material conforming to ASTM A 775 and in accordance with the patching material manufacturer's written recommendations. Spray-on coating products will not be permitted. Any reinforcing bars with damaged coating that has not been repaired to the satisfaction of the Engineer shall be removed from the site. The maximum amount of repaired damaged coating shall not exceed 1 percent of the total surface area in any linear foot of the reinforcing bar. This limit does not include sheared or cut ends that are coated with patching material. If the damage to the coating exceeds 1 percent of the total surface area in any linear foot of the reinforcing bar, the reinforcing bar shall be removed from the site.

B. Welded Wire Fabric

Types shall be as shown on the Contract Drawings and shall comply with the following:

1. Plain: ASTM A 1064 (AASHTO M 336), flat sheets for size W5 and larger and coiled rolls for sizes below W5.
2. Deformed: ASTM A 1064 (AASHTO M 336), flat sheets for sizes D5 and larger and coiled rolls for sizes below D5.
3. Welded wire fabric shall be compatible with other reinforcing steel with which it may come into contact.

C. Welded Steel Bar Mats

Where welded steel bar mats are shown on the Contract Drawings, they shall be in accordance with ASTM A 184 and as specified below:

1. Bar grade, size and spacing shall be as shown on the Contract Drawings.
2. Connections shall be welded as shown on the Contract Drawings.
3. Welded steel bar mats shall be compatible with other reinforcing steel with which it may come into contact.

D. Steel Wire

Steel wire shall comply with ASTM A 1064 (AASHTO M 336), plain finish unless otherwise shown on the Contract Drawings. Steel wire shall be compatible with other reinforcing steel with which it may come into contact.

E. Mechanical Couplers for Reinforcing Bar Splices

1. Where mechanical couplers are shown on the Contract Drawings, use mechanical couplers for reinforcing bar splices.
2. Splices made by mechanical couplers shall be Type I (Service Splice), unless otherwise shown on the Contract Drawings as Type II (Ultimate Butt Splice).
3. Type I splices shall develop a minimum tensile strength of 125 percent of the yield strength of the reinforcing bar.
4. Mechanical couplers shall be tested in accordance with ASTM A 1034, "Monocylic Tensile Test".
5. For Type II splices, submit a test report documenting the performance of the sample splice and the control bar for each bar size.

Common Comments

Buildings - Calculations

- Provide a narrative of the structural system(s) and sufficient calculations to demonstrate the stability of the structure with applied gravity and lateral loads.
- Detailed computer printouts, often thousands of pages for larger projects, should be submitted as an appendix to be reviewed if necessary for verification of the design of specific members.
- The building code identifies the categories of buildings for which an independent Structural Peer Review is required to confirm that the design is in general compliance with the code. A Key Element Analysis may also be required if a single element supports more than 15% of the building area.

Common Comments

Calculations – Table of Contents

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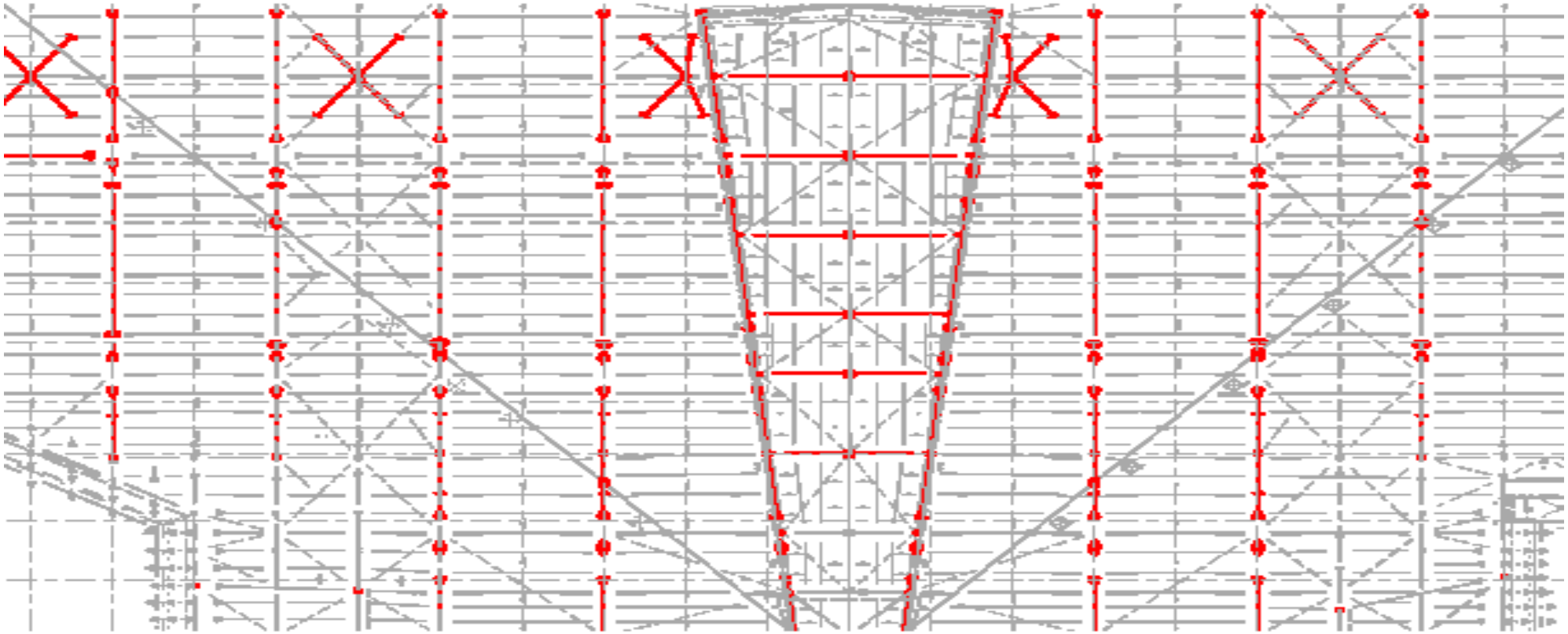
Common Comments

Calculations – Identify building elements in a Key Plan.



Common Comments

Structural Drawings

- The drawings shall show the fully dimensioned complete structural scheme. All structural members shall be identified in the structural system supporting the gravity and lateral loads.

- The drawings shall include

  design loads, the geotechnical information, and required special inspections.

- The foundation details shall include

  Shallow footings shall include frost depth protection.

  Deep foundations shall include pile type, capacity, and length.

Common Comments

Building – Structural Drawings – General Notes

STRUCTURAL NOTES:

DESIGN CODES AND STANDARDS

2022 EDITION OF THE NEW YORK CITY BUILDING CODE
ASCE/SEI 7-16: MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES WITH SUPPLEMENT NO.1
ACI318-14: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE INCLUDING CHAPTER 17 FOR POST-INSTALLED ANCHORS.
AISI S100-16: NORTH AMERICAN SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS

DESIGN LOADS

DESIGN DEAD LOADS — WEIGHT OF BUILDING MATERIALS

DESIGN LIVE LOADS, PER NYC BUILDING CODE REQUIREMENTS, ARE AS FOLLOWS:

RETAIL AREAS	100 PSF
INTERIOR WIND PRESSURE	5 PSF

STRUCTURAL STEEL

STEEL WIDE FLANGE (WF) SECTIONS SHALL CONFORM TO ASTM A992 (FY = 50 KSI).

TUBE STEEL HOLLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO ASTM A500, GRADE B (FY = 46 KSI).

STEEL ANGLES AND PLATES SHALL CONFORM TO ASTM A36 (FY=36 KSI)

WELDING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STRUCTURAL WELDING CODE, AWS D1.1, LATEST EDITION AND THE AISC SPECIFICATIONS, LATEST EDITION. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS ONLY. WELDING ELECTRODES SHALL BE E70 SERIES UNLESS NOTED OTHERWISE.

PROVIDE 3/16" WELDED END PLATES WITH 3/16" CONTINUOUS WELD ON EACH END OF ALL HSS MEMBERS, TYPICAL UNLESS NOTED OTHERWISE. CAP PLATES MAY BE FIELD INSTALLED TO FACILITATE INSTALLATION OF REQUIRED UTILITIES.

OPENINGS THROUGH BEAMS AND COLUMNS SHALL NOT BE PERMITTED UNLESS APPROVED BY THE STRUCTURAL ENGINEER.

ALL STRUCTURAL STEEL DESIGN, FABRICATION, AND ERECTION SHALL COMPLY WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STEEL ERECTION STANDARD.

COLD-FORMED LIGHT GAGE FRAMING

DESIGN OF COLD-FORMED LIGHT GAGE STEEL FRAMING MEMBERS SHALL CONFORM TO AISI SPECIFICATIONS FOR DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE DESIGN AND DETAILING OF ALL STRUCTURAL MEMBERS AND CONNECTIONS IN CONFORMANCE WITH THE GENERAL LAYOUT, PROPERTIES AND BASIC MEMBER SIZES SPECIFIED. CONTRACTOR SHALL ENGAGE A QUALIFIED PROFESSIONAL ENGINEER EXPERIENCED IN DESIGN OF THIS WORK AND LICENSED IN THE STATE OF THE PROJECT TO PREPARE SIGNED AND SEALED DESIGN CALCULATIONS, SHOP DRAWINGS, AND OTHER STRUCTURAL DATA.

STRUCTURAL STUD, JOIST BRIDGING AND ACCESSORIES SHALL HAVE A MINIMUM YIELD STRENGTH OF 50,000 PSI FOR 16 GAGE AND THICKER MATERIALS, AND 33,000 PSI FOR MATERIALS THINNER THAN 16 GAGE. STRUCTURAL STUDS SHALL HAVE 1 5/8" MINIMUM WIDTH FLANGES TYPICALLY, UNLESS NOTED OTHERWISE.

PRIOR TO STARTING FABRICATION OF FRAMING, THE CONTRACTOR SHALL SUBMIT THE ABOVE REFERENCED FABRICATION AND ERECTION DRAWINGS AND CALCULATIONS TO THE ARCHITECT FOR OWNER'S RECORD AND FOR REVIEW OF DESIGN CRITERIA ONLY.

FRAMING COMPONENTS MAY BE PRE-ASSEMBLED INTO PANELS PRIOR TO INSTALLATION. PROVIDE THAT PANELS ARE SQUARE AND BRACED AGAINST RACKING. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS, OR AS REQUIRED FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS. MEMBERS SHALL BE HELD POSITIVELY IN PLACE UNTIL PROPERLY FASTENED. HANDLING AND LIFTING OF PREFABRICATED PANELS SHALL BE DONE IN A MANNER AS TO NOT CAUSE DISTORTION IN ANY MEMBER.

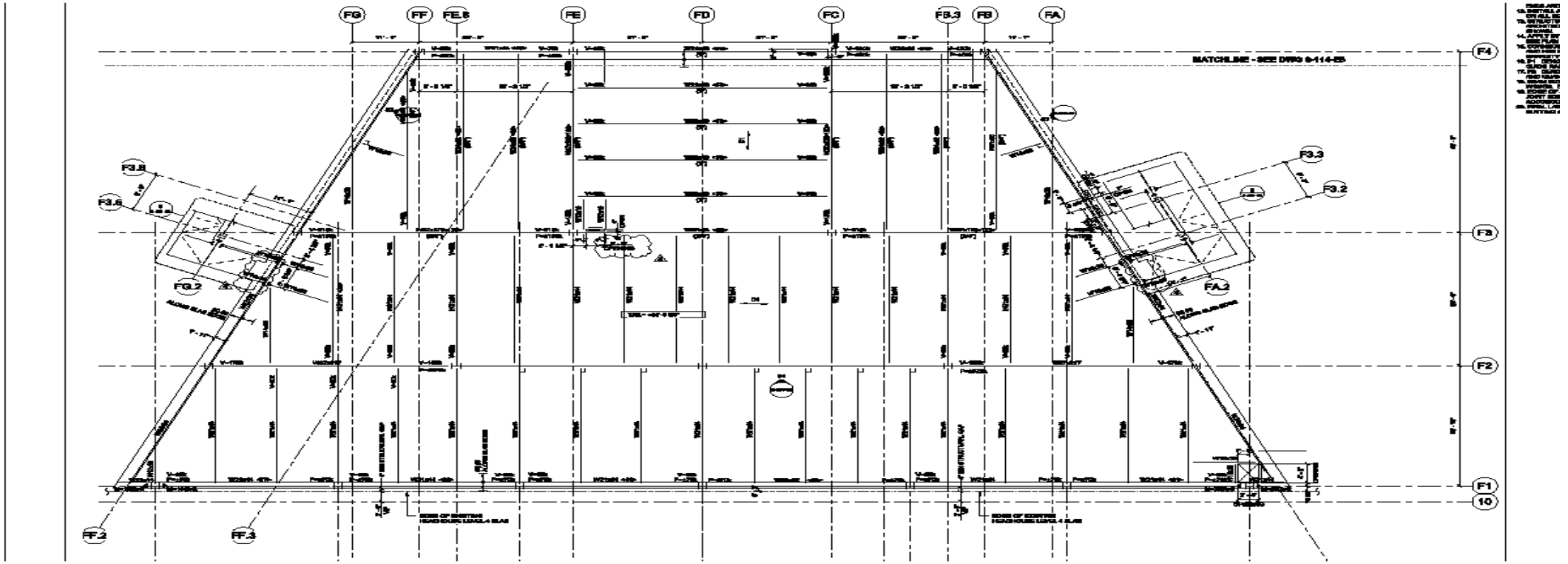
TRACKS SHALL BE SECURELY ANCHORED TO THE SUPPORTING STRUCTURE. AT TRACK BUTT JOINTS, ABUTTING PIECES OF TRACK SHALL BE SECURELY ANCHORED TO A COMMON STRUCTURAL ELEMENT, OR THEY SHALL BE BUTT-WELDED OR SPLICED TOGETHER. STUDS SHALL BE PLUMBED, ALIGNED AND SECURELY ATTACHED TO THE FLANGES OR WEBS OF BOTH UPPER AND LOWER TRACKS. PROVIDE DEFLECTION TRACKS BETWEEN FRAMING AND BRACING AS REQUIRED TO PREVENT LOAD TRANSFER TO BRACING.

TEMPORARY BRACING SHALL BE PROVIDED UNTIL ERECTION IS COMPLETED. WALL STUD BRIDGING SHALL BE INSTALLED IN A MANNER AS TO PREVENT ROTATION AND ALSO IN A MANNER TO PROVIDE RESISTANCE TO BOTH MINOR AXIS BENDING AND ROTATION. BRIDGING ROWS SHALL BE EQUALLY SPACED NOT TO EXCEED 3'-4" ON-CENTER. DESIGN AND INSTALL BRACING AS REQUIRED FOR FRAME STABILITY AGAINST WIND LOADS. UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS, ADDITIONAL STUDS SHALL BE POSITIONED TO RESIST THE VERTICAL COMPONENTS AS INDICATED ON PLANS. SPLICES IN AXIALLY LOADED STUDS SHALL NOT BE PERMITTED. MAXIMUM DEFLECTION OF STUDS SHALL BE L/360.

WELDING OF ALL FRAMING SHALL BE IN ACCORDANCE WITH AWS AND SHALL BE PERFORMED BY CERTIFIED WELDERS ONLY.

Common Comments

Building – Structural Drawings – Fully dimensioned framing plans with all members identified



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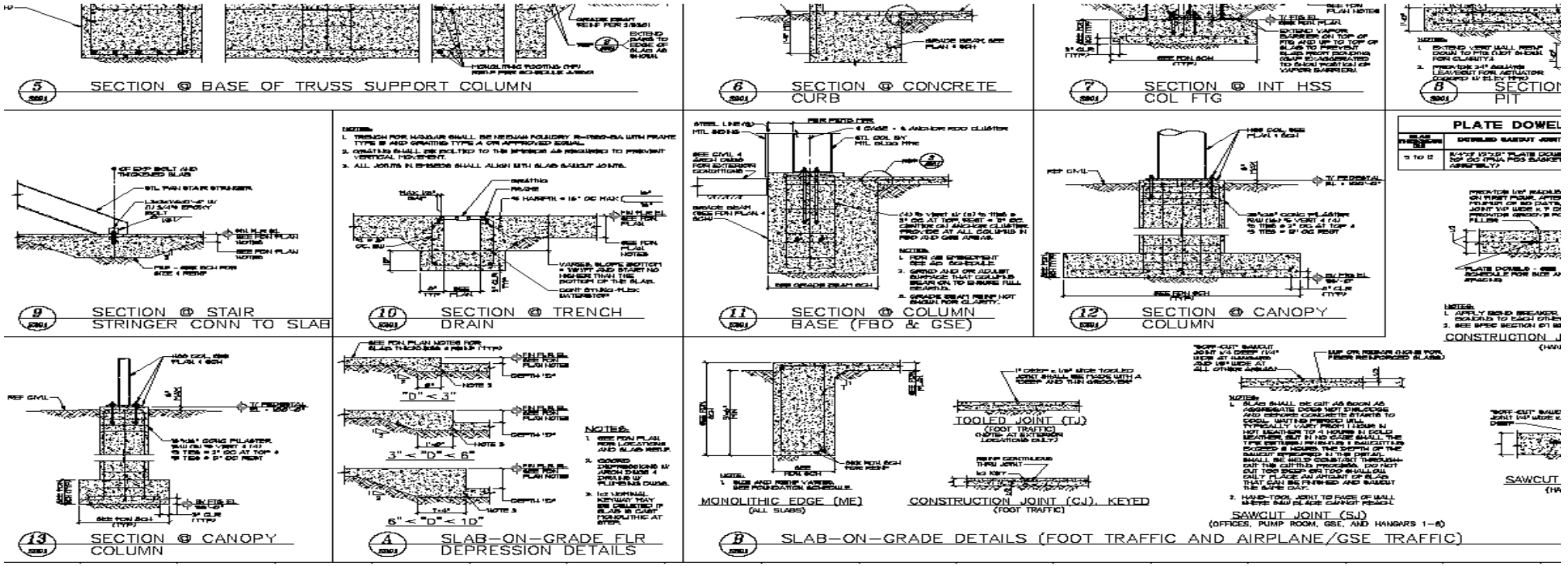
Common Comments

Buildings – Foundations – Shallow footings



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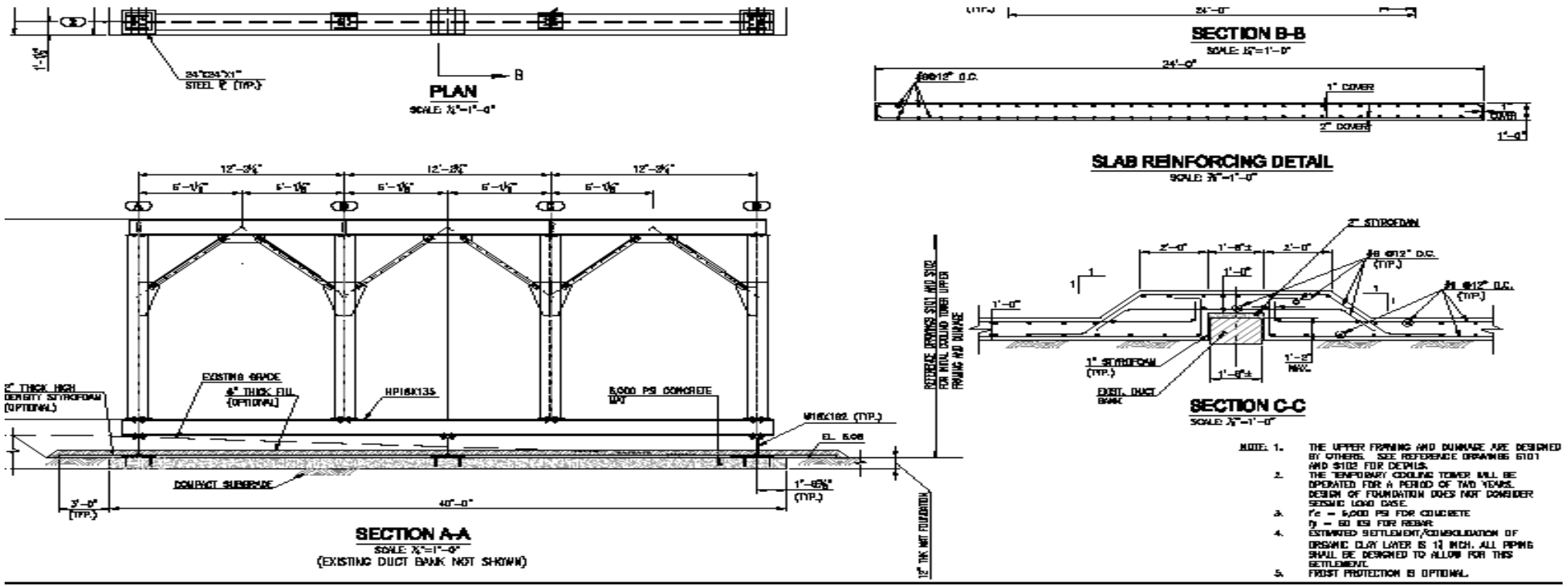
Common Comments

Buildings – Foundations – Shallow footings



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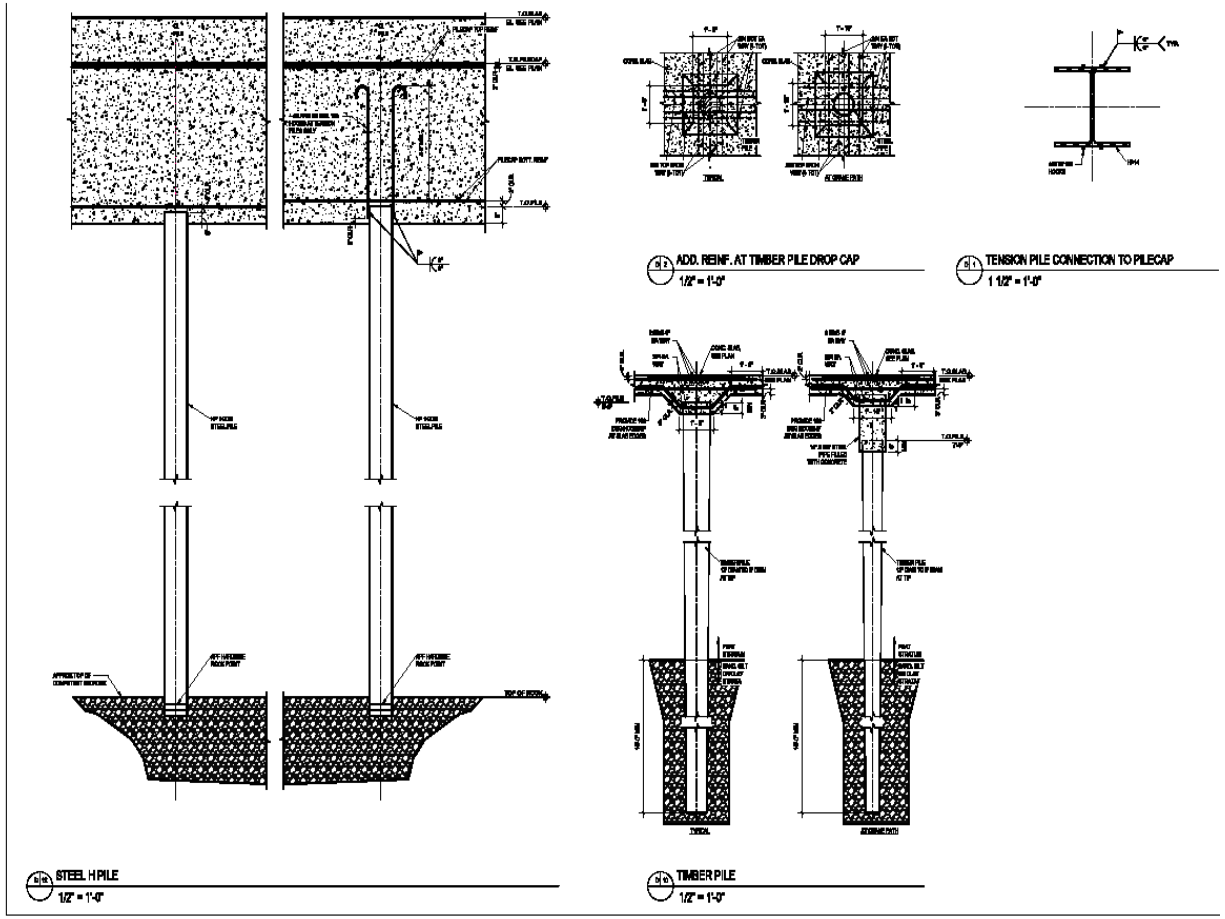
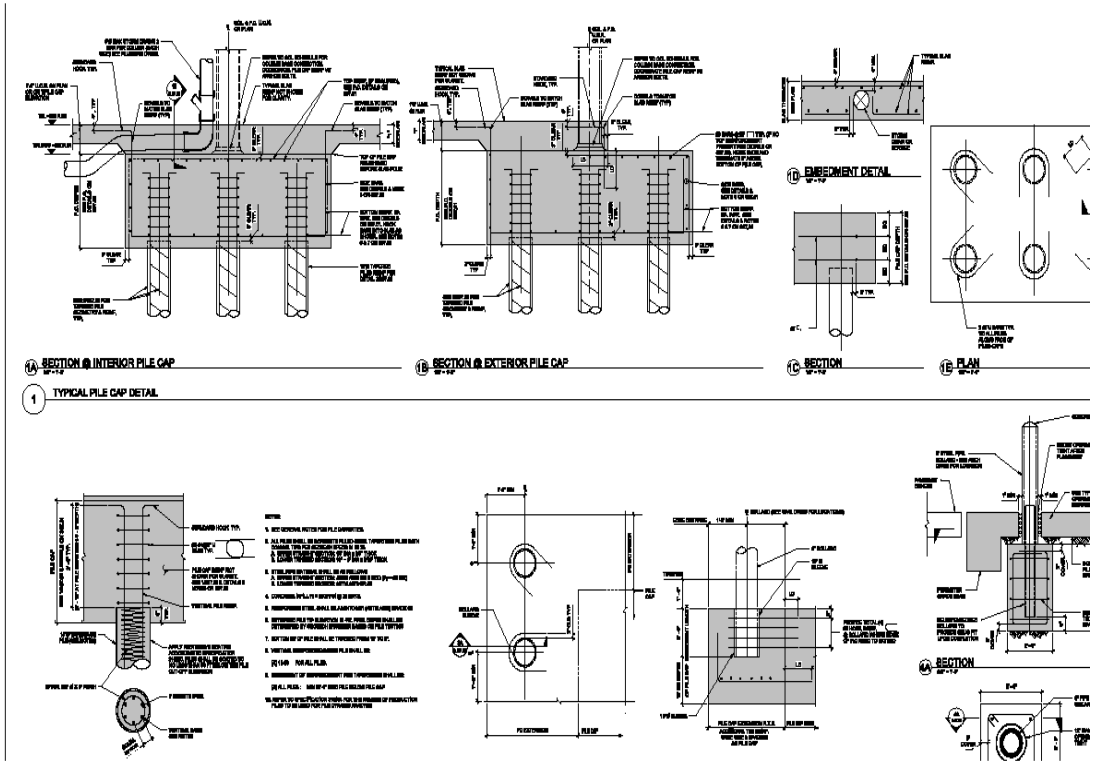
Common Comments

Buildings – Foundations – Deep footings





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Common Comments

Buildings – Alterations to Existing Structure

- Mechanical Equipment: Indicate on the drawings the support of mechanical equipment and provide structural calculations for additional load on existing structure.

- Alteration of Existing Slab: Slab cuts, core drilling, trenching must be indicated on the structural drawings. Provide calculations for any required reinforcement of existing structure.

Common Comments

Buildings – Nonstructural Components

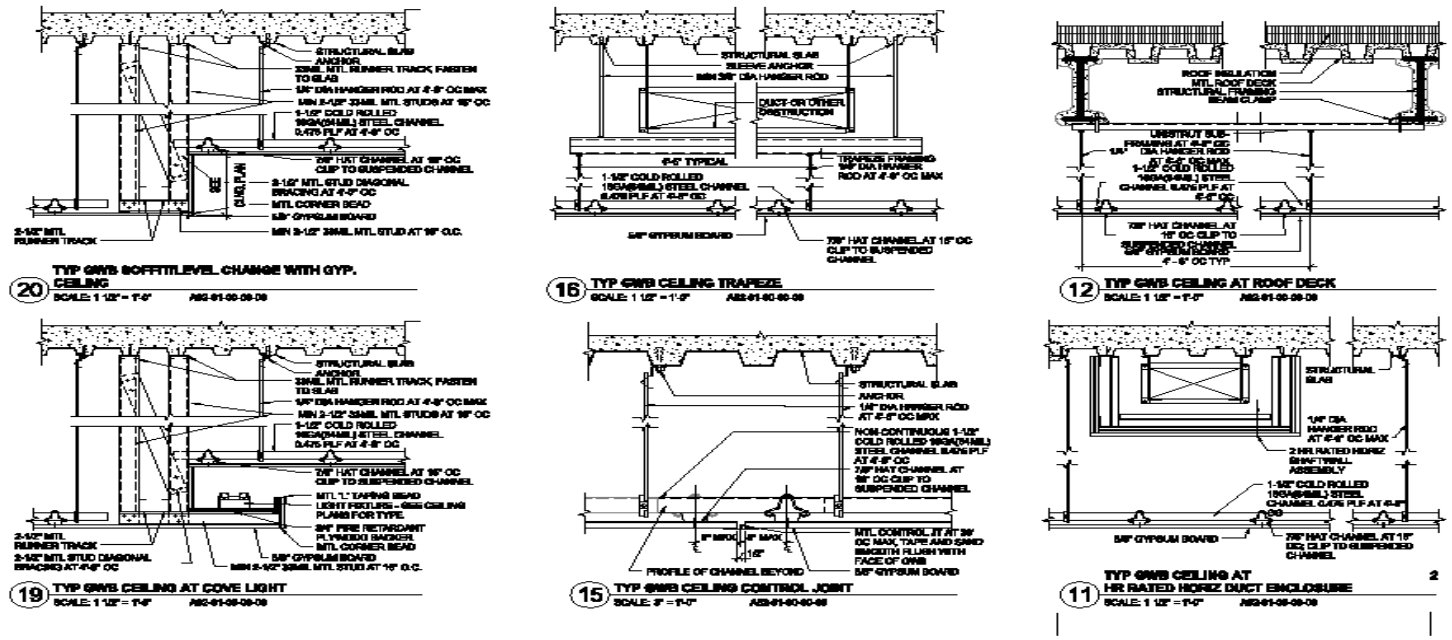
- Ceiling Systems: The NYCBC and the TCRM addresses the installation of acoustical ceiling systems. Drawings are reviewed for compliance.

- Partitions: In buildings subject to seismic loads partitions are required to be laterally braced to the building structure (not supported by the ceiling).

- Sprinkler Systems: Sprinklers are part of the life safety infrastructure of the building and for buildings subject to seismic loads the sprinkler system is required to be laterally braced to the building structure.

Common Comments

Buildings – Nonstructural Components – Ceiling supports



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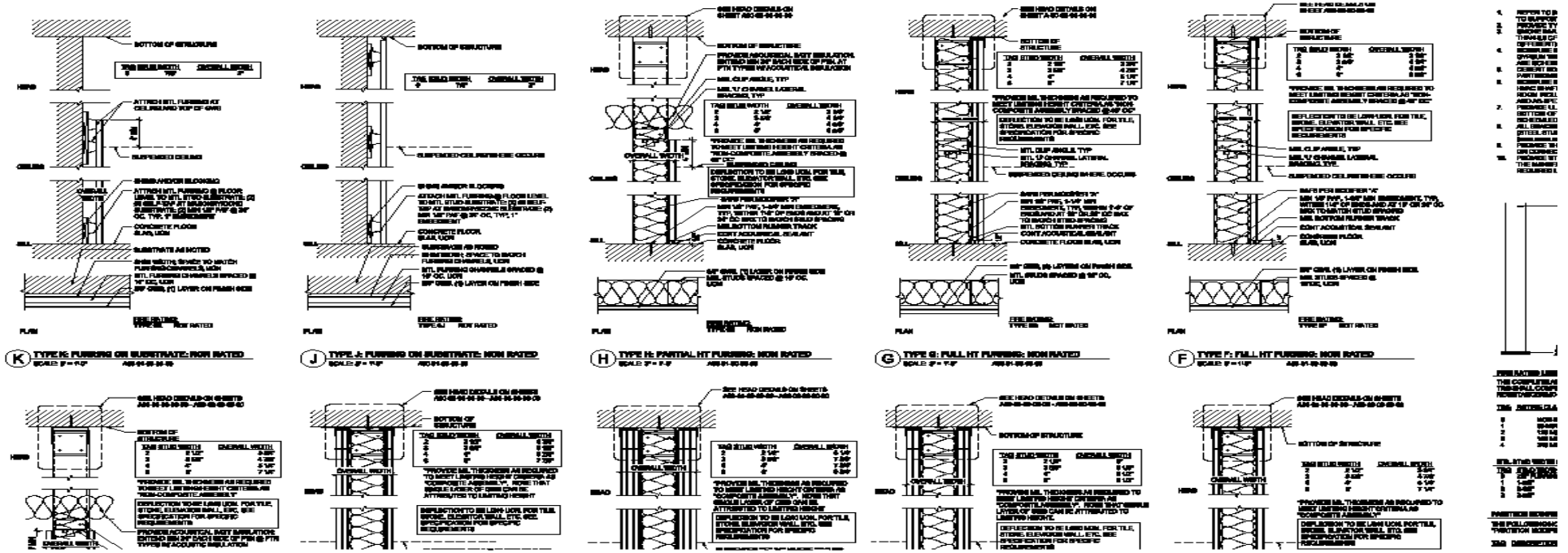
Common Comments

Buildings – Nonstructural Components – Partitions support and lateral bracing



PORT AUTHORITY NY NJ
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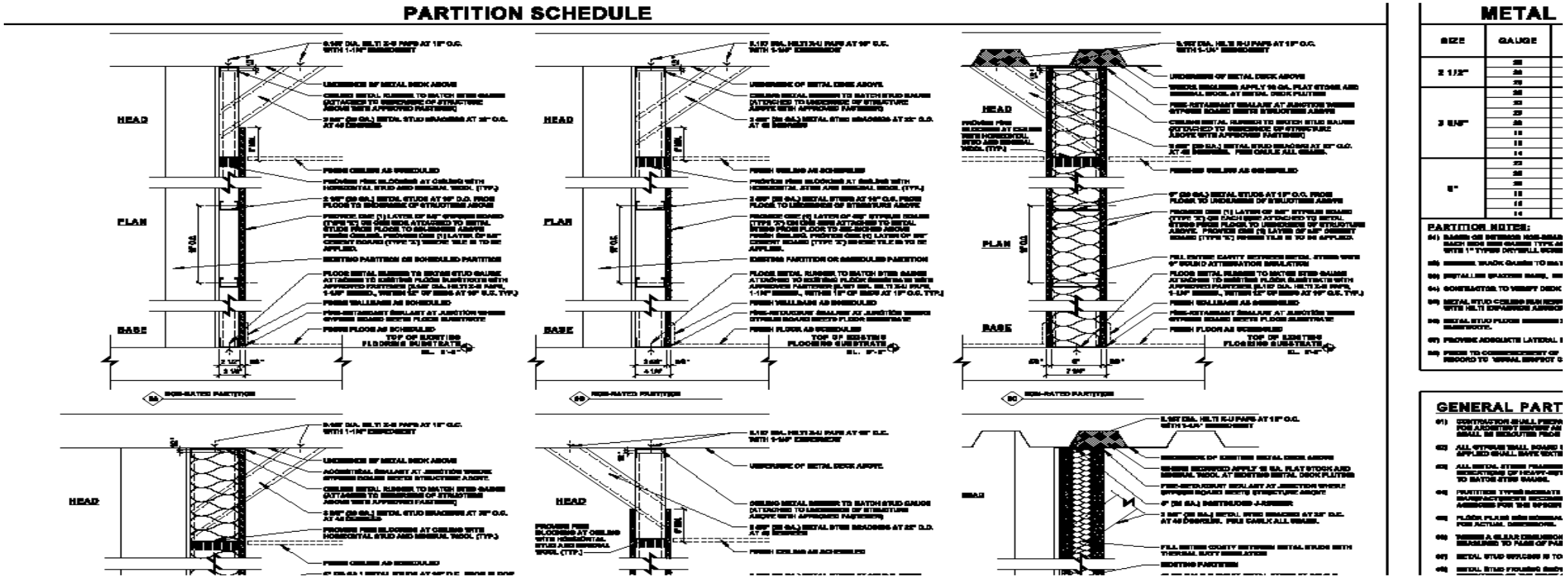
Common Comments

Buildings – Nonstructural Components – Partitions support and lateral bracing



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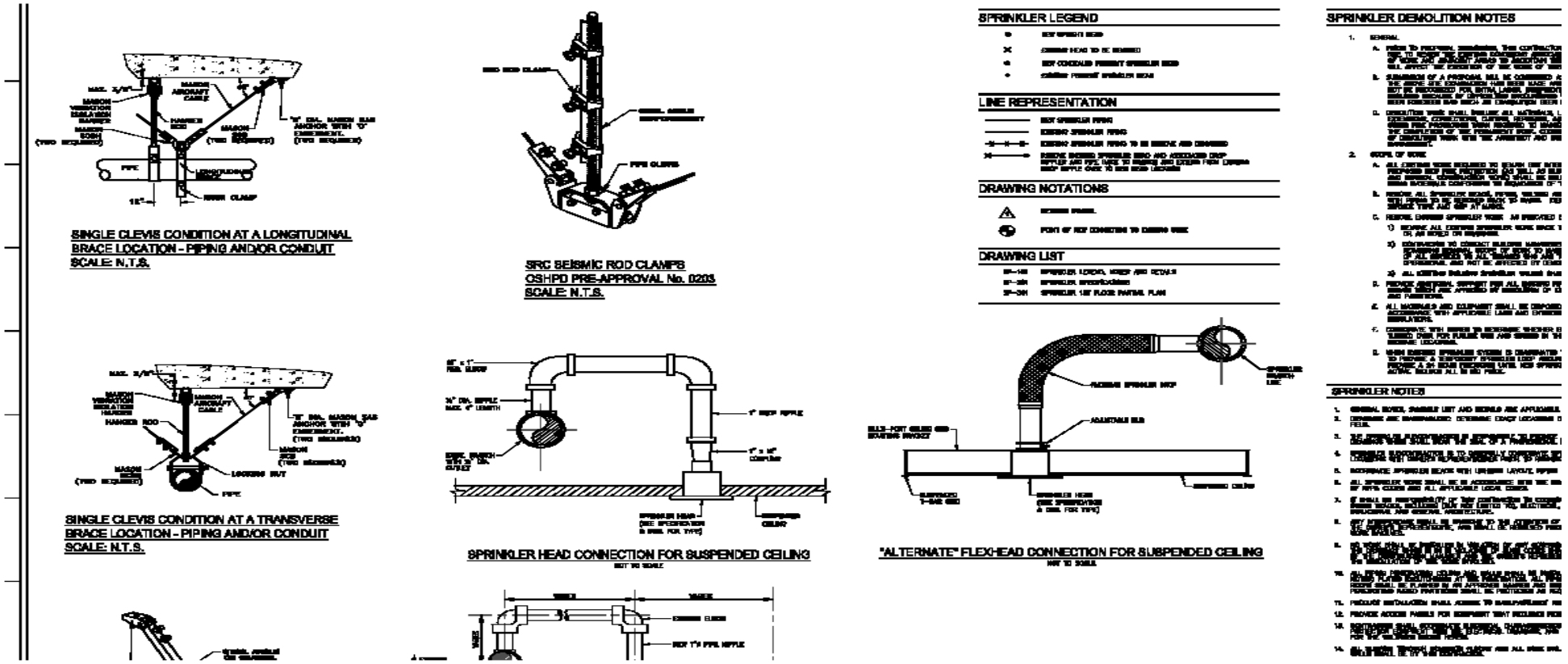
Common Comments

Buildings – Nonstructural Components – Sprinkler systems lateral support



SINGLE CLEVIS CONDITION AT A LONGITUDINAL BRACE LOCATION - PIPING AND/OR CONDUIT
SCALE: N.T.S.

SRC SEISMIC ROD CLAMPS
OSHPD PRE-APPROVAL No. 0203
SCALE: N.T.S.

SINGLE CLEVIS CONDITION AT A TRANSVERSE BRACE LOCATION - PIPING AND/OR CONDUIT
SCALE: N.T.S.

SPRINKLER HEAD CONNECTION FOR SUSPENDED CEILING

"ALTERNATE" FLEXHEAD CONNECTION FOR SUSPENDED CEILING

SPRINKLER LEGEND

LINE REPRESENTATION

DRAWING NOTATIONS

DRAWING LIST

SPRINKLER DEMOLITION NOTES

SPRINKLER NOTES

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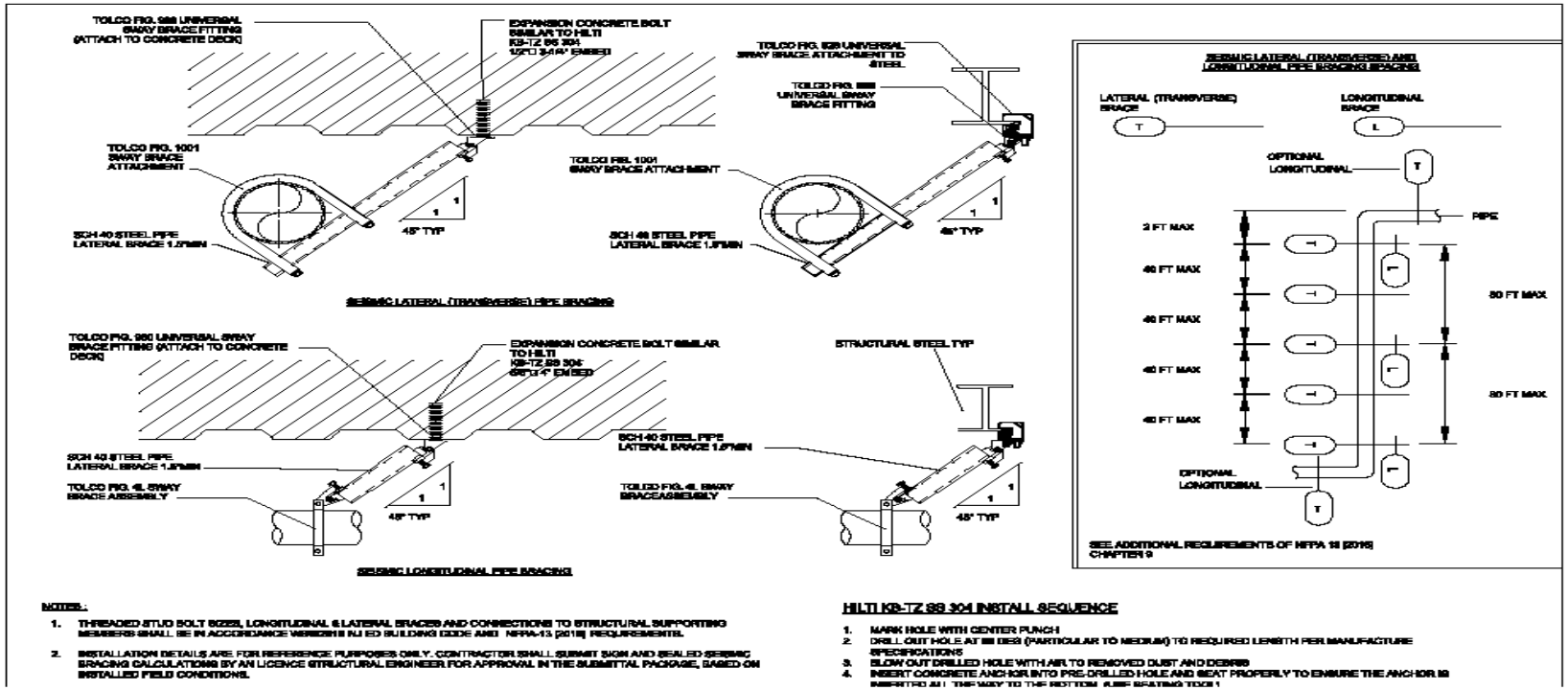
Common Comments

Buildings – Nonstructural Components – Sprinkler systems lateral support



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Keys to Success

- The reviewer is not an adversary and is available to discuss and assist in the resolution of comments
- Understand the intent of the review - a code-compliant design
- Anticipate the reviewer's needs and make it easy to locate needed information
- The requirements of the building code, referenced standards and the TCRM will dictate the methodology of the review; present information with the intent to verify that the code requirements have been satisfied.

PORT AUTHORITY NY NJ

Architectural Design Audits

Port Authority Quality Assurance Division – Design Standard Unit

Michael Lodespoto – QAD - DSU

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Agenda for Architectural Design Review Process

June 18, 2025
External Webinar

1. Design Audits - QAD DSU
    I. Architectural Audit Process
    II. What, Why, How We Do It
    III. Audit Process
    IV. Sample Audits
    V. Code and Compliance Audit
    VI. Keys to Success
2. Questions

Architectural Review Process

Code Compliance Architectural Staff

Engineering – QAD - DSU

- Brian Johnson
- Rufino Martinez
- Erick Urias
- Ron Papaleo
- Michael Lodespoto

What We Do

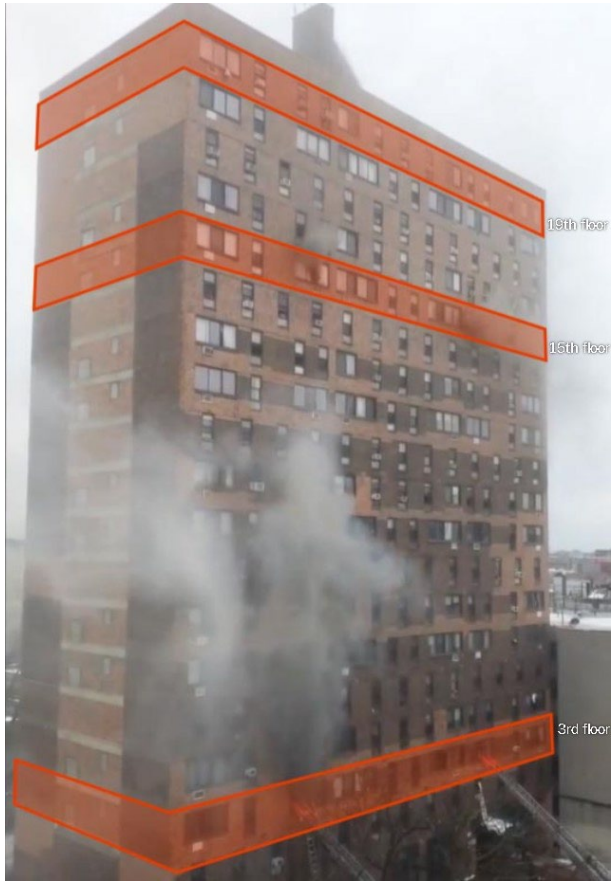
Code Compliance

- QAD **audits** to confirm that the design **complies** with code requirements, including those for life safety, fire safety, and accessibility.

- QAD **audits** conceptual designs and provides guidance; but **only** recommends approval for construction when the construction documents are complete and signed and sealed by a licensed architect or engineer, registered in the state in which the project occurs.

Why We Do It

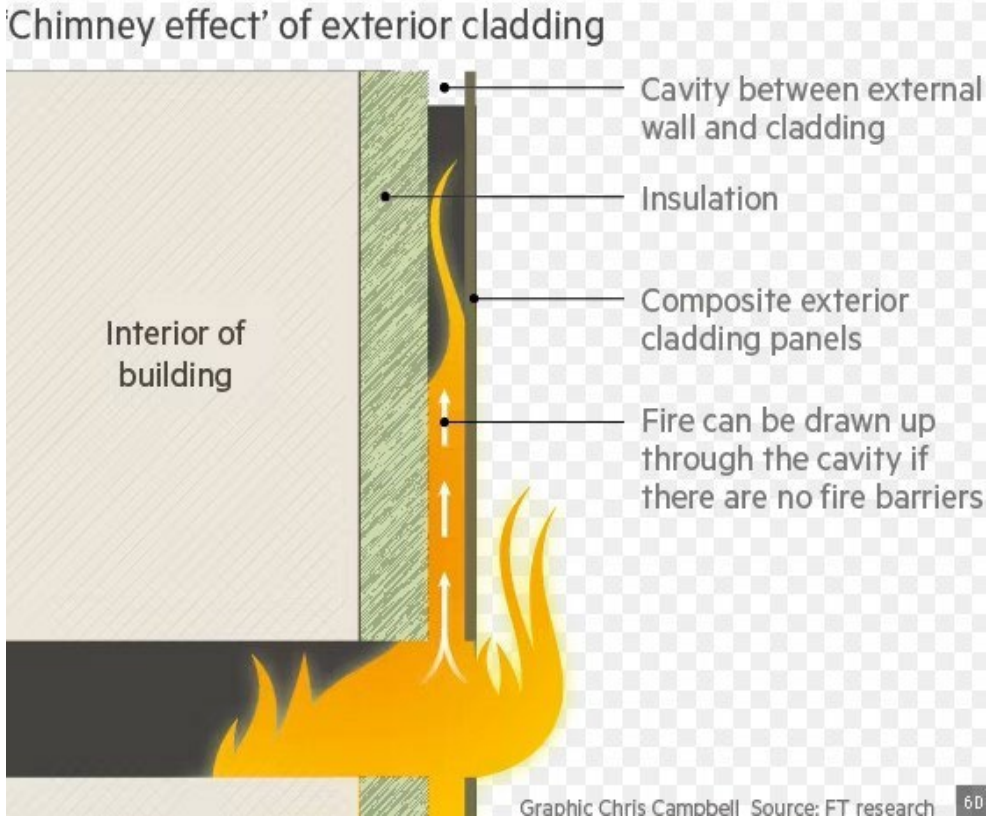
Twin Parks Apt Bldg, Bronx NY – January 9, 2022 – 17 Fatalities



Primary Failure – Door Hardware

Why We Do It

Grenfell Tower Apt Bldg, West London, U.K. – June 14, 2017 – 72 Fatalities



Primary Failure – Insulation Design

How We Do It

Review Process

- Audits using the adopted Building Codes & the Port Authority Tenant Construction Review Manual (TCRM).
- Collaborative and Vetted Audit Process
- Dispositions – Conceptual, Disapproved, Conditionally Approved, or Full Approval.

Audit process

Against what standards or requirements are the audits performed?

i. **New Jersey**: 2021 International Building Code, NJ Edition

New Jersey: New Jersey Uniform Construction Code, (5:23), Subchapter 6

ii. **New York City**: 2022 New York City Building Code

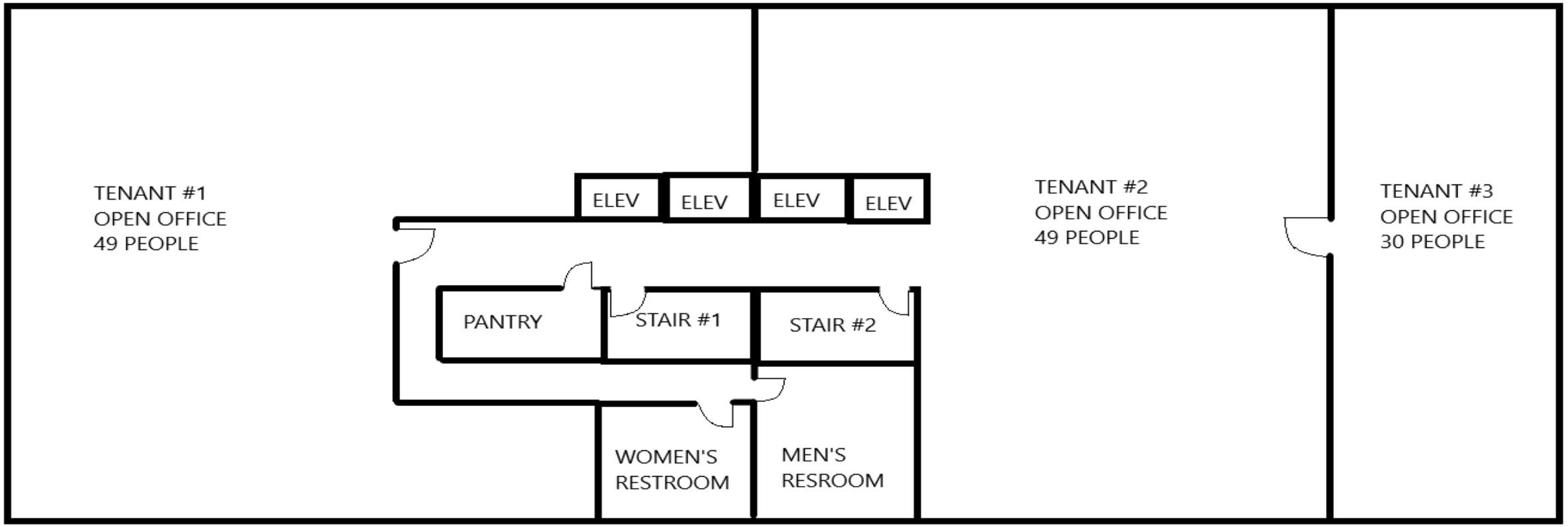
(2014 NYC BC if application was submitted before 11/7/22)

New York City:1968 New York City Building Code

iii. **New York State**: 2020 International Building Code

Sample Audit

BUSINESS OCCUPANCY
45TH FLOOR

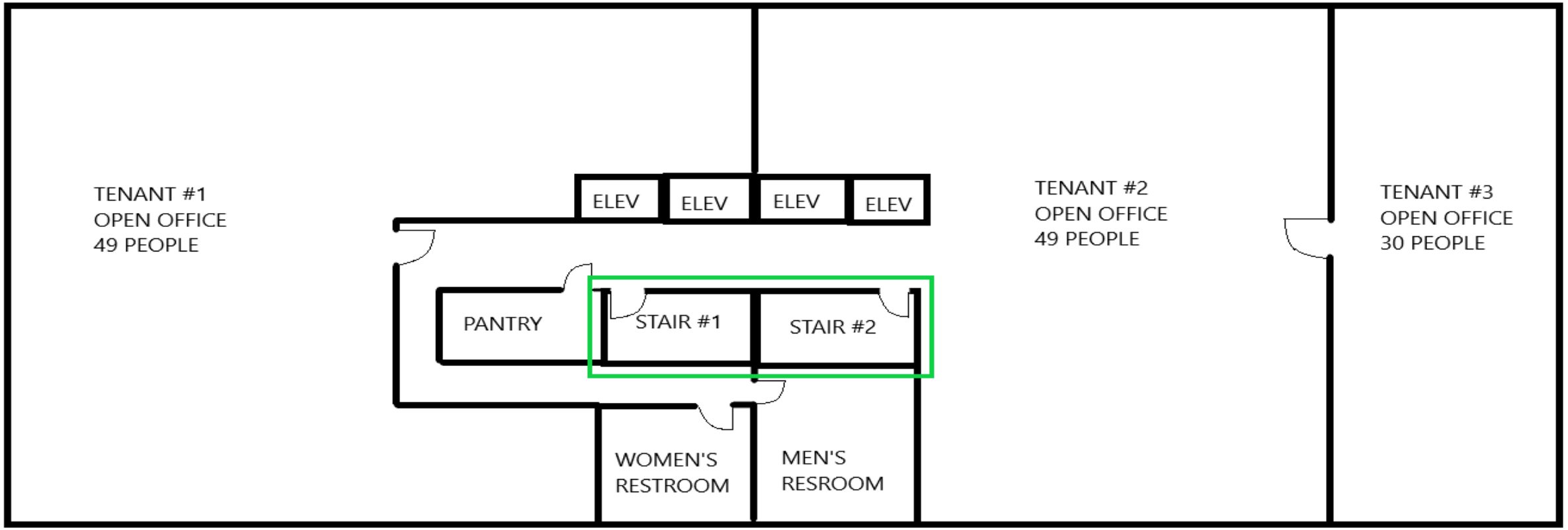


Sample Audit

Total Occupant Load – 128 People – 2 Exits Required from Floor

BUSINESS OCCUPANCY
45TH FLOOR

NYC BC Table 1006.3.1

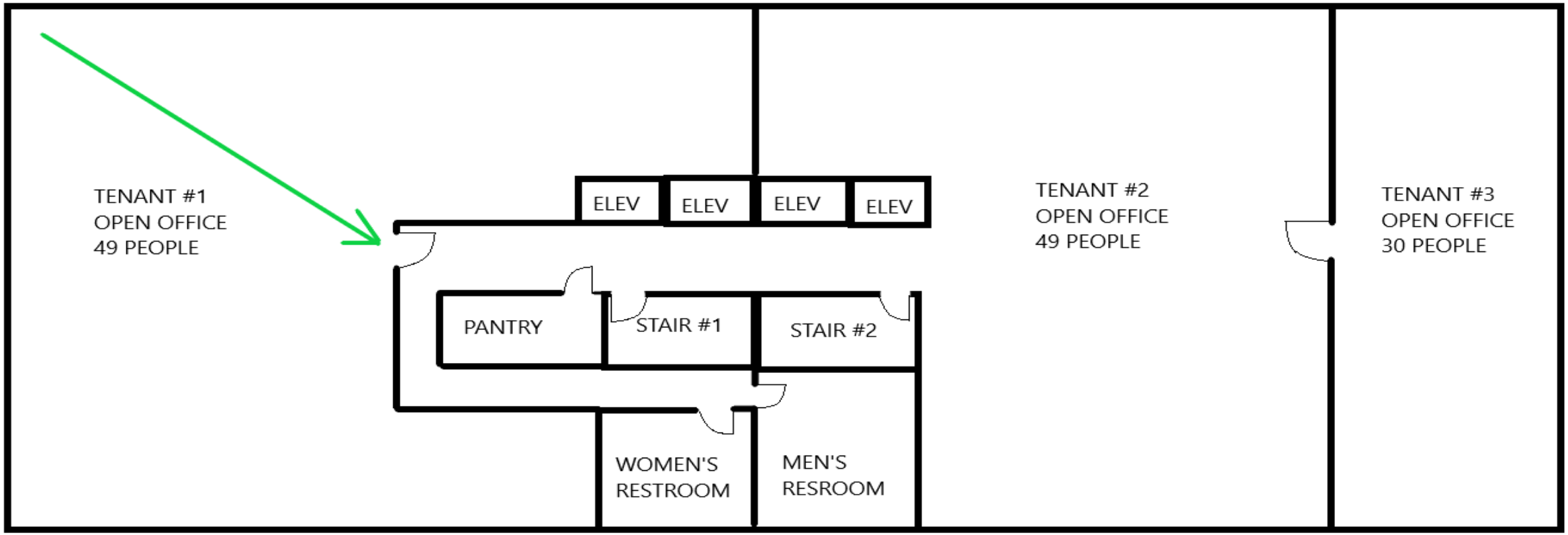


Sample Audit

Tenant #1 – 49 People – 1 Exit Access Required - Complies

BUSINESS OCCUPANCY
45TH FLOOR

NYC BC Table 1006.2.1

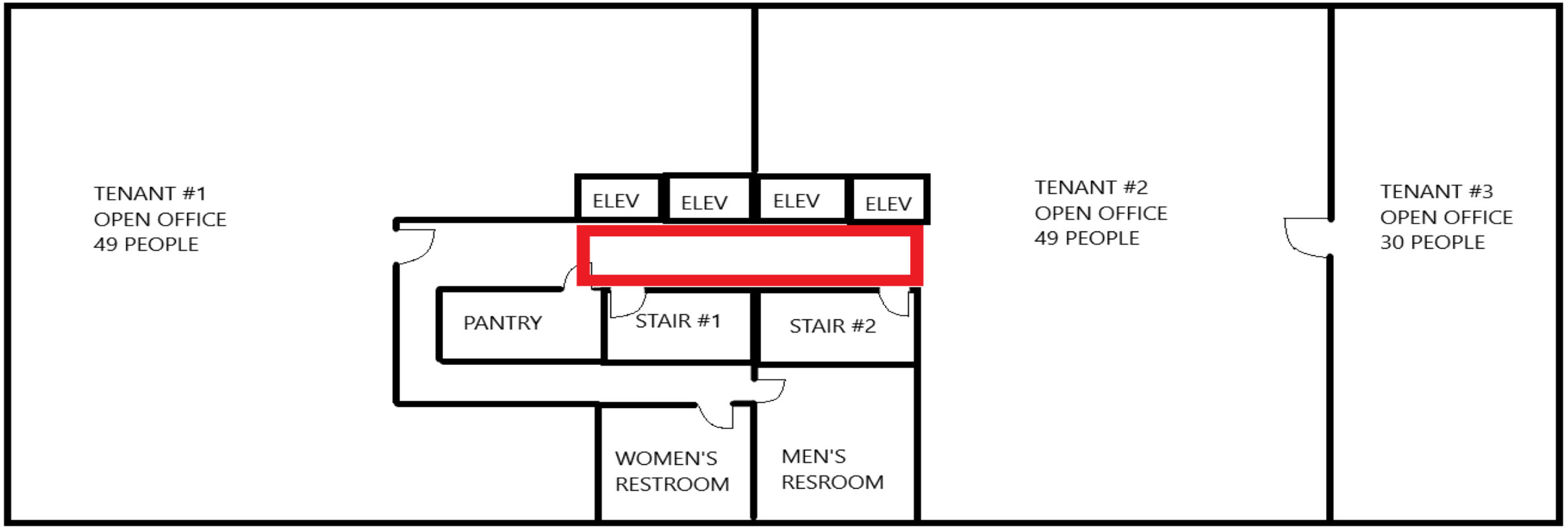


Sample Audit

All Tenants – Elevator Lobby – Not Compliant

NYC BC Section 3006.1

BUSINESS OCCUPANCY
45TH FLOOR



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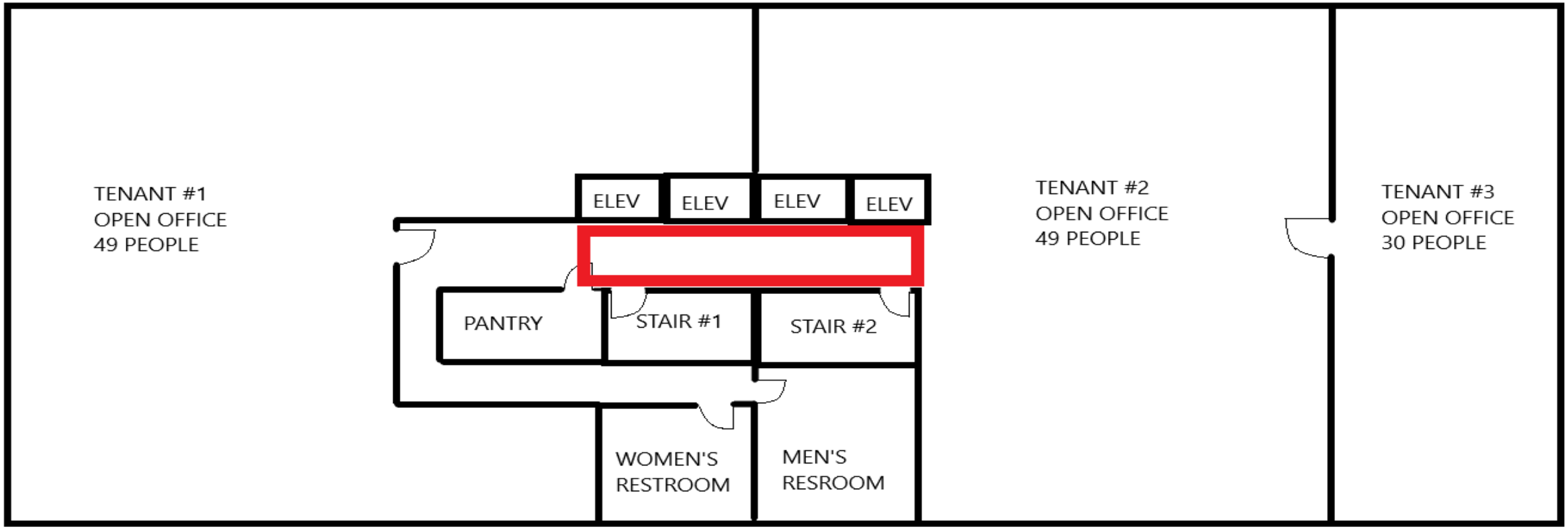
Sample Audit

All Tenants – Exit Independent of Elevator Lobby – Not Compliant

BUSINESS OCCUPANCY
45TH FLOOR

NYC BC Section 3006.1



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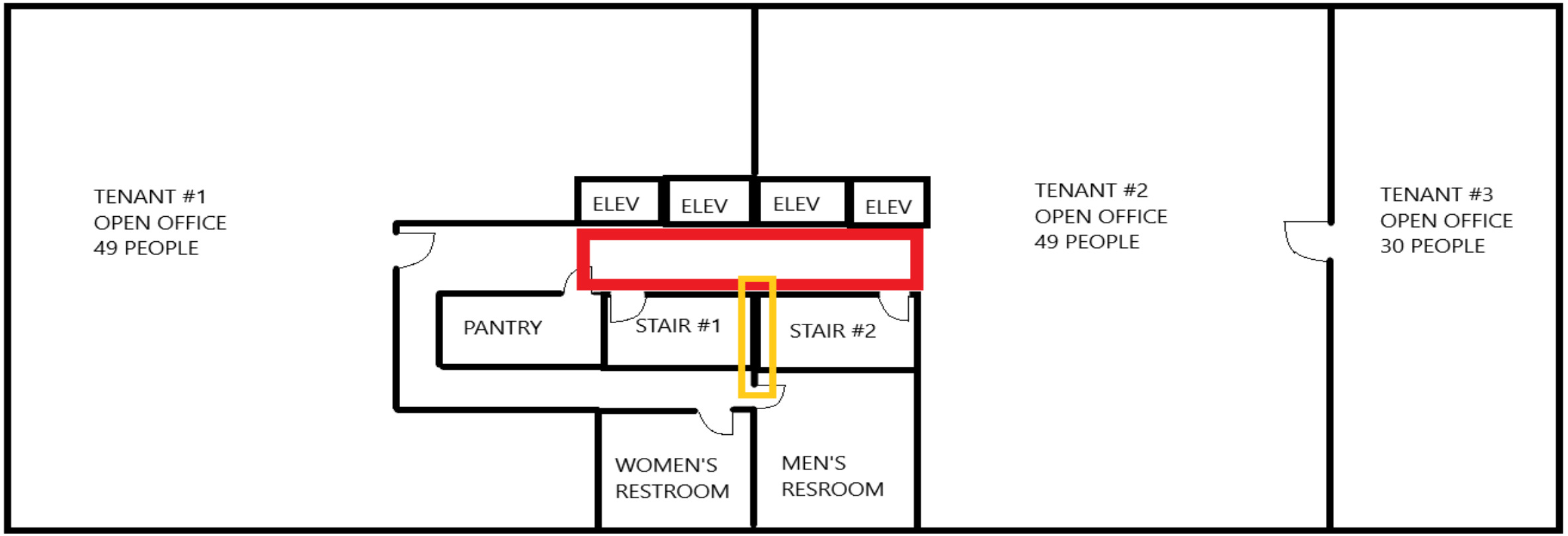
Sample Audit

All Tenants – Two Independent Exits – Not Compliant NYC BC Section 1007.1

All Tenants – Remoteness of Exits – Not Compliant NYC BC Section 403.5

BUSINESS OCCUPANCY
45TH FLOOR



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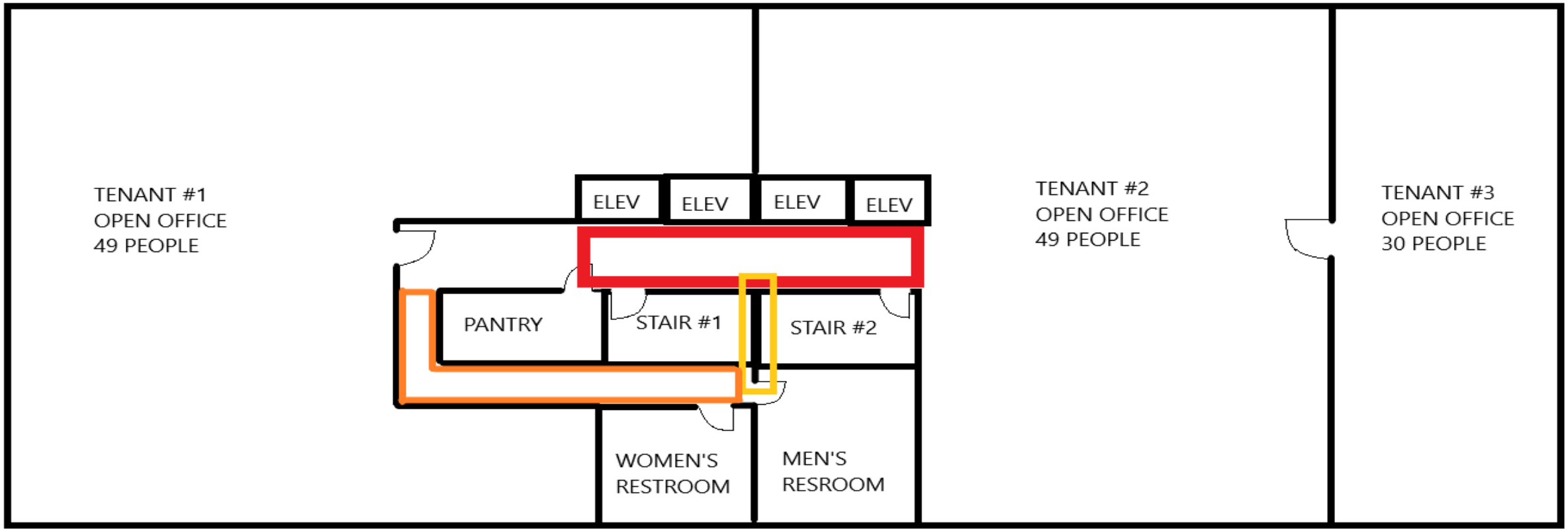
Sample Audit

All Tenants – Dead End Corridor – Not Compliant

NYC BC Section 1020.4

BUSINESS OCCUPANCY
45TH FLOOR



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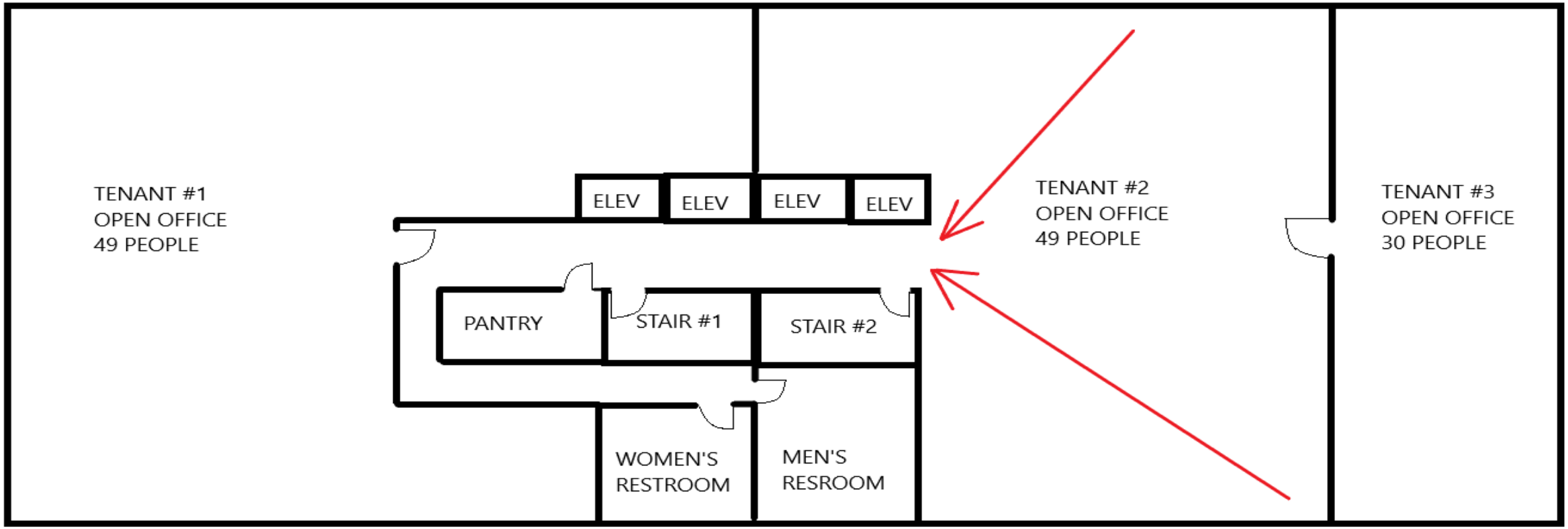
Sample Audit

Tenant #2 – Two Independent Exits Access Locations – Not Compliant

BUSINESS OCCUPANCY
45TH FLOOR

NYC BC Table 1006.2.1



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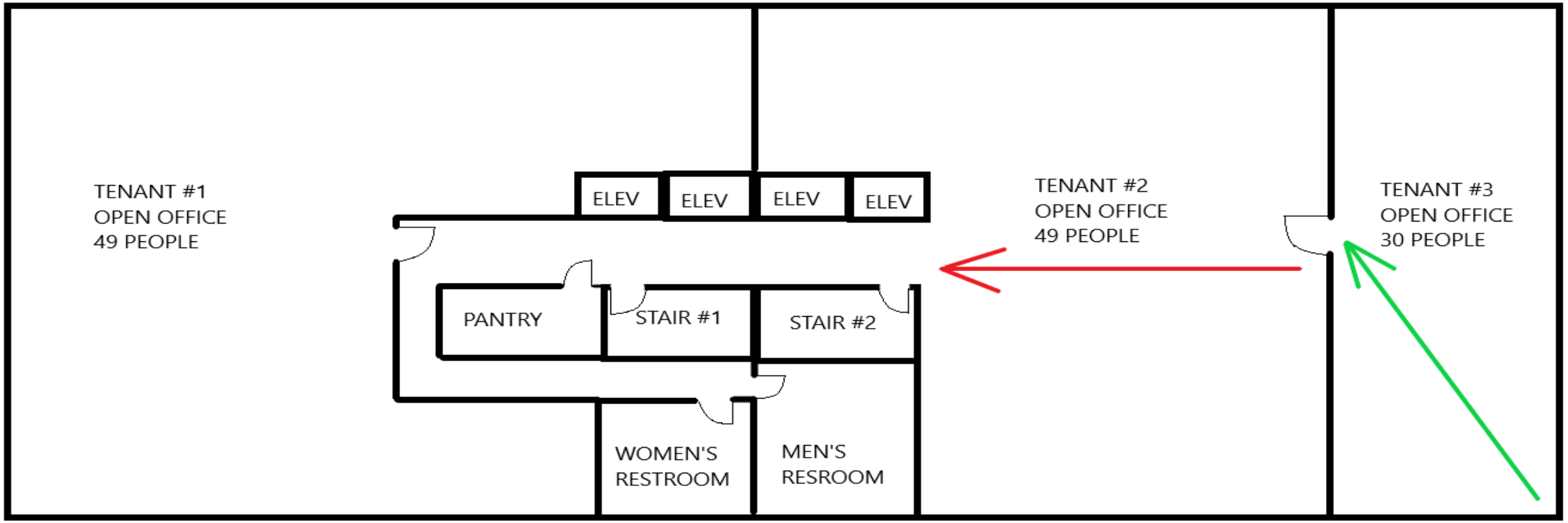
Sample Audit

Tenant #3 – Egress through Tenant #2 – Not Compliant

NYC BC Section 1016.2.1

BUSINESS OCCUPANCY
45TH FLOOR



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Egress

- Travel Distances
- Exits (Access, Exit, Discharge)
- Doors and Hardware
- Exit Signs
- Stair Capacity
- Elevator Lobbies

Fire Separation & Fire Prevention

- Flammability of Interior Finishes (Use Groups & Sprinkler Systems)
- Fire Ratings / Separation of Occupancies / Penetrations
- Storage and Use of Hazardous Materials
    i. Flammable substance or materials
    ii. Allowable quantities
    iii. Hazardous Materials Report
    iv. Use Group Classification (High Hazard?)

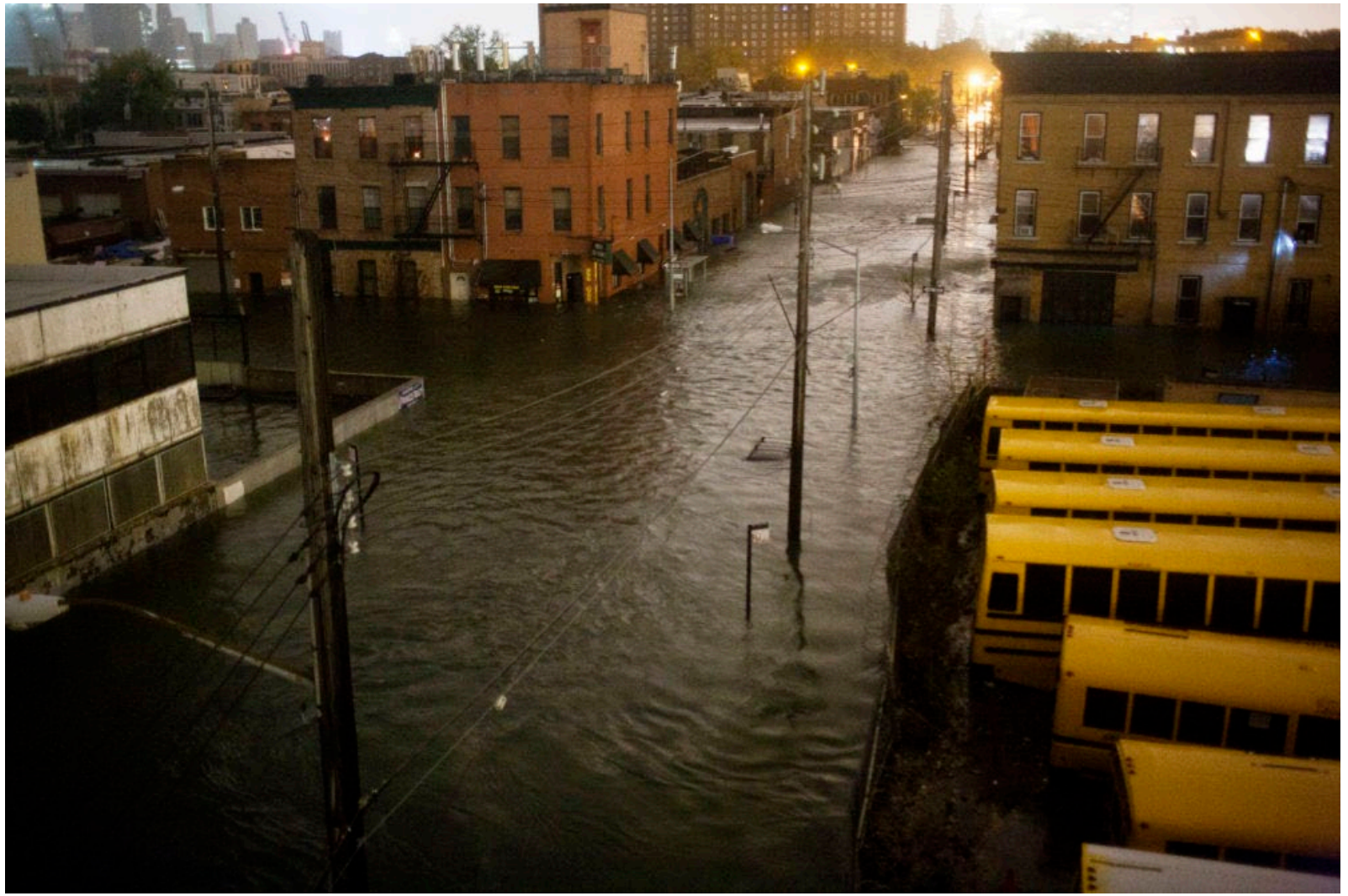
Accessibility

- ADA (federal) vs. Local Accessibility Codes
- Standard ADA Note
- Parking Spaces
- Counter Heights
- Restrooms
- SAR Review

Energy Code & Green Roofs

- Energy Analysis for Building Envelope, Mechanical and Water Heating Equipment, Lighting and Power
- Review Com-Check Calculations
- New York City – Local Law 92/94 of 2019, i.e. 2022 NYC BC, Section 1512.2 – Requires vegetative roofing and/or solar panels on all new roof construction and in renovations that involve the replacement of existing roof decks.

Flood Zone Compliance



Flood Zone Compliance

- International Building Code (NYS & NJ) vs. New York City Building Code
- IBC references ASCE 24-14 – New Construction, Substantial Improvements, and Substantially Damaged Structures must comply.
- Different flood zones based on the severity of the storm surge, which is often governed by proximity to water bodies.
- ASCE 24-14 generally requires structures to be elevated above the flood elevation at PA properties due to our locations adjacent to water.
- Provisions for protecting electrical, plumbing, fuel tanks, and utilities located below the flood elevation.

Flood Zone Compliance

New York City Building Code – Appendix G

- New Construction, Substantial Improvements, Horizontal Enlargements to existing buildings, Alterations that increase the degree of non-compliance in existing buildings must comply.
- Permits structures to be located below the flood elevation, provided that the buildings have been flood-proofed to prevent water from entering the building.
- Design professional certifications for the proposed compliance path based on the flood zone in which the project is located.
- Requirements to maintain egress under flood conditions
- Provisions for protecting electrical, plumbing, fuel tanks, and utilities located below the flood elevation.

Temporary Construction

- **Time Duration** Limitation – 90 Days(NYC), 180 Days (NYS & NJ)
- **Addresses** Life Safety, Fire Safety, Health (Sanitary) Safety, and Accessibility required.
- **Trailers** – When occupied by people, trailers are considered buildings and must comply with building code. See TCRM for specifics.
- **Modular Buildings** – Signed and sealed drawings by engineer or architect licensed in the state in which the buildings are to be installed. In NJ, modular buildings may be certified by a state inspection agency or the Industrialized Building's Commission. AOR/EOR must still demonstrate the site installation is code compliant.

Keys to success

- Ensure complete application documentation is submitted to QAD.
- QAD can work closely with the design team to resolve comments quickly. The goal must always be to achieve full approval. Conditional approvals are only granted on as-needed basis, and only under unusual circumstances.
- Dedicated Project Management and Review team to assist in best possible review strategy

Keys to success (cont'd)

- Conceptual & Preliminary audits
  - High-level Audits
  - 30/60/90
  - Find the non-compliant "Show Stoppers"

- Interim Audits
  - Expedited audits
  - Work through comments efficiently and effectively
  - Hold Dispositions to achieve NFC

Key Take-aways

- QAD's goal is to facilitate safe facilities and successful construction projects. This can only be achieved when QAD, the facility, and the design team work together to identify and resolve issues.
- QAD protects the public by ensuring compliance with life safety requirements.
- QAD protects the Port Authority by minimizing liability for non-code compliant construction.
- QAD protects the Architect and Engineer of Record, by identifing potential code deficiencies.

PORT AUTHORITY NY NJ

PANYNJ Supplemental Accessibility Requirements

Three Years and Counting

Russell Kriegel – EADD – Chief Architecture

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Commitment to ADA

PANYNJ Supplemental Accessibility Requirements

- PANYNJ and the Engineering Department have a long-standing commitment to Universal Design principals.
- All applicable codes reference the International Code Council (ICC) standard 117.1 and are followed diligently.
- Civil Engineers additionally generally follow the equivalent to Public Right of Way Accessibility Guidelines (PROWAG).
- Our commitment to design excellence extends in efforts to do more, as documented in our Supplemental Accessibility Requirements, or “SAR”.

Compliance Process

PANYNJ Supplemental Accessibility Requirements

- Our facilities are responsible for ADA compliance. Engineering assists with Law in response to Department of Justice (DOJ) letters, Federal Aviation Administration (FAA) audits, etc.
- Capital or Operating projects that affect public accessibility are reviewed by the Law Department via protocol established by the Project Management Office (PMO)
- Engineering Quality Assurance/Quality Checking (QA/QC) process certifies technical compliance for self or consultant performed work.
- The professional of record is responsible for Design/Build or Public Private Partnership (PPP) projects. Compliance is subject to audit.
- The Tenant Construction and Alteration Process (TCAP) governs tenant work and some development projects.

History of “Above & Beyond”

PATH Harrison Station Headhouses – Co-location of Elevators, Escalators & Stairs

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History of “Above & Beyond”

GWB North and South Walk – Compliance plus Additional Amenities – The “Belvedere”

History of “Above & Beyond”

EWR Terminals A & B Vertical Circulation Improvements – Size and Visibility

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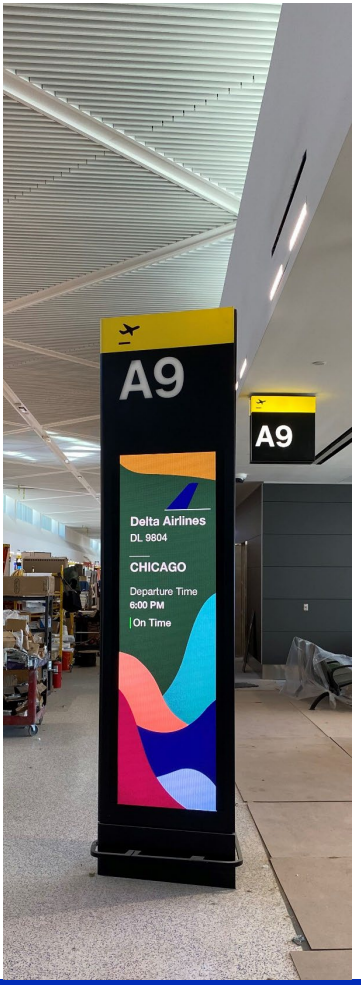
History of “Above & Beyond”

Jamaica Station / EWR Terminal B Restrooms – Aviation Standards

History of “Above & Beyond”

GWBBS / EWR New Terminal A – Signage Standards



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History of “Above & Beyond”

TCAP Process, Amenities & Redevelopment

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Chief Engineer's Authority

AI 45-1, dated May 20, 2021

- Engineering is committed to initiatives that implement transformative policies, priorities and change management strategies that create a culture embracing workforce and business diversity and inclusion. (page 1 of 6)

- Engineering is led by the Chief Engineer, who serves as the agency's principal authority on engineering matters. The Chief Engineer is responsible for ensuring all existing, redeveloped and new Port Authority facilities are designed, built and maintained in accordance with the guidelines of this policy, subsequent technical and procedural instructions as set forth in Engineering Instructions (EIs), and all other related guidelines and memoranda issued by the Office of the Chief Engineer. (page 2 of 6)

- Engineering is responsible for determining that all engineering work performed for the Port Authority or for tenants of the Port Authority at its facilities conforms to applicable codes and technical standards for construction, safety, operations, patron services, maintenance, security, environment, sanitation and accessibility. (page 3 of 6)

Background

PANYNJ Supplemental Accessibility Requirements

- Authorized in January 2020 as part of the Chief Engineer's five-year initiatives established with the Executive Director. By August 2021, the grace period concluded, and the policy was final.
- The effort was a collaboration between the Engineering Department, the Office of Diversity & Inclusion and the Port Authority Abilities Network EBRG.
- The task is to establish PANYNJ as a leader in inclusion by going above and beyond minimum accessibility requirements, implementing best practices to achieve cutting-edge accessibility in our facilities.
- Expert support supplied from Accessibility Services, a division of United Spinal; and Studio 5, an Architect experienced with ADA issues. Studio 5 continues to do audits for compliance.

Timeline

PANYNJ Supplemental Accessibility Requirements

- January 2020 – Authorized, planning, consultant research
- April 2020 – Visioning sessions, first draft
- August 2020 – Comment period start. Draft sent to ED/Design Chiefs, ED/Division Heads, PMO, Law, Line Department Directors.
- October 2020 – Presented at 30th Anniversary ADA Event. Rick Cotton announced in place by end of year. (Document eventually dated for 5/1/21 based on feedback to allow for training & socialization.)
- April 2021 – Training module completed; links as follows:

  INTERNAL: EOL > Eng Policies, Procedures and Applications > Administration & Policies > Agency > SAR > Manual & Training Video

  EXTERNAL: Engineering Available Documents > General Standards & Guidelines > Supplemental Accessibility Requirements > Manual (Download) & Training Video

- August 2021 – End of grace period, as requested by QAD/TCAP staff.

Mission Supported

PANYNJ Supplemental Accessibility Requirements

*primary

Priorities	Standards
Customer Experience*	Diversity & Inclusion*
Operational Excellence	Global Best Practices*
Employer of Choice	Collaboration
	21st Century Technology

Sections Included

PANYNJ Supplemental Accessibility Requirements

- Executive Summary, Background, How to Use this Document
- Supplemental Accessibility Requirements –
  Working rules that utilize code language
  Mandatory for new construction and *if technically feasible* for alterations
- Appendix A (Explanatory Material) – Plain English to aid socialization
- Appendix B (Additional Accessibility Considerations) –
  Non-mandatory design guidance
- Appendix C (Topic by Topic Summary) – Abbreviated reference

Basis/Highlights

PANYNJ Supplemental Accessibility Requirements

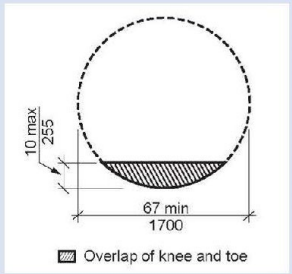


FIGURE 304.3.1.1
CIRCULAR TURNING SPACE - NEW BUILDINGS SIZE AND OVERLAP

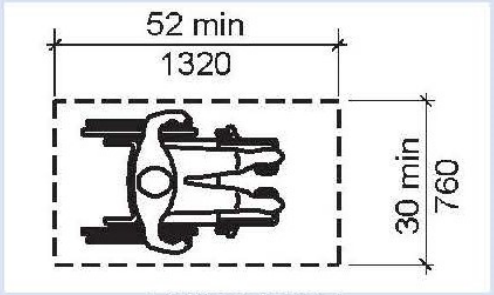
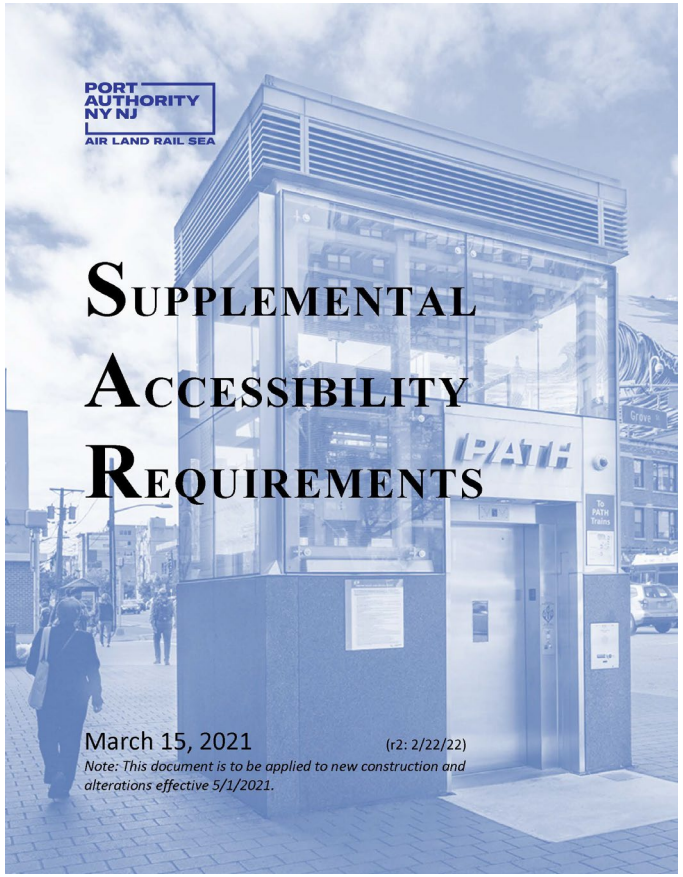
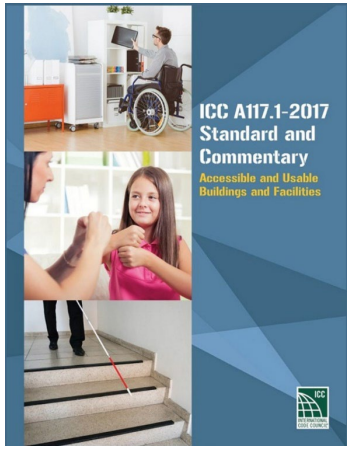
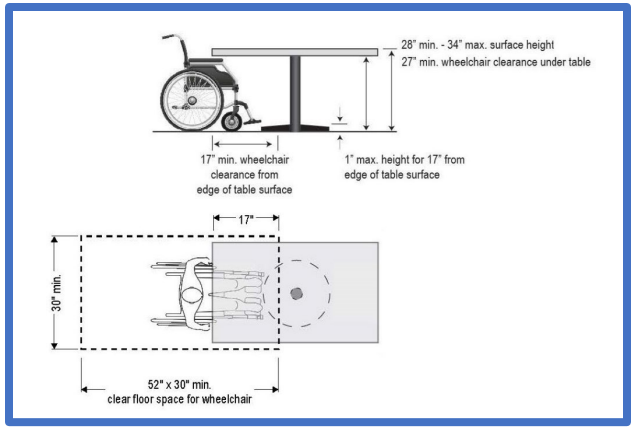


FIGURE 305.3.1
SIZE OF CLEAR FLOOR SPACE – NEW BUILDINGS







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TCAP Issues

PANYNJ Supplemental Accessibility Requirements

- Applicability – All new projects & alterations, with some exceptions.
  See explanatory document “SAR New v Alterations.pdf”
- Process – The SAR team will review all first submittals for comment, others only if necessary. QAD will review & reconcile comments. The application can be withheld, as we are beyond the grace period.
- Cost – The SAR Cost Matrix indicates most items of negligible cost. Minor exceptions are 2.13 Adult Changing Stations and 2.20 Hearing Loops.
- Guidance – The SAR team has published a “Common Oversights” and “Restaurant Table and Seating” documents to assist TCAP managers, professionals and lessees.

Accomplishments/Future Efforts

Successes, Code Updates and Response

- As of October 2024,1000+ TCAP & design submittals have been reviewed for compliance.
- Continued alignment with other documents, such as the Aviation Standards
- NJ – 2021 code adopted 2017 ANSI A117.1, which was the basis of the SAR.
- NY - 2022 NYCBC Accessibility Chapter includes items beyond the SAR.
- The SAR committee is drafting an SAR II that recognizes these changes, resolves the inherent conflicts, and keeps the Authority a leader in this space.
- This version will be fully vetted with input from Design Chiefs, Division Heads, Line Department Directors, PMO & Law.

Thank You!

@panynj @panynj @panynj www.panynj.gov

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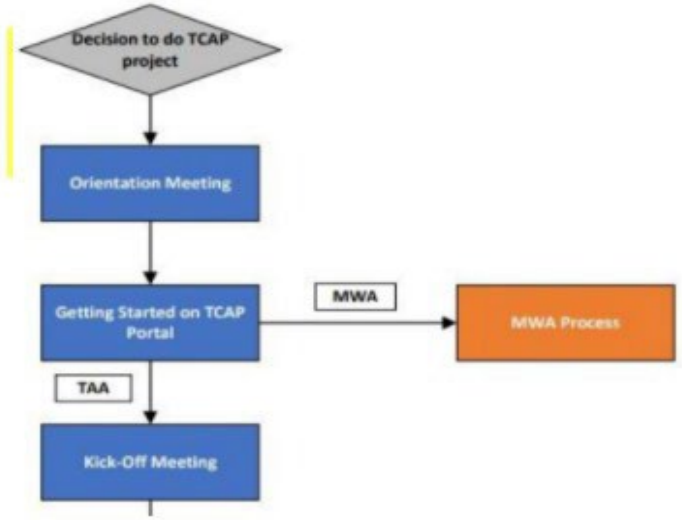
The TCAP Central Office

Start Here!
Interactive TCAP RoadMap

Download the Interactive TCAP Road Map using the link below for an overview of each step of the process. Once downloaded, click on the boxes in the flowchart and gain quick access to important TCAP forms and documents.

Click here to download Interactive TCAP Road Map



Contact TCAP Central office:
TCAP@panynj.gov

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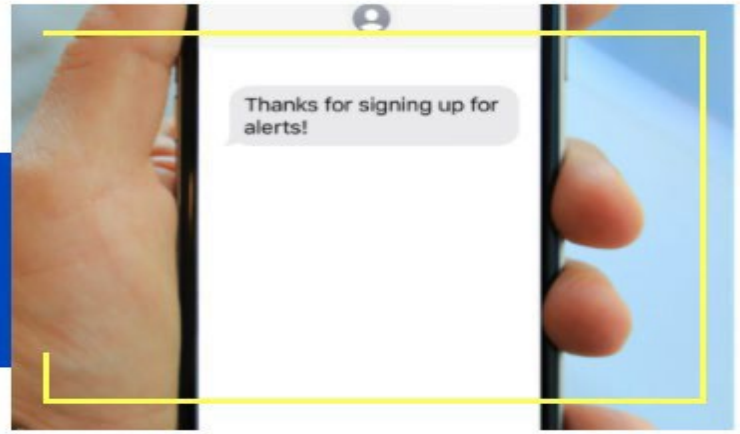

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