

CAPITAL REGION – ALBANY BOARD OF REVIEW

In the Matter of the Petition of: DECISION
NEW YORK CITY TRANSIT
METROPOLITAN TRANSIT AUTHORITY
For a Variance to the New York State
Uniform Fire Prevention & Building Code

PETITION NO. 2019-0684

Upon the application of New York City Transit - Metropolitan Transportation Authority,
and upon taking testimony and hearing arguments thereon at a duly noticed hearing before the Capital
Region – Albany Board of Review held at the offices of The Department of State, One Commerce Plaza,
99 Washington Avenue, Albany, New York, on December 4, 2019, and upon all other papers in this
matter, the Board makes the following determination:

NATURE OF GRIEVANCE AND RELIEF SOUGHT

The petition pertains to a system-wide variance for alterations and additions of all existing subterranean,
underground, elevated, and open-cut transit station buildings, Occupancy Group A-3 for transit stations
of Type 2B construction. All structures are located throughout the five boroughs of New York City in the
five Counties of New York, Bronx, Queens, Kings, and Richmond in the State of New York.

Relief is requested from:

1. Occupant load

**19 NYCRR Part 1221, International Building Code and 19 NYCRR Part 1225, International Fire
Code, Section 1004.1.2, areas without fixed seating.**

2. Area limitations

**19 NYCRR Part 1227, Existing Building Code, Section 1101.2, creation or extension of non-
conformity and Section 1102.2, area limitations.**

3. Sprinklers

**19 NYCRR Part 1227, Existing Building Code, Section 1102.3, fire protection systems, and 19
NYCRR Part 1221 International Building Code Section 712.1.3, escalator openings 19 NYCRR Part
1221, International Building Code, 19 NYCRR Part 1225, International Fire Code,**

Section 903.2.1 Group A, related to automatic sprinkler system, and also seeking relief from **19 NYCRR, Part 1221, International Building Code, and 19 NYCRR Part 1225, International Fire Code Section 903.2.11.1**, stories without openings.

19 NYCRR, Part 1221 International Building Code, 19 NYCRR Part 1225, International Fire Code Section 903.3.1.1, NFPA 13 sprinkler system requirements, **N.F.P.A. 13, Section 8.15.5.1**, sidewall sprinklers, **N.F.P.A. 13 Section 8.15.5.3**, automatic sprinklers not required in elevator machinery rooms.

4. **24 hours of emergency power for PA system and fire alarm and emergency responder radio coverage system, 19 NYCRR Part 1221, International Building Code, 19 NYCRR Part 1225, International Fire Code, Section 907.5.2.2.5, emergency voice communication systems, N.F.P.A. 72-13 Section 10.6.7.2.1(2), secondary power emergency voice alarm communication services.**

19 NYCRR Part 1221, International Building Code, Section 907.5.2.2.5, emergency power for voice communication systems, **19 NYCRR Part 1225, International Fire Code, Section 907.5.2.2.5**, emergency power for emergency voice communication systems, **19 NYCRR Part 1225, International Fire Code Section 510.4.2.3**, standby power for emergency response and radio coverage systems, **19 NYCRR Part 1225, International Fire Code, Section 604.2.3** standby power for emergency responder systems required under Section 510.4.2.3, **19 NYCRR Part 1225, International Fire Code Section 604.2.4**, emergency voice alarm communication systems.

19 NYCRR Part 1221, International Building Code Section 2702.2.3, emergency responder radio coverage systems and standby power, **19 NYCRR, Part 1221 International Building Code, Section 2702.2.4**, emergency voice alarm communication systems, **19 NYCRR Part 1221, International Building Code, 19 NYCRR Part 1225, International Fire Code, Section 907.2**, where required new building structures requiring an approved fire alarm system including **N.F.P.A. 72-13, Section 10.6.7.2.1**, regarding secondary power supply.

5. Shaft rating

19 NYCRR Part 1221, International Building Code, Section 713.14, elevator dumbwaiter and hoist ways regarding elevator hoist way enclosures. Included in that request is **19 NYCRR Part 1221, International Building Code, Section 712.1.9**, two-story openings in other than group I-2, I-3 Occupancies, **19 NYCRR Part 1221, International Building Code Section 3002.1**, hoistway

enclosure protection related to elevator dumbwaiter and other hoistway enclosures.

6. Fire rated exterior walls

19 NYCRR Part 1221, International Building Code, Table 602, Fire-Resistance Rating Requirements for Exterior Walls Based on Fire Separation Distance

7. Exterior stair location and interior and exterior stairway and ramp protection

19 NYCRR Part 1221, International Building Code, 19 NYCRR Part 1225, International Fire Code Section 1027, exterior exit stairs, ramps as to Section 1027.5, the location.

19 NYCRR Part 1221, International Building Code, 19 NYCRR Part 1221, International Fire Code Section 1027.6, exterior exit stairways, and ramp protection.

19 NYCRR Part 1221, International Building Code and 19 NYCRR Part 1225, International Fire Code Section 1023.7, interior exit stairs and ramp exterior walls.

8. Turnstile egress capacity

19 NYCRR Part 1221, International Building Code, 19 NYCRR Part 1225, International Fire Code, Section 1010.3, turnstiles.

19 NYCRR Part 1221, International Building Code, 19 NYCRR Part 1225, International Fire Code, Section 1010.3.2, regarding an additional door.

9. Posting occupant load

19 NYCRR Part 1221, International Building Code, Section 1004.3, every assembly space shall have the occupant load posted in a conspicuous place.

10. Discharge air outdoors

19 NYCRR Part 1223, International Mechanical Code section 501.3, air removed through exhaust system to be discharged outdoors.

11. Plumbing Fixtures

19 NYCRR Part 1221, International Building Code, Section 2902.1 and Table 2902.1, minimum number of required plumbing fixtures, **19 NYCRR Part 1221, International Building Code, Section 1109.2.1**, family or assisted use toilet and bathing facilities, **19 NYCRR Part 1222, International Plumbing Code, Section 403.1 and Table 403.1**, minimum number of fixtures.

12. 60% of public entrances to be accessible

19 NYCRR Part 1221, International Building Code, Section 1105.1 and 19 NYCRR Part 1227, Existing Building Code, Section 1105.1, public entrances.

13. Security Grilles

19 NYCRR Part 1221, International Building Code, Section 1010.1.4.4, limits the use of security grilles to B, F, M and S Occupancies.

FINDINGS OF FACT

1. The buildings and structures that are the subject of this determination are existing subterranean, elevated, open-cut or at-grade transit buildings and structures found throughout New York City Subway in the five-borough area.
2. The buildings and structures that are the subject of this determination include additions, and Level 2 or 3 alterations to buildings and structures found throughout the New York City Subway in the five-borough area.
3. The building occupancies are as follows: Occupancy Group A3 for transit stations, all of the structures are of Type 2B construction.
4. The Metropolitan Transportation Authority of the New York City Transit Authority utilizes the Uniform Fire Prevention and Building Code of New York State and National Fire Protection Association 130 Standard or portions of NFPA 130 standard for fixed guideway transit and passenger rail systems as per approved variances for design and safety criteria.
5. The existing structures and stations proposed additions will be constructed as Non-Combustible Construction 2B or 1B type construction.
6. The proposed additions for A.D.A. elevators and/or stairways entail locating stairways and elevator enclosures within the public right of way in close proximity to existing buildings and structures for either above ground or underground locations. Petitioner requires relief in order to locate exterior stairs in close proximity (e.g., less than 10 feet as required by Table 602 IBC) to adjacent buildings, where station and street geometry require.
7. Elevator hoistways are typically constructed of clear glass for passenger security. Petitioner requests not to fire-rate these hoistways where located in close proximity to building or property lines as required.

8. The International Building Code, Sections 712.1.9, 713.4, 713.14, and 3002.1, require elevator hoistways to be rated as shafts. The petitioner request relief from elevator shafts passing through public areas in stations to be non-rated. The Petitioner affirms portions of shafts passing through non-public areas of stations or underground shafts containing elevators with a travel distance exceeding 45 feet will be rated in accordance with International Building Code, Section 713.
9. The Metropolitan Transportation Authority requests relief from Section 1101.2, International Existing Building Code, Creation or extension of non-conformity for area increases beyond that permitted by International Building Code, Chapter 5, where new A.D.A. elevators, stairways, and ramps are added along the circulation space and elevator machine rooms and electrical distribution rooms serving elevators are added as required for the project. This request has been granted at multiple locations.
10. The Metropolitan Transportation Authority requests relief from Section 1102.2, International Existing Building Code, Area limitations for additions which would require firewall separation within passenger circulation areas. Providing firewall within passenger circulation areas interferes with passenger circulation, and the construction of a firewall within a passenger station is extremely difficult to accomplish. Firewalls are to be designed and structured to allow the collapse of the structure on either side of the firewall without collapse of the firewall, itself. NFPA 130 allow the space to be open without separation as part of the circulation and egress design elements.
11. The International Building Code, Section 903.2.11.1 requires sprinklers in stories without openings and International Building Code, Section 903.2.1, which requires sprinklers throughout the story where an assembly occupancy is located including back of house spaces.
12. The International Building Code, Section 712.1.3, requires sprinklers throughout the buildings with escalators and around the escalator openings. The Metropolitan Transportation Authority has been granted a variance for International Building Code, Section 903.2.1.3 allowing un-sprinklered assembly areas in underground stations. The Petitioner has affirmed that the Metropolitan Transportation Authority provide sprinklers in, concession spaces over 200 square feet, refuse rooms over 100 square feet, and storage areas over 200 square feet; and in areas with combustible loadings (as required by NFPA 130, Section 5.4.4.1). The request follows design standards found in NFPA 130 standard.
13. International Building Code, Section 903.3.1.1 requires sprinklers to be installed in accordance with N.F.P.A. 13 and be provided at hydraulic elevator machine rooms and pits.

MTA Request to follow New York City requirements and not sprinkler elevator machine rooms based on New York City Rule 3616-01 and not provide the sidewall sprinkler in pit areas at station public and under platform areas as these areas are not heated and wet sprinkler lines are subject to freezing.

14. International Building Code/International Fire Code, Section 1004.3, Posting of occupant load.

The Petitioner requests relief from this requirement as it is more specific to buildings than a fixed guideway transit system. · A passenger stations platform occupant load is based on ridership, as opposed to a fixed number of persons per square foot value occupant load factor used in a typical building. The occupants or passengers may only be transferring to another train which uses the same track. Occupant load restrictions also cannot be readily enforced in a station.

15. The International Plumbing Code, Section 403.1 and International Building Code, Sections 1109.2.1, 2902.1, and Table 2902.1, requiring a minimum of number of fixtures and family and/or assisted use toilet and bathing rooms. Metropolitan Transportation Authority - New York City Transit does not generally provide toilet room facilities at most of its stations as most passenger occupants typically queue or wait for short periods of time in between trains. The MTA has found public toilet areas can be a public safety issue when unmanned operations exist. · Staff toilet rooms are generally provided at stations.

The Petitioner requests not to provide public plumbing fixtures where none currently exists, and where public plumbing fixtures currently exist, not to provide additional fixtures. In addition, the Petitioner requests to permit a reduction of public plumbing fixtures only to allow the installation of A.D.A. compliant toilet facilities where public plumbing fixtures currently exist.

16. Where accessibility is required by the International Existing Building Code and International Building Code, Section 1105.1 for additions where A.D.A. elevators are installed. Some elements of the building remain impracticable or infeasible to modification of accessibility. Relief is sought to provide not more than one accessible entrance in the addition or alteration portion of each station.

REQUESTED ITEMS WITHDRAWN BY PETITIONER

A. The following items were marked as “continued” on the hearing date of December 4, 2019; and were later withdrawn by petitioner on December 24, 2019:

1. Occupant load

2. 24 hours of emergency power for PA system and fire alarm and emergency responder radio coverage system
3. Fire rated exterior walls – Table 602
4. Exterior stair location and interior and exterior stairway and ramp protection
5. Turnstile egress capacity
6. Discharge air outdoors

B. The following item was withdrawn by petitioner at the hearing on December 4, 2019.

1. Security Grilles

CONCLUSION OF LAW

The proposed variance will not substantially adversely affect the Code's provisions for health, safety, and security. Strict compliance with the provisions of the Uniform Fire Prevention and Building Code would entail practical difficulties or unnecessary hardship, would not achieve the Code's intended objective, would be unnecessary in light of alternatives which ensure the achievement of the Code's intended objectives or, in light of alternatives, which, without a loss in the level of safety, achieve the Code's objective more efficiently, effectively, or economically.

DETERMINATION

WHEREFORE IT IS DETERMINED that the application for the following variances, be GRANTED with the following conditions.

I. Area Limitations - 19 NYCRR, Part 1227, Existing Building Code, Section 1101.2, Creation or extension of non-conformity, and 19 NYCRR, Part 1227, Existing Building Code Section 1102.2, Area limitations are granted with the following condition:

1. Additional area is limited to 20 percent of the area of the story and is allowed specific to ADA accessibility projects. Stair and ramp square footage will be permitted above and beyond the 20 percent increase in building area limit.

II. Sprinklers - Section 19 NYCRR, Part 1221, International Building Code, Section 712.1.3, Escalator openings, Section 712.1.3.1, Opening size, Section 712.1.3.2 automatic shutters, and Section 19 NYCRR, Part 1221, International Building Code, and 19 NYCRR Part 1225, International Fire Code, Section 903.2.1 Group A in regard to automatic sprinkler systems, and Section 19 NYCRR, Part 1221, International Building Code, and 19 NYCRR, Part 1225, International Fire Code, Section 903.2.11.1, stories without

openings, and 19 NYCRR, Part 1221, International Building Code, and 19 NYCRR, Part 1225, International Fire Code, Section 903.3.1.1, N.F.P.A. 13 sprinkler systems, N.F.P.A. 13-13 Section 8.15.5.1, NFPA 13-13, Section 8.15.5.3, these are all GRANTED with the following conditions:

1. There shall be a help point station or emergency phone for customer use located at each elevator landing, except the ground level, meaning the street level.
2. Additional protocol shall be added to the Metropolitan Transportation Authority emergency procedure manual to address emergency evacuation for disabled individuals.
3. Provide dry standpipes where none currently exist at all existing stations undergoing addition or Level 2 or 3 alteration construction.
4. Sprinklers shall be provided in areas required by N.F.P.A. 130-17 Section 5.4.4.1.

III. Shaft rating - The next group of variances are 19 NYCRR Part 1221, International Building Code, Section 713.14, elevator dumbwaiter and other hoist ways, Section 713.4, fire resistance rating, 19 NYCRR Part 1221, International Building Code, Section 712.1.9, two-story openings, and 19 NYCRR Part 1221, International Building Code, Section 3002.1, hoistway enclosure protection. These sections shall all be GRANTED with the following conditions:

1. That this variance is limited to elevator shafts within underground and elevated stations where the shaft travel through public areas of stations.
2. That petitioner will fire-rate any shafts in underground and elevated stations that pass thru BOH spaces and
3. Will fire rate underground shafts with a travel distance exceeding 45 feet.

IV. Posting of occupant load - 19 NYCRR Part 1221, International Building Code, and 19 NYCRR Part 1225, International Fire Code, Section 1031.1.1, posting of occupant load, shall be GRANTED as presented.

V. Plumbing fixtures - 19 NYCRR Part 1221, International Building Code, Section 2902.1 and Table 2902.1, minimum number of required plumbing fixtures, 19 NYCRR Part 1221, International Building Code, Section 1109.2.1, family or assisted use toilet and bathing facilities, 19 NYCRR Part 1222, International Plumbing Code, Section 403.1 and Table 403.1, minimum number of fixtures, and these variances shall be GRANTED as presented: The Petitioner requests relief to not provide public plumbing fixtures where none currently exists, and where public plumbing fixtures currently exist, not to provide additional fixtures. In addition, the Petitioner requests to permit a reduction of public plumbing fixtures only to allow the installation

of A.D.A. compliant toilet facilities where public plumbing fixtures currently exist.

VI. 60% of public entrances to be accessible - 19 NYCRR Part 1227, Existing Building Code, Section 1105.1, minimum requirements for accessibility, and 19 NYCRR Part 1221, International Building Code, Section 1105.1, public entrances shall be GRANTED with the following conditions:


1. These variances apply to existing stations undergoing additions or alterations level 2 or 3 only.
2. Appropriate way finding signage shall be provided to properly identify accessible routes.

This decision is limited to the specific buildings and application before it, as contained within the petition, and should not be interpreted to give implied approval of any general plans or specifications presented in support of this application.

Chairman Thomas Parsons, David Abramo, Megan Smailer, and Joseph Cherubino, all concur.

So ordered.

Capital Region – Albany Board of Review


Chairman Thomas Parsons
DATE: 4/22/2020

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