

**REGULATORY IMPACT STATEMENT
(19 NYCRR Part 1228)**

1. STATUTORY AUTHORITY

Article 18 of the Executive Law (§370-383) establishes the State Fire Prevention and Building Code Council (hereinafter “Code Council”) and authorizes such council to formulate a code to be known as the Uniform Fire Prevention and Building Code (hereinafter “Uniform Code”). The statutory authority for this rule is Executive Law §377(1), which authorizes the Code Council to formulate the Uniform Code and, from time to time, to amend particular provisions of the Uniform Code.

This proposed rule would amend the Uniform Code by amending Part 1219 and adding a new Part 1228 to Title 19 of the New York Codes, Rules and Regulations, which would contain specific provisions in relation to the construction, alteration, relocation, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of rail stations. This proposed rule would incorporate by reference a publication entitled “Uniform Code Provisions for Rail Stations” published by the Department of State and the 2020 edition of the reference standard NFPA 130, “Standard for Fixed Guideway Transit and Passenger Rail Systems” published by the National Fire Protection Association (NFPA). The proposed rule and the publications to be incorporated by reference within the proposed rule would update the Uniform Code to adequately address the unique nature and design of rail stations in the State.

2. LEGISLATIVE OBJECTIVES

Executive Law §371(2) provides that it is the public policy of the State of New York to provide for the promulgation of a Uniform Code addressing building construction and fire prevention in order to provide a basic minimum level of protection to all people of the State from hazards of fire and inadequate building construction.

Executive Law §371(2) further provides that in providing for such Uniform Code, it is the policy of this State to reconcile the myriad of existing and potentially conflicting regulations which apply to different types of buildings and occupancies; to place public and private buildings on an equal plane with respect to fire prevention and adequacy of building construction; to require new and existing buildings alike to keep pace with advances in technology concerning fire prevention and building construction, and to provide protection to both residential and non-residential buildings.

The Legislative objectives sought to be achieved by this proposed rule would be to provide an enhanced level of protection to the people of this State from the hazards of fire and inadequate building construction and to require buildings in this State to keep pace with advances in technology concerning fire prevention and building construction. These objectives will be achieved by adding new provisions to the Uniform Code that will provide specific provisions and requirements that shall apply to rail stations given the unique nature and design of rail stations in the State.

3. NEEDS AND BENEFITS

The purpose of this rule making is to amend the Uniform Code to include certain specific provisions and requirements that shall apply to rail stations. This proposed rule would define the term “rail station” as “a building or structure, or portion thereof, that is utilized for the boarding and/or disembarking of passengers from train equipment, including passenger rail and fixed guideway transit systems, and ancillary spaces to such activities. This includes public locations, back of house locations, and trainways within the bounds of the building or structure. This shall not include shelter stops.”

Rail stations are unique structures within the Uniform Code in that many building occupants enter rail stations by train equipment that was boarded in a different location. Upon disembarking train equipment, the

occupant has entered the building, but is immediately unfamiliar with the building layout, having not entered the building through a means of egress element. Should an emergency event occur, an occupant's first thoughts are generally to exit a building via the same route they entered it, which in the case of rail stations, is typically not an option. This provides a different type of experience for rail station occupants than most other building occupants, necessitating the need for specialized provisions for rail stations.

The current version of the Uniform Code does not include specific provisions tailored to address the unique nature of rail stations. Many rail stations in the State would be considered underground buildings under the current Uniform Code. Underground buildings pose specific hazards and design complications with complying with other provisions of the Uniform Code, resulting in Section 405 of the 2020 Building Code of New York State having requirements specific to underground buildings. This section addresses topics such as automatic sprinkler systems, compartmentation, smoke control systems, fire alarm systems, standby and emergency power, and standpipe systems. However, Section 405.1 specifically exempts fixed guideway transit systems from the specific requirements of underground buildings. Therefore, although the Uniform Code recognizes underground buildings require special consideration, rail stations on fixed guideway transit systems would be exempt from the typical underground buildings provisions, leaving rail stations without the necessary specific provisions to address their unique nature. This has historically resulted in numerous variance applications to the Department of State Boards of Review through the process established under 19 NYCRR Part 1205 Uniform Code: Variance Procedures.

NFPA 130 is published by the National Fire Protection Association, who is globally recognized for developing standards related to fire, electrical, and related hazards, and is the recognized standard for fixed guideway transit and passenger rail design. It addresses the uniqueness of rail stations by providing for the safety of rail station occupants through design requirements including specific provisions for fire alarm and sprinkler

systems, standpipe systems, fire separation and fire rated construction, smoke control systems, and emergency communication and evacuation. Accordingly, Board of Review variance decisions and mitigating criteria relied heavily on the use of various parts of NFPA 130 to address the complications over the direct application of the current Uniform Code to new rail stations, and specific challenges for providing accessible entrances, fire safety improvements, and construction limitations within existing rail stations. Therefore, the proposed rule would incorporate by reference NFPA 130, and also make the necessary modifications, including the typical mitigating criteria as applicable, from past Board of Review decisions.

In general, approximately 4,000 code enforcement officials in about 1,600 municipalities would be affected by an amendment to the Uniform Code (the City of New York will not be affected by this rule because the 2014 NYC Construction Codes is in effect in the City of New York).¹ Given the specific definition of rail stations as provided for in the rule, the limited number of locations where buildings meeting the definition would be located, and the limited entities that would have custody of those buildings, it is anticipated that a very small percentage of municipalities will actually be impacted by this proposed rule. The majority of rail stations in the State are currently in the custody of State construction-permitting agencies (*see* 19 NYCRR Part 1204) such as the Metropolitan Transportation Authority (MTA) or its affiliated agencies, with several other entities such as the Niagara Frontier Transportation Authority, Capital District Transportation Authority, the National Railroad Passenger Corporation (commonly known as “Amtrak,” a federal agency not regulated by the Uniform Code), and some private operators operating rail systems. As defined within the rule, the provisions only apply to rail stations serving passengers on fixed guideway transit and passenger rail systems, which by definition are for the movement of passengers within and between metropolitan areas. This would mean the provisions do not apply to systems utilized specifically for other uses such as systems used for tourist, scenic, historic, or excursion

¹ For 2014 NYC Construction Code *See*: <https://www1.nyc.gov/site/buildings/codes/2014-construction-codes-updates.page>

operations; conventional freight systems; or circus trains; thereby further narrowing the number of buildings and systems impacted by this rule. Stations not meeting the specific definition for “rail station” generally do not contain the same unique hazards and would therefore be able to comply with all other provisions of the Uniform Code. This aligns with the scope of NFPA 130 which specifically states that the standard does not cover requirements for those other types of rail systems.

As noted above, incorporation of the publication “Uniform Code Provisions for Rail Stations” and the standard NFPA 130 in this proposed rule is a compilation of the approved variances into specific technical requirements for rail stations. This proposed rule will reduce the duplication of effort on both the regulated parties and the Department of State from deliberating and completing the variance process for technical topics that have been previously approved on multiple occasions by the Department of State Boards of Review. It will also solidify the necessary technical provisions specific to rail stations in order to ensure all people of the State are protected from hazards of fire and inadequate building construction resulting from the uniqueness of rail stations.

4. COST

a. COST TO REGULATED PARTIES FOR THE IMPLEMENTATION OF, AND CONTINUING COMPLIANCE, WITH THE PROPOSED RULE

This rule making proposes the inclusion of technical requirements pertaining to rail stations. Regulated parties are not expected to bear any additional net costs relating to the construction, operation, or maintenance of rail stations in comparison to the existing provisions contained within the Uniform Code. These regulated parties are limited in nature to those that operate rail stations as defined in the proposed rule. They would include those rail stations that are in the custody of a private corporation, a local government, a State Agency, or a regional transportation authority. Those designing and constructing rail stations will likewise realize savings

for not having to utilize the variance process when designing and constructing these unique buildings, as noted below relating to the example of the impact to MTA, who has custody of the majority of the buildings impacted by this proposed rule.

For regulated parties constructing new rail stations, costs of complying with the requirements of the references incorporated into the proposed rule will differ in comparison to the current provisions of the Uniform Code. The more significant costs due to the requirements would include fire protection engineering-based design work focused on risk assessment, pedestrian flows based upon projected occupant loads, computational fluid dynamics (CFD) for tenability analysis, and additional fire testing of certain rail station interior components in public locations. MTA has submitted information that a standalone project for fire protection engineering-based design work for pedestrian flow, risk assessment, and CFD for an MTA owned rail station in the City of New York, which includes several center-island style platforms and associated waiting and retail spaces, would result in an increased cost of approximately \$3,403,000. This cost is considered to be the maximum limit of the work that is expected to meet the additional design costs within NFPA 130 as it includes the most expensive and complex additional requirements NFPA 130 could impose on a large rail station. Unlike the scenario above, many rail stations are constructed as an open station, as defined in the rule making, and would not need as extensive CFD performed for tenability, and therefore, would cost less.

An increased cost that some rail stations may incur is the installation of emergency ventilation, also known as a smoke control system. This requirement is for stations that are not open stations and the fire protection engineering-based design work identifies the need for an emergency ventilation system. Rail station designs with high ceilings, natural ventilation, and rated HVAC systems can achieve the goals of tenable design without the additional costs of emergency ventilation. However, the construction of new rail stations under existing buildings does sometimes require emergency ventilation. A current MTA design to establish smoke

ventilation in a 330 foot long passageway with low ceilings, including the costs of the installation of ductwork and multiple fans to provide approximately 40,000 cubic feet per minute of exhaust from a subterranean level 30 feet below grade to the roof of a two-story structure above grade with two shafts is currently estimated at \$1,000,000. It is important to note that emergency ventilation systems would be required for many of the rail stations mentioned within this paragraph if the exception for fixed guideway transit systems was not within the 2020 Building Code of New York State for underground buildings, therefore, the cost may be perceived as an additional expense brought on by the use of NFPA 130, but is typical for an underground buildings built to the current Uniform Code.

Additional costs of the incorporated reference standard's requirements could include the need for fire testing of certain internal components to meet additional fire safety requirements. The National Institute of Standards and Technology (NIST) survey of fire testing completed in document NIST Internal Report 6582 states that fire testing costs are in the \$50,000-\$75,000 range per test.² Since most rail stations already limit the materials permitted within the station due to heavy-duty wear, vandalism, and security, the need for specialized testing is limited to those products that are both combustible, not manufactured with known material fire properties, such as fire retardant treated wood, and are of enough value to place within the rail station.

In comparison to the additional costs of the incorporated reference standard's requirements, the standard also provide cost savings due to the flexibility in the design of the means of egress. As an example, if the Uniform Code requirements were followed to meet exit access travel distance requirements, the regulated party would need to install roughly double the number of stairways on train platforms for aboveground and subterranean stations due to the baseline requirements of the Uniform Code of 200 feet exit access travel distance in an unsprinklered Group A-3 occupancy, when compared to the baseline of 325 feet in NFPA 130

² <https://nvlpubs.nist.gov/nistpubs/Legacy/IR/nistir6582.pdf>

Section 5.3.3.4. Based on a two-platform arrangement of 10 standard commuter rail car lengths (80 feet each), this adds at least two stairways off each platform (total of four), and which would be required by the Uniform Code to be enclosed to the level required for an “exit enclosure,” as defined in the Uniform Code. The additional costs of providing the stairways and enclosures by not following NFPA 130 have been estimated by the MTA at \$2,241,000 per enclosed stairway for one change of level, or \$8,964,000 for the four stairways described in the characteristic commuter rail station layout herein. However, this estimate does not take into account the additional excavations, property acquisitions, street and sidewalk changes, and existing infrastructure that are all additional costs if the Uniform Code provisions were followed.

In comparing the additional costs and the cost savings of utilizing the incorporated reference standard’s requirements, the increased emphasis on a performance-based type of design allows regulated parties more flexibility in providing adequate safeguards, rather than prescriptive measurements that are small, when compared to the dimensions of most new rail stations. This flexibility allows for more cost savings to be realized by regulated parties as a rail station design becomes more complex and is being designed in existing urban areas. Additionally, due to the absence of any requirements for fixed guideway transit systems in the Uniform Code for underground buildings, additional overall costs are not expected since NFPA 130 has generally been the best practice document that is followed due to the absence of specific requirements currently in the Uniform Code.

For operations and maintenance of rail stations, overall costs are expected to be less than the requirements of the current Uniform Code due to the modified requirements of automatic sprinkler systems, the allowance for Class I standpipes, unenclosed stairways without fire-rated doors, locations of portable fire extinguishers, recognition of existing exit signage, and public safety radio repeater systems. As a comparison, an agency of MTA currently pays \$862.00 every six months to inspect a single riser sprinkler system within the

City of New York and \$500.00 in Westchester County. Sprinkler protection of the four new rail stations proposed for construction in the City of New York would cost an additional \$34,480 over the next 5 years, not taking into consideration changes in costs from vendors, if the current Uniform Code provisions were followed without this proposed rule.

The cost is also expected to be less than the current Uniform Code for existing rail stations undergoing rehabilitation, as defined in the Uniform Code, due to specific relief for certain Uniform Code requirements for rehabilitations that increase access to those with mobility restrictions. As some improvements are considered an addition by the 2020 Existing Building Code of New York State due to the need to build outside the existing rail station footprint to provide an elevator, exceptions to accessibility improvements that are found for alteration work generally cannot be applied. This requires consideration of the protection of the “fire area,” as defined in the 2020 Existing Building Code of New York State, resulting in the need to provide a sprinkler system, automatic fire detection, and enclosed stairway in at a minimum of the immediate area of the new elevator (5000 square foot coverage area), which is estimated at \$2,728,000 for an elevator serving a platform directly to the street level.

MTA has provided data to show that the estimated cumulative cost over the previous 18 years of MTA code compliance staff to review, prepare, approve, and participate in the presentation of variances to the Department of State and, when needed, the Regional Board of Review is currently at \$1,522,500. This does not include the costs to the designers of the projects that were funded by MTA, other interested disciplines that are part of the MTA, or Department of State staff that either issues routine variances or acts as the secretariat to the Regional Board of Review. Further, the cost to delays of other variance petitioners throughout the State due to MTA regularly seeking spots on the hearing schedule of Regional Board of Review agendas is recognized as a negative aspect to overall building construction within the State.

b. COST TO THE AGENCY, THE STATE AND LOCAL GOVERNMENTS FOR THE IMPLEMENTATION OF, AND CONTINUED ADMINISTRATION OF, THE RULE

Given the specific definition of rail stations as provided for in the rule, the limited number of locations where buildings meeting the definition would be located, and the limited entities that would have custody of those buildings, it is anticipated that a very small percentage of municipalities will actually be impacted by this proposed rule. As noted, the majority of rail stations in the State are currently in the custody of the MTA, who the Division worked closely with in the development of this rule. The Department of State's Division of Building Standards and Codes, in addition to staff from MTA, will provide any necessary training, guidance documents, or technical support to the enforcement community on the application of this rule, at no cost to the code enforcement community.

It is anticipated that the Department of State's Division of Building Standards and Codes will receive fewer, if any, variance applications related to rail stations, as defined in the rule, thereby reducing staff time spent on acting as the secretariat to the Board of Reviews. As noted above, the State will see a cost reduction in future projects that are funded by the State for MTA due to streamlining of technical requirements, minimization of delays due to the removal of variance application for many projects, and the known technical requirements by potential bidders for design-build projects that MTA is statutorily required to execute. Other State and local agencies, authorities, and jurisdictions, including regional transportation authorities other than the MTA, would similarly see project savings from the requirements addressing the unique design and construction provisions of this rule making and minimizing the necessity to apply for variances.

Code enforcement personnel employed by the cities, towns, villages, and counties that are required to administer and enforce the Uniform Code will have no additional cost to enforce these requirements in the limited amounts that rail stations will be constructed or rehabilitated by non-State Agency entities. With respect to the City of New York, where a majority of the impacted buildings are located, there are no additional costs to

the City of New York since the MTA agencies and affiliates within their jurisdiction are all construction-permitting agencies administering the Uniform Code to MTA agency and affiliate projects. The rule does not change any requirements regarding the custody or responsibilities between local governments, including the City of New York, and State Agencies.

Local governments and State agencies can obtain a copy of 19 NYCRR Part 1228 and the publication entitled “Uniform Code Provisions for Rail Stations” on the Department of State’s website at no cost. A copy of NFPA 130 “Standard for Fixed Guideway Transit and Passenger Rail System, 2020 Edition” can be viewed for free online or purchased in a digital or paper format for less than \$70 on NFPA’s website at www.nfpa.org.

5. LOCAL GOVERNMENT MANDATES

This proposed rule will not impose any new program, service, duty, or responsibility upon any county, city, town, village, school district, fire district, or another special district.

6. PAPERWORK

This rule will not impose any additional reporting or record keeping requirements. No additional paperwork is anticipated. The Department anticipates there will be a reduction in paperwork related to the elimination of the necessity for variances for rail stations. This reduction would be realized by both the applicants for variances, the Department of State as the secretariat to the Boards of Review, and the authorities having jurisdiction over the projects.

7. DUPLICATION

The proposed rule does not duplicate any existing Federal or State requirement.

8. ALTERNATIVES

Alternatives to the adoption of the Uniform Code Provisions for Rail Stations have been considered but rejected for the following reasons.

The first alternative would be to attempt to construct in accordance with the current version of the Uniform Code without the application of variances to projects. As an example, a regulated party could add an elevator outside the current bound of a rail station to increase accessibility to a currently non-accessible below-ground rail station. In doing so, the current 2020 Existing Building Code of New York State would require the installation of an automatic sprinkler system, automatic detection system, and enclosed exit stairways throughout the public locations within the station. To provide a sprinkler system, automatic fire detection, and enclosed stairway in just the immediate area of the new elevator (5000 square foot coverage area) is estimated at \$2,728,000 for an elevator serving a platform directly to the street level. This type of additional cost is not an acceptable alternative as it would likely inflate the cost of the proposed project over budget by requiring work that is not in line with the nationally recognized standard, NFPA 130, which would not require such installation of components in new rail stations.

The second alternative would be the direct adoption of NFPA 130 without modifications proposed within the Uniform Code Provisions for Rail Stations publication. Section 101.3, Intent, of the 2020 Building Code of New York State, provides: “The purpose of this code is to establish the minimum requirements to provide a reasonable level of safety, public health, and general welfare through structural strength, means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life, explosion and other hazards, and to provide a reasonable level of safety to firefighters and emergency responders during emergency operations.” This intent is substantially different than that of the purpose of NFPA 130, Section 1.2,

which provides: “The purpose of this standard shall be to establish minimum requirements that will provide a reasonable degree of safety from fire and its related hazards in fixed guideway transit and passenger rail system environments.” Due to the layout of the referenced standards of the Uniform Code, especially the 2020 Building Code of New York State, the complete replacement of all Chapters of the 2020 Building Code of New York State with NFPA 130 does not adequately address all of the requirements of the intent. For example, NFPA 130 has specific requirements for designing the means of egress for a rail station that are more specific than those found in Chapter 10 of the 2020 Building Code of New York State. However, NFPA 130 does not have accessible means of egress requirements within rail stations and only provides guidance to follow NFPA 101, Life Safety Code. This different location of accessible means of egress requirements is not an acceptable alternative since it has the potential to provide an inconsistent application of accessible means of egress requirements. Additionally, referencing NFPA 101, Life Safety Code, is an additional burden to code enforcement and regulated parties.

The third alternative would be to remove the exception to “fixed guideway transit systems” within Section 405 of the 2020 Building Code of New York State, regarding underground buildings. While this would apply fire safety requirements consistently amongst all underground buildings, such an alternative is not acceptable since it does not take into account the need for unenclosed tunnel and trainway openings, the unique nature of an occupant load that does not necessarily enter the rail station by building openings, and the emergency ventilation challenges caused by the pressure differentials from the movement of train equipment.

The fourth alternative is to utilize the 2020 Fire Code of New York State in its entirety without the provisions of the Uniform Code Provisions for Rail Stations publication. This alternative would require a separate, and usually redundant, radio repeater system that would create a duplication of features that would not support a consistent use by emergency responders in jurisdictions already using an established system. Additionally, the installation of portable fire extinguishers in areas susceptible to vandalism and theft, such as open stations without

a constant rail operator presence, does not meet the intended objective of providing fire extinguishers to trained personnel when such extinguishers are available in both non-public areas and train equipment. Finally, the specific requirements for addressing the fire safety and evacuation plans for persons with disabilities in rail stations are not specifically required for all locations. Collectively, this alternative is not acceptable since it does not address the specific fire safety operational goals that are intended by the 2020 Fire Code of New York State, as they would apply to the uniqueness of rail stations.

9. FEDERAL STANDARDS

There are no standards of the Federal Government that address the subject matter of the proposed rule.

10. COMPLIANCE SCHEDULE

The Department of State (DOS) and MTA notified the “regulated parties” (i.e., cities, towns, villages, counties, and State agencies that administer and enforce the Uniform Code and known entities who operate rail systems) of its intent to develop and propose this rule by means of a notice that was posted on the DOS website and contained in *Building New York*, an e-bulletin sent by DOS to local governments and other persons and entities interested in the construction industry. The notice was posted, and issued in the *Building New York* e-bulletin, prior to the filing of the Notice of Proposed Rule Making for this rule. Additionally, DOS worked closely with MTA, the agency with custody over the majority of the buildings impacted by this rule, in the development of the rule. MTA has performed outreach in the development of this rule making to the City of New York, State Agencies that would potentially be impacted by this rulemaking, and local governments where existing rail stations are currently located. #

The target date for publishing a notice of adoption for this rule making is July 1, 2021. The Department anticipates that the rule will become effective ninety (90) days after the date such notice of adoption is published in the State Register, but the Department will recommend that the Code Council find that in the period during which changes to the code have been adopted but are not yet effective, a person shall have the option of complying with either the provisions of the code as changed or with the code provisions as they were set forth immediately prior to the change pursuant to Executive Law §378(18)(b).