



EXTERNAL PARTNER PROGRAM
ADJACENCY GENERAL NOTES

All notes listed below shall be included in the Project's Contract Drawings.

1. The NYC Transit (NYCT) reserves the right to place inspectors, flagmen or other personnel in the subway structures during construction of the project linked by a telephone system, if deemed necessary, to observe the effects of the construction on the transit facilities. NYCT further reserves the right to place such personnel whenever, in its opinion, the project conditions warrant such placement, regardless of distance. The cost of such personnel, telephone installation and any re-routes, diversions of service, work trains, etc., made necessary by the project, must be borne by the project or the responsible New York City/State Agency.
2. All rock excavation adjacent to the transit structure shall be channel drilled two feet below subgrade.
3. If top of rock is found below subway structure, the subway structure shall be underpinned in accordance with drawings submitted to NYCT for review and approval. Underpinning drawings shall be signed and sealed by a professional engineer licensed in the state of New York.
4. If the rock stratum quality is soft or seamy, lateral supports shall be provided below the subway structure in accordance with drawings and calculations submitted to NYCT for review and approval. Lateral support system drawings and calculations shall be signed and sealed by a professional engineer licensed in the state of New York.
5. Blasting with light charges only shall be permitted subject to the approval of NYCT's Engineer and in accordance with the regulations of the Fire Department. The Contractor shall provide a detailed monitoring plan, providing for measurements of both particle velocity and displacements at critical locations of the NYCT structure. The monitoring plan shall include threshold and upset levels of both particle velocity and settlement together with an action plan for their implementation. The contractor shall secure an approved seismologist to install and operate suitable velocity gauges to continuously monitor particle velocity and an independent licensed surveyor to monitor displacements. A qualified technician from the monitoring company shall be on site to provide vibration readings upon the request of a NYCT Engineer. The threshold maximum particle velocity above the ambient caused by the blasting shall be 0.5 inch per second. Values exceeding this level shall be reviewed and evaluated by NYCT's Engineer. Measured particle velocities under the blasting work shall not exceed the upset level of 2.0 inches per second at any time.
6. Before placing concrete, the subgrade of the foundations in the vicinity of the subway structure shall be inspected and approved by NYCT's Engineer.
7. Any damage to NYCT structures or architectural elements shall be repaired and/or replaced with the same in kind, subject to the approval of the NYCT Engineer at the expense of the project.
8. Excavation embankments shall be shored and braced. Drawings indicating a suggested method of construction shall be submitted to NYCT for review and approval in conjunction with the project's contract drawings. If it is determined that excavation may undermine NYCT's structural foundation, underpinning shall be required. Drawings and calculations for the underpinning shall be submitted to NYCT for review and approval prior to excavation. Drawings and calculations shall be signed and sealed by a professional engineer licensed in the state of New York.
9. Temporary shoring may be placed in direct contact with NYCT structures only if the NYCT structure is shown to be able to support all anticipated (existing and temporary) loads that can be transferred through the temporary structures without damaging or altering the existing structure. All calculations and drawings for the temporary shoring installation and removal shall be signed and sealed by a professional engineer licensed in the state of New York.

York. The calculations and drawings shall be submitted to NYCT for review and approval. At the completion of the project, these temporary shoring and bracing systems shall be removed, or cut-off as approved by NYCT. Any damages incurred during the installation and removal of the temporary shoring shall be repaired and/or replaced to the satisfaction of the NYCT Engineer at the expense of the Contractor.

10. When piles are driven or drilled adjacent to the subway structure, boring data, pile layouts, specifications and installation procedures shall be submitted to NYCT for approval. Velocity meters shall be installed in the subway tunnel at critical locations to monitor induced vibrations. Induced displacements along the tunnel structure and track invert shall be monitored during driving or drilling. The threshold maximum particle velocity above the ambient caused by the driving or drilling shall be 0.5 inch per second. Values exceeding this level shall be reviewed and evaluated by the NYCT Engineer. Measured particle velocities due to driving or drilling pile work shall not exceed the upset level of 2.0 inches per second at any time
11. No piles shall be installed by any method within three feet of subway structure, measured from the edge of the pile or casing to the wall. Closed-end piles shall not be driven within ten feet of the subway structure.
12. All piles shall be placed within a pre-augered cased hole to the influence line. The casing shall be cleaned without disturbing the soil outside the casing and the pile shall be placed within the casing for installation. The piles may then be driven beyond the influence line within the casing.
13. The influence line shall start at the bottom of the subway structure and extend from 1H:1V to 2H:1V slope depending on the soil properties and ground water table. For piles installed within ten feet of the subway structure, the casing shall extend to the bottom of the subway structure.
14. All piles shall be driven or drilled a minimum of ten feet below the intersection of the pile centerline and the influence line of the subway structure.
15. The use of "down-the-hole-hammers" for installation of piles through overburden and fill shall be permitted only to remove boulders. This method shall not be permitted as a matter of course to advance the hole. Furthermore, this method used to construct rock sockets shall not be allowed within 5 feet of the NYCT structure. The use of machine utilizing air for soil removal shall not be allowed.
16. Vibratory hammers shall not be permitted within 75 feet of subway structures. Hoe rams shall not be permitted within 25 feet of subway structures.
17. Dynamic compaction methods using dropped heavy weights shall not be conducted within 1000 feet of any NYCT structure unless it is shown that induced settlements and vibrations will not damage these structures. A suitable monitoring plan including settlement and vibration measurements shall be approved by the NYCT Engineer for all such operations within these distances prior to work.
18. There shall be no machine excavation within 3 feet of NYCT structures, power duct lines, or any other facilities until they have been carefully exposed by hand excavation.
19. All dewatering operations conducted within 500 feet of the NYCT structure shall be performed in accordance with drawings, calculations and procedures signed and sealed by a professional engineer licensed in the state of New York. These drawings, calculations and procedures shall be submitted to NYCT for review and approval. The distance from the structure to the dewatering operation may be reduced provided that soil conditions at the site indicate that the radius of influence of the dewatering is less than 500 feet. For dewatering within the radius of influence, the dewatering program shall be shown to have negligible influence on settlements of the NYCT structure.
20. Subway entrances, ventilators, vaults and any NYCT appurtenances at the sidewalk shall be underpinned or shored and braced if directed by NYCT's Engineer.

21. NYCT, at its discretion, reserves the right to require the project to close or maintain and protect existing subway entrances, ventilators, structures and property adjacent to the project during construction. Such construction may include underpinning, shoring, bracing and erection of suitable barricades and/or canopies and shields. Such protection shall be in accordance with drawings and calculations submitted to NYCT for review and approval. All drawings and calculations submitted to NYCT shall be signed and sealed by a professional engineer licensed in the state of New York.
22. , Temporary and permanent shield installation plans and calculations protecting NYCT facilities and/or the public shall be submitted to NYCT for approval. The plans shall include the location, design load, type and method of attachment to the transit structure. These plans and calculations submitted to NYCT shall be signed and sealed by a professional engineer licensed in the state of New York.
23. All lumber and plywood used for protection of subway facilities shall be fire retardant.
24. Subway emergency exits shall be kept clear at all times.
25. Special care shall be exercised when excavating over or near the subway roof so that the thin concrete protection of the subway waterproofing is not damaged. Repair plans for damage to the water protection waterproofing layer during excavation shall be submitted for NYCT approval. Repair work shall be performed before excavated area is filled, closed or covered up at no expense to NYCT.
26. Burning of, welding to or drilling through existing steel structures shall not be permitted except as shown on drawings approved by NYCT.
27. Horizontal and vertical control survey data of the existing NYCT structure shall be performed by a Licensed Land Surveyor to monitor any movements that occur during construction and to certify that the induced movements are within the limits noted below. If any movements require work to be stopped based on the values below, a remediation plan shall be submitted to NYCT for approval by NYCT prior to the rehabilitation and repair work..

Structure Type	Monitored & Measured Movement	Action to Take
Elevated	1/8 inch or more	Notify NYCT Engineer
Elevated	¼ inch or more	Stop Work
Subway	¼ inch or more	Notify NYCT Engineer
Subway	½ inch or more	Stop Work

28. Bus routes affected by the project may require bus diversions. These arrangements shall be made through:

Ms. Sarah Wyss
Senior Director, Operations Planning
 New York City Transit
 2 Broadway, Room A17.82
 New York, New York 10004
 Telephone Number (646) 252-5517

When impacting any bus stop, Special Operations shall be notified two weeks in advance.

29. Duct lines shall be maintained and protected during construction. Any interference with duct lines shall be reported to the NYCT Engineer. When a duct line containing cables is to be removed, or when masonry adjacent thereto is to be removed, penetrated, or drilled, the work shall be done with hand labor entirely, using hammer and chisel. Jackhammers, bull points or other power equipment shall not be used.
30. Where manholes are encountered:

- a) They shall be protected and raised or lowered as required, to match the new street grade.
- b) If manhole covers are raised or lowered, protect cables in manhole by wood sheeting of 2" nominal thickness.
- c) Prior to the start of construction operations affecting manholes and duct lines, seven days notice must be given to Mr. Anthony V. DiRuggiero, P.E., Assistant Chief Officer, Inspections and Emergency Response, MOW Engineering, at 718/694-1499.

31. Construction work done near vent gratings and hatches shall be as follows:

- a) Unless approved by the NYCT Engineer, all vent gratings and hatches shall remain outside the construction site, separated by a construction fence. Protective shields shall be provided over vent gratings as required by the NYCT Engineer.
- b) No building material, vehicles or construction equipment shall be stored or cover over vent, gratings, hatches or emergency exits.
- c) Details of sidewalk reconstruction around vent gratings, entrances, hatches and emergency exits shall be submitted to NYCT for approval.

32. Tractors, cranes, excavators, and any heavy equipment used in the vicinity of the elevated structures shall be isolated from the ground. Since the elevated structure is used as a negative return path, with a consequent potential between it and the ground, any contact between the structure and grounded equipment could result in burning of the steel.

33. Temporary construction sheds, barricades or plywood partitions shall be a minimum of 5'-0" from edge of finished platform. All barricade plans shall be submitted to NYCT's Office of Station Programs for review and approval.

34. The general requirements for NYCT Station Areas or Stairway/Closings are as follows:

- a) Only one stairway at each station shall be permitted to be closed at the same time. Approvals for closing any stairway shall be obtained from the Division of Station Programs at least three weeks in advance.
- b) Ms. Susannah Harrington, Director, Office of Station Programs; Telephone 718/694-4891 of the Division of Stations shall be notified three weeks prior to the actual closing and reopening of the entrance.
- c) Signage shall be supplied and posted at least two weeks in advance, advising the public of the proposed subway stair closing. However, if it is an entire entrance closing, signage shall be posted two weeks in advance.
- d) The street entrance stairway shall not be closed unless manpower and materials are available to commence work on dates permitted.
- e) Once the closing is effected, construction signs shall be placed at appropriate locations on the barricades at the street and mezzanine levels, stating the contractor's name, 24 hour emergency telephone number, contract number, the duration of the closing, direction to an alternate entrance/exit, and an apology for the inconvenience to our customers.
- f) Existing station signage shall be adjusted to reflect any changes in access/egress.
- g) Barricades shall be painted Federal Blue and be made of fire rated material. Barricades shall be kept graffiti free at all times. The contractor shall maintain the barricaded area clean of all debris.

- h) All materials shall be properly stored and secured away from customer traffic.
 - i) The Contractor shall remove all waste material and barricades from all station areas when construction is completed.
 - j) Inspection of the area under construction by authorized NYCT Station Department employees shall not be inhibited.
 - k) If streetlights on the sidewalks are affected, temporary lights shall be provided.
35. If new concrete construction is designed to join to existing concrete, dowels, lap splices and keyways shall be used in accordance with NYCT Standards. Otherwise, cold joints shall be designed in accordance with NYCT Standards.
36. If the project involves construction or alteration of a subway facility on private property, the property owners shall enter into an agreement with NYCT pertaining to all work affecting the transit facilities with clearly defined limits and responsibility for maintenance and liability.
37. Wherever a new sidewalk is being placed adjacent to NYCT structures the following shall be required:
- a) The top of the new sidewalk shall be flush with the subway vent gratings, hatches and emergency exits.
 - b) The slope of the new sidewalk shall be such that the drainage be away from these structures.
 - c) A 1/2" premolded filler shall be installed between the new sidewalk and the NYCT structure.
 - d) Where sidewalk elevations are being changed, details of proposed work around NYCT structures shall be submitted for approval.
38. Before entering NYCT property, Contractor or Subcontractor's personnel shall have attended NYCT Track Safety Training and expect to follow NYCT rules and regulations as per training and instructions.
39. Before the start of any work, the Contractor shall make an examination, in the presence of NYCT's Engineer, of the interior and exterior of NYCT subway or other structure adjacent to the proposed work. The person or persons authorized by the Contractor to make these examinations shall be approved by the Engineer. The Contractor shall take all photographs as may be necessary or ordered to indicate the existing condition of NYCT structure. Any structurally deficient condition shall be made safe prior to the commencement of the work. A copy of the field report with photos shall be submitted to Mr. Anthony V. DiRuggiero, P.E., Assistant Chief Officer, Inspections and Emergency Response, MOW Engineering, 130 Livingston Street, Room 8046, Brooklyn, New York 11201, Telephone 718/694-1499 before the start of construction.
40. All architectural details (service booths, railings, doors, etc.) shall conform to the latest NYCT Standards. These standards are available at NYCT.
41. Standard NYCT Insurance Clauses shall be made part of the Project's Contract Drawings. Proof that the necessary insurance is in effect shall be required before work can commence.
42. At the close of any project involving construction or alterations to transit facilities, a pdf and electronic copies complying to microstation.dgn format of "approved as-builts" must be provided to NYCT for its records. For details of specific requirements, contact MTA Construction and Development External Partner Program.
43. At least three weeks prior to the start of construction operations, notification shall be given to Mr. Anthony V. DiRuggiero, P.E., Assistant Chief Officer, Inspections and Emergency Response, MOW Engineering.