

There Should Be a Broadway Junction Station on the Interborough Express

John Pegram¹

Although Broadway Junction is one of the busiest transit transfer stations in Brooklyn, the MTA does not plan to build an Interborough Express (IBX) station there. Instead, many transferring IBX riders would have to walk about ¼ mile from or to the IBX station at Atlantic Avenue.



An Imagined Sign at Atlantic Avenue Station

The MTA’s consultants apparently concluded, in preparing the MTA’s January 2022 *Interim Report* (attached)² on the IBX project, that an additional, 1.8 mile-long, single-track tunnel with 3 underground platforms would be required to have an IBX station at Broadway Junction. The estimated cost was over 1 billion dollars.³ The reason for requiring a new tunnel was primarily because one of the four existing East New York Tunnel tubes under Broadway Junction is used by the Buckeye pipeline to deliver jet fuel (kerosene) to JFK Airport.⁴ The MTA’s January 2023

¹ © John Pegram, 2024.

² MTA, *Interborough Express – Feasibility Study and Alternatives Analysis – Interim Report* (Jan. 2022) (*Interim Report*). The attached copy is the most complete version with appendices available to the public, produced to me in response to my Freedom of Information Law (FOIL) request. Citations to pages of this version, as indicated by a PDF reader, are in the form [###/1041].

³ These facts and conclusions are not all in one place in the *Interim Report*. See generally [725-726]. The tunnel length and stations affected are indicated in drawings at [872-875, 883-884/1041] For costs, compare, [547/1041] with [569/1041], and [612/1041] with [632/1041]. Note that at least some of the detailed base cost estimates in the *Interim Report* Appendix 1.12 are mislabeled as “w/ Broadway Junction,” whereas the descriptions and costs indicate that those estimates are without a new East New York Tunnel tube, without a Broadway Junction station, and without southbound platforms of the Atlantic Avenue and Wilson Avenue stations being underground. See, e.g., [610-628/1041].

⁴ *Interim Report*, [10, 259/1041]. See pipeline map at <https://pvnpm.phmsa.dot.gov/PublicViewer/>, New York State, Kings County.

*PEL Report*⁵ does not include any Broadway Junction station on the IBX line, apparently because of the projected cost of that new transit tunnel,

There could be a better and much less expensive solution. Move the pipeline. That should not be difficult. Indeed, the *PEL Report* contemplated “Relocating portions of the Buckeye pipeline,”⁶ possibly referring to other parts. The existing four tubes of the East New York Tunnel could be used for two transit tracks, a transit station platform and a freight track. Ideally, a new station building at Broadway Junction would include elevators and escalators connecting to each of the other transit lines.

Let’s dig into the details.

The Present Broadway Junction Station

According to the *Interim Report*, “Broadway Junction is a critical subway connection in east Brooklyn” and “The existing Broadway Junction station is a key transfer location between subway lines in Brooklyn . . .”⁷ As shown in the aerial view below (from Google Maps), Broadway Junction is served now by the A, C, J, L and Z “subway” lines, and several bus routes on the adjoining Van Sinderen Avenue. The IBX *Interim Report* projected that, if a station were built there, it would be the busiest IBX station, with 95% of the projected IBX activity there being transfers with other bus and subway lines.⁸ The area around the Broadway Junction also is being considered for major economic development.⁹ The *Interim Report* says, “[O]ne of the goals of the Broadway Junction initiative [is] to create opportunities for sustainable, transit-oriented employment and residential growth.”¹⁰

⁵ MTA, *The Interborough Express - Planning and Linkages Study* (Jan. 2023) (*PEL Report*). The attached copy is the most complete version with appendices available to the public, produced to me in response to my FOIL request. Citations to pages of this version, as indicated by a PDF reader, are in the form [###/1150].

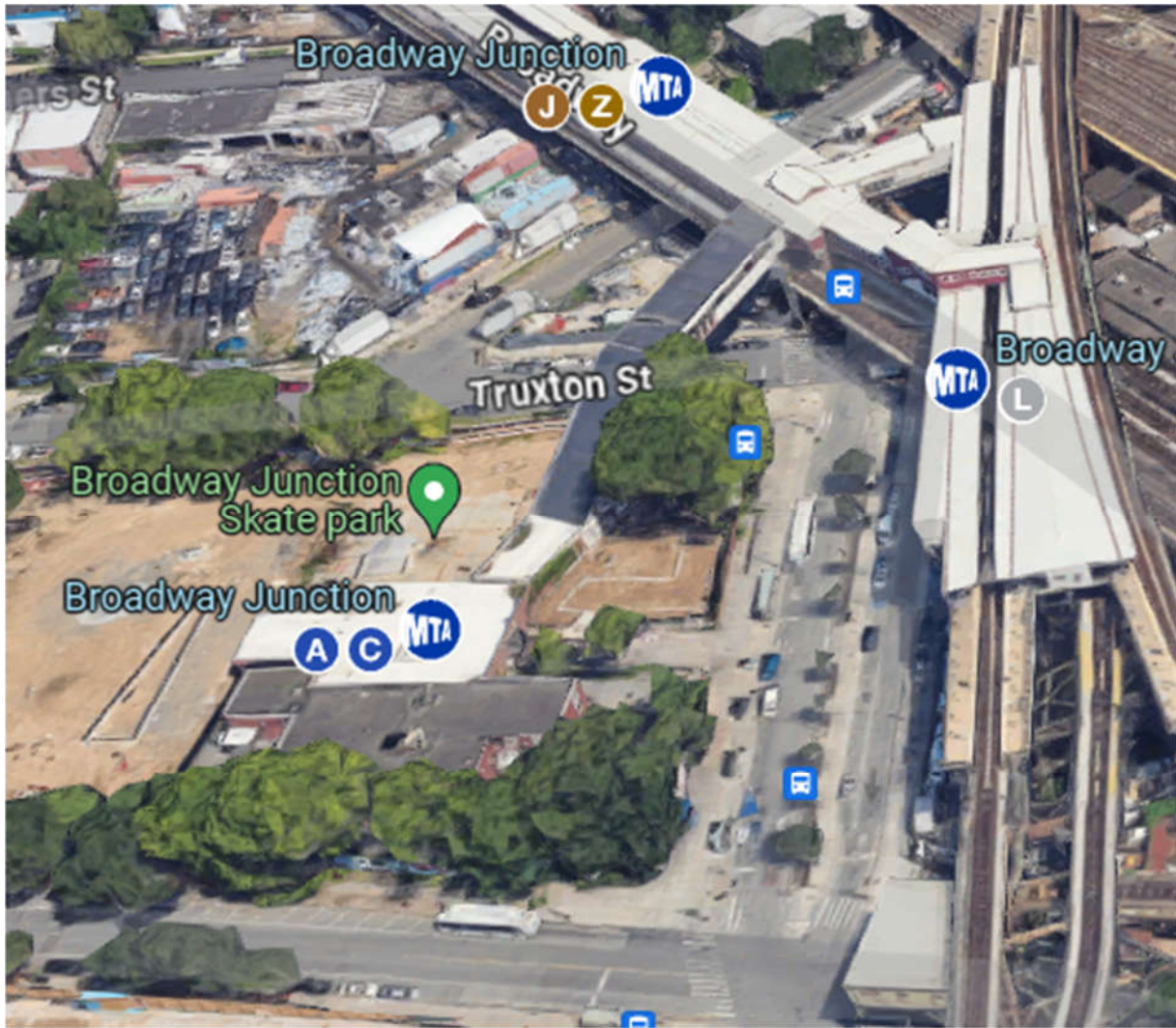
⁶ *PEL Report*, [33/1150].

⁷ *Interim Report*, [152, 227/1041].

⁸ *Id.*, [785-786/1041].

⁹ *Id.*, [71/1041]; *see* [165/1041].

¹⁰ *Id.*, [85/1041]; *see* [149-150/1041].



Broadway Junction Station - Aerial View

The Broadway Junction Station was built over 100 years ago at the intersection of the Broadway, Canarsie and Fulton elevated train lines.¹¹ Later, the Fulton Street elevated line was replaced by the underground subway where the A and C trains now run.

As shown in the aerial view above and photo below, riders can enter the station from Van Sinderen Avenue, which parallels the Canarsie (L) line. Bus stops are located near the entrance. The Fulton Street line (A & C) runs east-west (right-left in the aerial view). The platform for that line is about 14 feet (21 steps)¹² beneath the entrance building. The East New York Tunnel

¹¹ See Dougherty, *Tracks of the New York City Subway*, 2024, p. 111.

¹² Vertical distances estimated by the author, based on staircase step height of 8 inches.

(where the IBX line would run) runs generally north-south about 40 feet below the playground, west of the entrance building (left of the aerial view).

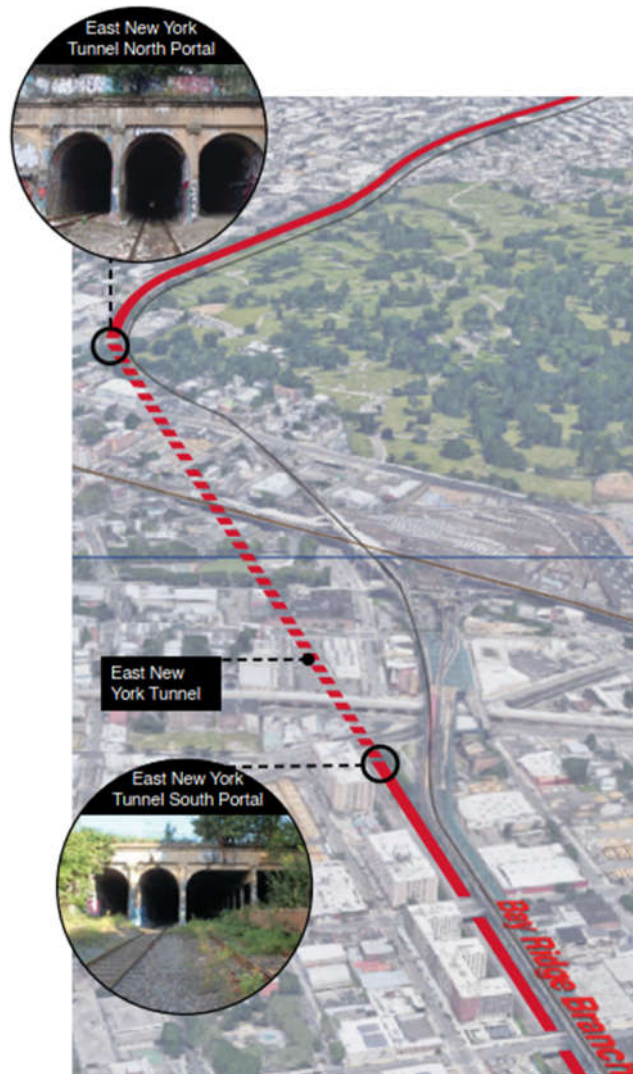
The entrance building is connected by an enclosed passageway, including stairs and escalators, rising up about 50 feet (72+ steps) and over Truxton Street to the mezzanine of the elevated structure. The Broadway line (J & Z) platforms are about 14 feet (20 steps) below the mezzanine. The southbound Canarsie line (L) platform is about 7 feet up a ramp from the mezzanine. To reach the northbound L train platform, Manhattan-bound riders must climb up and down another 14 feet (21 steps) of an overpass.



View of Broadway Junction Station, looking north from Van Sinderen Avenue

The East New York Tunnel

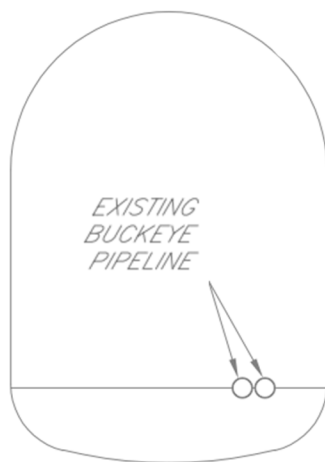
The East New York Tunnel has four tubes, one of which is closed at the north end, as shown below:



The tubes are numbered 1-4, from west to east (left to right in the South Portal photo above).¹³ Tube 1 is currently unused. Tube 2 has a freight storage track. Tube 3 is used for freight in both

¹³ *Interim Report*, [11/1041].

directions. Tube 4 is only used for two, approximately 12-inch diameter pipes of the Buckeye pipeline, which carry jet fuel (similar to kerosene) to JFK airport.¹⁴



The Buckeye Pipeline runs along the LIRR Bay Ridge Branch from near to its north end at Fresh Pond Junction, through the eastern tube 4 of the East New York Tunnel, *en route* to JFK Airport. As can be seen from the drawing above, the pipes occupy less than 1% of that tube. The pipeline leaves the Bay Ridge Branch near Linden Boulevard (NY Route 27) and continues to the airport along that eight-lane highway and other city streets in residential and business areas.¹⁵

The MTA’s Discarded Broadway Junction Station Proposal

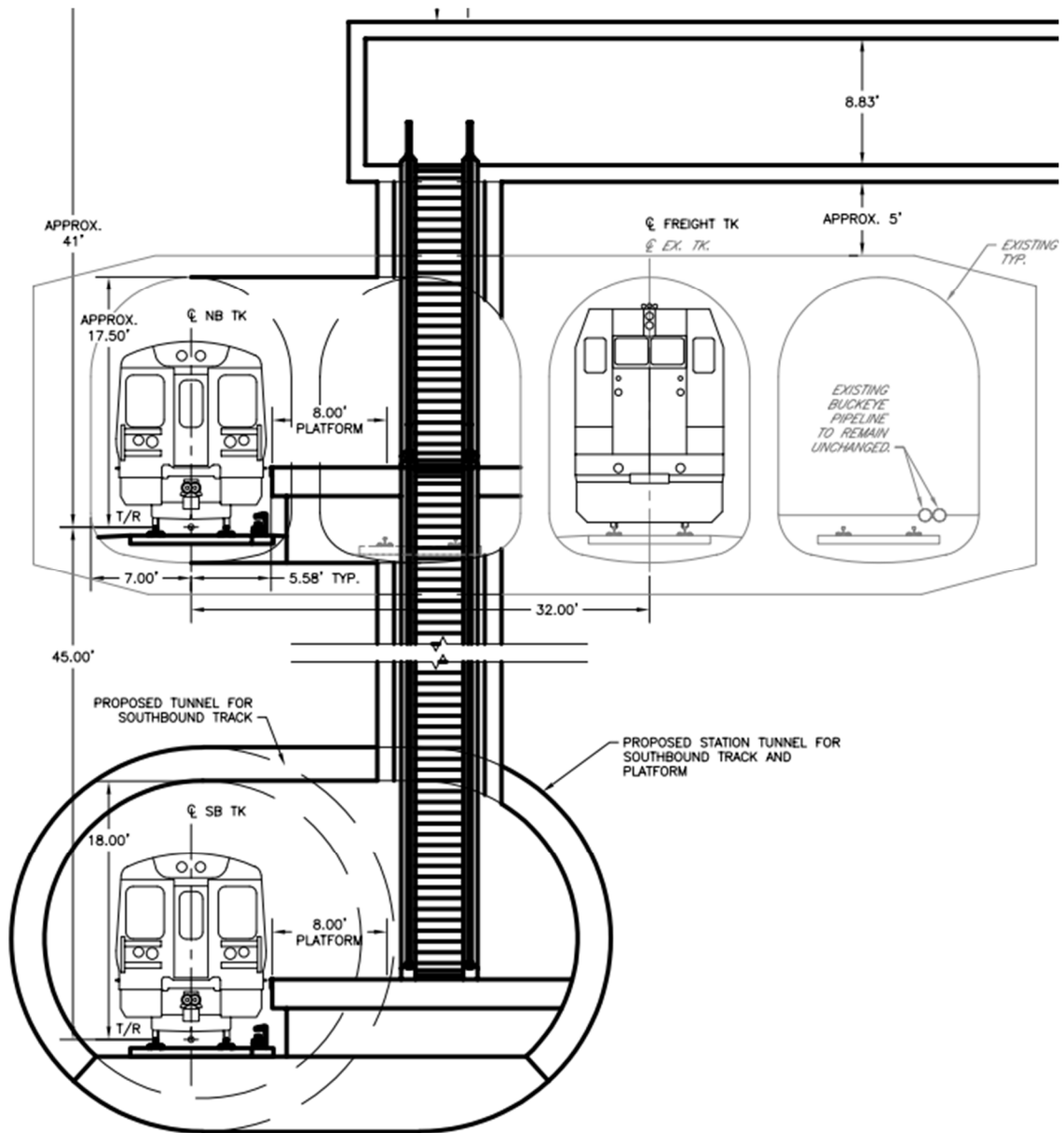
The *Interim Report* said, “Broadway Junction is an especially challenging location due to the Bay Ridge Branch running in a tunnel deep underneath the subway station complex.”¹⁶ The MTA’s consultants apparently understood that two tubes of the existing East New York Tunnel would be required for transit tracks, one for a freight track and one for the pipeline. That would leave no room in the existing tubes for station platforms. To provide a station at Broadway Junction, they proposed that tube 1 be used for northbound transit, tube 2 for a northbound station platform, tube 3 for freight and tube 4 for the pipeline. A new, deeper, 9,300-foot (1.8

¹⁴ *Id.*, [10, 259-260/1041].

¹⁵ See <https://pvnpm.phmsa.dot.gov/PublicViewer/>, New York State, Kings County.

¹⁶ *Interim Report*, [11/1041].

mile) long tunnel would be built to handle the southbound transit track and a southbound platform at Broadway Junction. See the portion of the *Interim Report* drawing below:¹⁷



Because of the depth of the new southbound tunnel and limitations on track grade, the southbound platforms at the Atlantic Avenue and Wilson Avenue IBX stations would also have to be underground.¹⁸ The MTA's consultants estimated costs both with and without a Broadway

¹⁷ From *id.*, [951/1041]. See [948/1041]

¹⁸ See *id.*, [872-875, 883-884/1041].

Junction station for each of the “Commuter Rail (CR) operating as Rapid Transit,”¹⁹ Light Rail and Bus Rapid Transit modes.²⁰ The differences exceed one billion dollars.²¹ The so-called “base” cost estimates, which omit a Broadway Junction IBX station and a new tunnel, include a 1,280 foot-long “Broadway Junction - Atlantic Ave Transfer Bridge,” to permit transferring riders to avoid walking along the street.²²

A Possible Less-Expensive Alternative

Clearly, an IBX station at Broadway Junction is highly desirable, preferably with elevators and escalators connecting to existing transit line platforms there. It would appear to be much easier and less expensive to relocate two pipes than to build a new rail tunnel to enable construction of that station. Experts would have to consider questions of access and safety in deciding where to relocate the pipeline.

Two possibilities for relocation come to mind. One is to place the pipeline in a middle tube between two transit tracks, with the pipeline passing under the Broadway Junction station platform. That could be tubes 1-3. Tube 4 would be used for a freight track. Another possibility would be to bore deeper pipeline tunnels, using a well-known Horizontal Directional Drilling (HDD) method.²³

Brooklyn and Queens transit riders deserve an IBX station at Broadway Junction.

¹⁹ While the main *Interim Report*, and the later *PEL Report* and appendices refer to “Conventional Rail,” the *Interim Report* refers to “Commuter Rail (CR) operating as Rapid Transit,” which apparently is the same mode as “Conventional Rail,” using FRA-compliant, subway-like railcars.

²⁰ *Interim Report*, Appendix 1.12, [__ /1041, __ /1041]

²¹ Compare, *id.* [547/1041] with [569/1041], and [612/1041] with [632/1041].

²² See, e.g., *id.*, [612/1041]

²³ See, e.g., American Petroleum Institute, *Pipelines: A Crucial Piece of Modern Infrastructure*, available at <https://www.api.org/-/media/apiwebsite/oil-and-natural-gas/primers/horizontal%20directional%20drilling%20hdd%20operations%20white%20paper.pdf?la=en&hash=87ECB03D2D25B28DE401D6A23DA1C74D387339A7>.

This article expresses the personal views of the author and does not express the views of his employer, or any client or organization. The author has degrees in law and physics, and has taken several engineering courses. After five years of work as an engineer, he has practiced law primarily in the field of patents for over 50 years, dealing with a wide variety of technologies. He is a life-long railfan and user of public transportation in the United States, Europe and Japan.
