SECOND AVENUE SUBWAY PHASE 2

NEPA RE-EVALUATION 3

Proposed Design Modifications:
Cost Containment Measures

June 2025

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Acronyms and Abbreviations

ADA	Americans with Disabilities Act
CIC	Community Information Center
EA	Environmental Assessment
FEIS	Final Environmental Impact Statement
FDNY	Fire Department of New York
FEMA	Federal Emergency Management Agency
FFGA	Full Funding Grant Agreement
FONSI	Finding of No Significant Impact
FTA	Federal Transit Administration
LOS	Level of Service
MTA	Metropolitan Transportation Authority
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NFPA 130	NFPA *Standard for Fixed Guideway Transit and Passenger Rail Systems*
NYCDEP	New York City Department of Environmental Protection
NYCT	MTA New York City Transit
NYPD	New York City Police Department
ROD	Record of Decision
SAS2	Second Avenue Subway Phase 2 Project
STEM	Science, Technology, Engineering, and Mathematics
TBM	Tunnel boring machine
VCE	Vertical circulation element

1 INTRODUCTION

This National Environmental Policy Act (NEPA) re-evaluation considers a package of potential design modifications for the Second Avenue Subway Phase 2 Project (SAS2 or the Project). These modifications would reduce spatial needs and the quantity of construction materials at the three planned subway stations included in SAS2, resulting in cost savings for the Project.

The Metropolitan Transportation Authority (MTA) is planning the new Second Avenue Subway, with construction in four phases that, when complete, will extend from 125th Street in Harlem to Lower Manhattan. Ultimately, the subway will extend 8.5 miles, with 16 new stations. Each station will have at least two entrances and two above-ground ancillary facilities, which are station support buildings that house ventilation, electrical, and mechanical equipment.

Phase 1 of the Second Avenue Subway, between East 63rd and East 96th Street (with tunnels extending to East 105th Street), has been completed and is now in operation with Q train service. Phase 2 of the Second Avenue Subway will extend the Q line into East Harlem, with two new stations on Second Avenue at 106th and 116th Streets and a third new station on 125th Street at Lexington Avenue that will connect to the 4/5/6 and Metro-North Railroad. Phase 2 has received a full funding grant agreement from the Federal Transit Administration (FTA), allowing MTA to begin awarding a series of contracts for completing the project. The first contract, for utility relocation and other preparations in advance of excavation in East Harlem, is currently under way.

FTA and MTA completed a Final Environmental Impact Statement (FEIS) in accordance with NEPA in April 2004 to evaluate the potential impacts resulting from the construction and operation of the full Second Avenue Subway. FTA issued a Record of Decision (ROD) for the subway project in July 2004. The 2004 FEIS and ROD concluded that construction activities for the new subway would result in temporary but significant adverse impacts. Once complete, the Second Avenue Subway would result in overall benefits but would also cause some permanent adverse impacts.

As MTA advances design for SAS2, some refinements and modifications to the conceptual design analyzed in the 2004 FEIS are being made. Consistent with the requirements of NEPA, MTA prepares analyses of the proposed design changes to allow agency stakeholders and the public, as appropriate, to understand the modifications and any changes to the Project's impacts.

In 2018, FTA and MTA prepared a Supplemental Environmental Assessment (EA) for SAS2 to evaluate changes in background conditions and design modifications made during advanced preliminary engineering for the Project. The Supplemental EA was completed in July 2018 for public review and FTA issued a Finding of No Significant Impact (FONSI) for SAS2 in November 2018.

As MTA continued to advance the Project design, the agency identified a package of potential measures to reduce the Project's costs that was analyzed in 2020 in a NEPA re-evaluation and incorporated into the approved design for the Project.

At this time, based on further engineering, MTA has identified additional measures to reduce Project costs. These potential design changes would reduce spatial needs and the quantity of construction materials at the three planned subway stations in SAS2 (the 106th Street Station, 116th Street Station, and 125th Street Station). This re-evaluation describes the approved design for each of those stations, including previous design modifications, and the potential cost-reduction design modifications MTA is now proposing. This re-evaluation has been prepared to determine whether these additional cost-reduction measures would result in any new or different impacts from those identified in the 2004 FEIS, the 2018 Supplemental EA, or the 2020 Re-evaluation. In general, the currently proposed design modifications would reduce the Project footprint, and therefore reduce potential impacts.

The 2004 FEIS, 2018 Supplemental EA, and 2020 Re-evaluation are available on MTA's website (https://www.mta.info/project/second-avenue-subway-phase-2; see "Documents and Presentations").

2 OVERVIEW OF PROJECT DESIGN: SAS2

Phase 2 of the Second Avenue Subway will extend from approximately East 105th Street (where the tunnels constructed in Phase 1 end) to East 125th Street. The tunnel alignment will be located beneath Second Avenue to approximately 125th Street, where it will curve westward and then run beneath 125th Street to approximately Lenox Avenue / Malcolm X Boulevard. Beneath Second Avenue, the tunnel will be relatively shallow beneath the surface, so that it can make use of existing tunnel segments that were constructed in the 1970s as part of earlier plans for the Second Avenue Subway. Beneath 125th Street, the tunnel will be deeper to facilitate construction using one or more Tunnel Boring Machines (TBMs).

SAS2 will include the following major components:

- **Three stations:**
  - **106th Street Station**, under Second Avenue from approximately East 106th Street to approximately East 109th Street. The station's tracks and platform will be relatively shallow beneath Second Avenue, with the platform approximately 37 feet below street level.
  - **116th Street Station**, under Second Avenue from approximately East 115th Street to approximately East 120th Street. The station's tracks and platform will be relatively shallow beneath Second Avenue, with the platform approximately 39 feet below street level.
  - **125th Street Station**, under 125th Street from approximately Lexington Avenue to west of Park Avenue The station's tracks and platform will be deep beneath 125th Street, with the platform approximately 120 feet below street level.
- **Station entrances:** Each station will have two entrances (and the 125th Street Station may ultimately have three entrances). Entrances will be within above-ground, off-street, standalone entrance structures. All entrances will be accessible in compliance with the Americans with Disabilities Act (ADA).
- **Ancillary facilities:** Similar to Phase 1 of the Second Avenue Subway, SAS2 will have multiple standalone, above-ground ancillary structures. These will house ventilation systems, mechanical equipment, station support functions, and emergency egress. They will also include ground-floor retail space to enliven the lower level. Each station will have two ancillary facilities, generally at each end of the station. In addition, SAS2 will have one additional ancillary facility at the western end of the tunnel between Lenox Avenue / Malcolm X Boulevard and Adam Clayton Powell Jr. Boulevard.
- **Storage tracks:** SAS2 will have tracks that extend beyond the 125th Street Station to approximately Lenox Avenue / Malcolm X Boulevard for train storage. These two tracks, referred to as "tail tracks," will be long enough to store three trains each.

2.1 Passenger Circulation

Consistent with MTA New York City Transit (NYCT) design standards for SAS2, all stations are being designed to operate with pedestrian flows at Level of Service (LOS) C or better, and stairs, escalators, elevators, and turnstiles are being designed and will be operated to minimize queuing in the peak hour. Platforms, mezzanines, and passageways will accommodate surged, peak 15-minute loads at passenger LOS C conditions and will meet NYCT's target clearance times[1]. As part of the extended preliminary engineering conducted for the 2018 Supplemental EA design, a detailed analysis of passenger conditions within the three SAS2 stations was conducted for normal operations and emergency conditions to ensure that station components will be adequate to handle passenger flows. The analysis considered passenger operating conditions over a 15-minute time interval, a partially surged flow, and more concentrated surge flow. It evaluated capacities and anticipated pedestrian volumes on platforms and mezzanines; stairs, escalators, elevators (vertical circulation elements, or VCEs); and turnstiles (fare arrays). **Appendix 1, "Pedestrian Circulation Analyses,"** provides the pedestrian flow analyses conducted for the

[1] NYCT has established target clearance times for station platforms and mezzanines, based on the number of seconds it takes for the 80th percentile surge over the peak hour to pass through a particular circulation element. For station platforms and mezzanines, the target clearance time is 30 seconds.

Supplemental EA design (see **Appendix 1.1, "Pedestrian Circulation Analyses, 2018 Extended Preliminary Engineering Design – All SAS2 Stations"**).

2.2 Emergency Egress

The new subway is being designed to comply with the National Fire Protection Association (NFPA) standard, NFPA 130, *Standard for Fixed Guideway Transit and Passenger Rail Systems*, for passenger flow and egress during emergencies, including standards for stations (NFPA 130 Chapter 5) and tunnels (NFPA 130 Chapter 6). NFPA 130 is part of the New York State Building Code. Emergency egress from stations will also comply with the New York State Building Code Chapter 10. In addition, the design reflects NYCT's longstanding coordination with emergency service first-responders in New York City regarding design and operation of the subway system to facilitate emergency response. This includes the coordination with Fire Department of New York (FDNY) and other first-responders during design of the Second Avenue Subway Phase 1, now complete and in operation.

Each station will have a Station Emergency Control Room at street level that houses fire-life safety systems that will help emergency responders manage a station emergency event. The Station Emergency Control Rooms will have direct access from the street and be separated from the station by a fire-rated wall, and will include emergency communications systems, elevator control equipment, and mechanical and electrical systems related to each station's tunnel and station smoke management and fire protection systems.

For each station, detailed analyses of emergency egress have been conducted to ensure that the design complies with NFPA 130 and the New York State Building Code. The analyses were based on three-dimensional modeling of the design fire event at various locations within each station in combination with modeling of passenger flows during an emergency evacuation, to evaluate passengers' ability to clear the platform and evacuate to points of safety, which include areas of refuge and the street.

MTA held a briefing meeting with New York City emergency services providers on May 22, 2025, which was attended by the FDNY, also representing Emergency Medical Services, and the New York City Police Department (NYPD). At the meeting, MTA provided an update on the Second Avenue Phase 2 project, including details of the design and construction methods for each station, and a specific update on the proposed new design elements at the 116th Street Station. Both FDNY and NYPD responded favorably to the design features presented and had no comments or questions about them.

2.3 Water Management and Flood Protection

Throughout SAS2, there will be track drains and piping systems along the tunnels and stations that will flow to sump pits located in each station and at the tunnel low points. A pump room at each sump pit location with three high-capacity pumps (one normal, one standby, and one emergency) will pump the collected water up to street level for discharge to the New York City sewer system in accordance with New York City Department of Environmental Protection (NYCDEP) requirements. The tunnels and pump rooms will have "pump car manifolds," which will allow for a NYCT subway pump car to assist with water removal as needed for other type of water ingress conditions, such as water main breaks.

Following Superstorm Sandy in 2012, which caused extreme flooding in New York City, including in East Harlem, NYCT updated its flood design standards. In addition, the Federal Emergency Management Agency (FEMA) prepared updated preliminary floodplain maps that reflected the flooding that occurred. The design for SAS2 reflects NYCT's updated flood design standards as well as the updated FEMA mapping. The 106th Street Station and 116th Street Station will be below the design flood elevation, and therefore will incorporate flood resiliency. Throughout the new subway system, critical electrical and ventilation equipment will be located above the design flood elevation in the stations' entrance buildings and ancillary facilities. All ingress points into the below-grade spaces will be located above the design flood elevation. For the 106th Street Station and 116th Street Station, entrance thresholds for station entrances and ancillary facilities will be raised above the design flood elevation. In addition, the stations will have watertight structures around elevator headhouses and canopy entrances to stations, watertight equipment hatches and manholes, and flood gates or deployable barriers for station entrances. Appropriate station drainage will be provided at all levels of the station.

2.4 Construction Methods

For Phase 2, the tunnel and stations within Second Avenue will make use of existing tunnel segments already constructed in the 1970s for the Second Avenue Subway. These segments were constructed beneath Second Avenue between 99th Street and 105th Street and between 110th Street and 120th Street in anticipation of the new subway planned at that time. After that construction, the project was halted due to financial constraints.

At the 106th Street Station (between approximately East 106th Street and East 109th Street), where no existing tunnel is present, construction of the shallow tunnel beneath Second Avenue will be accomplished using “cut-and-cover” construction. This type of construction involves excavating from the surface, with a temporary deck above the excavation area to allow the affected area of roadway or sidewalk to continue to be used while work is under way below ground. Prior to excavation, existing utilities, such as water mains, sewer mains, and electric and telecommunication ducts, are relocated or protected so they can remain in place. Cut-and-cover construction involves establishing a construction zone over and around the excavation area, with workers and materials accessing the excavation from the surface in that zone. The decking placed above the excavation can be moved to create a larger open area, when needed, and then replaced. Once the tunnel is complete, the area above is permanently backfilled, and the road and sidewalk are restored to their permanent condition.

At the 116th Street Station (between approximately East 115th Street and East 120th Street), a tunnel segment is already present, so cut-and-cover construction is not needed to excavate the station. However, the 1970s design did not include a 116th Street Station, so the existing tunnel segment must be modified to accommodate a station there. This will involve limited cut-and-cover excavation in Second Avenue.

From approximately 120th Street northward and then westward, the tunnel will be deeper and will be constructed using one or more TBMs in combination with mining. The TBM will begin tunneling from an excavated area within Second Avenue—the TBM “launch” point—near 120th Street and will be removed at the western end of the tunnel, west of Lenox Avenue / Malcolm X Boulevard. Construction activities at the surface will occur to create station entrances and ancillary facilities and to provide construction access and staging points.

3 PROPOSED DESIGN MODIFICATION: 106TH STREET STATION

3.1 Design Changes Since the FEIS and ROD: 106th Street Station

3.1.1 2004 FEIS Design: 106th Street Station

The 2004 FEIS design for the 106th Street Station included a two-track configuration with an island platform and a mezzanine level above the platform level. The station had two entrances and two standalone, above-ground ancillary facilities. In the 2004 FEIS design, those were as follows:

- **106th Street Station Entrance 1:** Off-street at the northeast corner of Second Avenue and East 106th Street
- **106th Street Station Entrance 2:** Off-street near the southeast corner of Second Avenue and East 108th Street
- **106th Street Station Ancillary 1:** Northeast corner of Second Avenue and East 105th Street
- **106th Street Station Ancillary 2:** Near the southeast corner of Second Avenue and East 110th Street

3.1.2 2018 Supplemental EA Design: 106th Street Station

The 2018 Supplemental EA evaluated a modified design for the 106th Street Station based on Preliminary Engineering for Phase 2. As in the 2004 FEIS design, the 2018 Supplemental EA design for the 106th Street Station had a two-track island platform with a mezzanine level above the platform level. Design modifications for the 106th Street Station in the 2018 Supplemental EA design included the following:

- The platform was shifted approximately five to six feet east of the Second Avenue centerline to reduce impacts to the existing Empire City Subway duct bank (utility line) that runs beneath the west side of Second Avenue.
- The station was shifted approximately 50 feet south to accommodate modified station entrances and connections to ancillary buildings.
- Station entrances were enlarged to accommodate updated passenger projections and better accommodate accessibility in compliance with ADA requirements; Entrance 1 was also relocated. With this change, the two entrances were as follows:
  - **106th Street Station Entrance 1:** Off-street at the northeast corner of Second Avenue and East 106th Street
  - **106th Street Station Entrance 2:** Off-street at the southeast corner of Second Avenue and East 108th Street
- Ancillary facilities were enlarged to accommodate more above-ground functions, other design modifications, and ground-floor retail space and relocated to better meet station ventilation needs and avoid new buildings not present when the 2004 FEIS was completed. Larger ancillary facilities would also allow improved construction staging and access. With this change, the two ancillary facilities were as follows:
  - **106th Street Station Ancillary 1:** Southeast corner of Second Avenue and East 106th Street
  - **106th Street Station Ancillary 2:** Northeast corner of Second Avenue and East 109th Street

Figure 3.1 provides a comparison of the 2004 FEIS design and the 2018 Supplemental EA design; this figure is excerpted from the 2018 Supplemental EA (where it was Figure 2-1a).

SAS2 is being designed to accommodate NYCT ridership forecasts, which were updated in connection with development of the extended preliminary engineering reflected in the 2018 Supplemental EA design. The predicted passenger flows during the AM peak hour at the 106th Street Station will be as follows:

- Entering the station and boarding the trains: 2,362 passengers
- Alighting the trains and exiting the station: 756 passengers

Consistent with NYCT design standards for SAS2, all stations are being designed to operate at pedestrian LOS C and stairs, escalators, elevators, and turnstiles are being designed and will be operated to minimize queuing in the peak hour. **Appendix 1, "Pedestrian Circulation Analyses,"** provides an analysis of pedestrian flows at the 106th Street Station with the 2018 Supplemental EA design (see **Appendix 1.1, "Pedestrian Circulation Analyses, 2018 Extended Preliminary Engineering Design – All SAS2 Stations**).

The analyses presented in **Appendix 1.1** conclude that pedestrian elements at the pedestrian elements at the 106th Street Station would be adequate to handle anticipated pedestrian volumes, including the following:

- The platform VCEs would clear the projected peak 15-minute passenger alighting load within NYCT's guideline time (see page 10 of **Appendix 1.1**); and
- Mezzanine-to-street VCEs and fare arrays would operate at LOS B or better during the peak 15-minute period (see page 11 of **Appendix 1.1**).

Following Superstorm Sandy in 2012, which caused extreme flooding in New York City, including in East Harlem, NYCT updated its flood design standards. In addition, FEMA prepared updated preliminary floodplain maps that reflected the flooding that occurred. The changes incorporated in the 2018 Supplemental EA design for the 106th Street Station included modifications to reflect NYCT's updated flood design standards as well as the updated FEMA mapping. The 106th Street Station will be within the 100-year floodplain (1 percent annual chance of flooding) on FEMA's preliminary (2015) floodplain map (see **Appendix 4, "Updated Natural Resources Information,"** for the floodplain map). All critical electrical and ventilation equipment supporting the new subway system will be located above the design flood elevation in the station's entrance buildings and ancillary facilities. All ingress points into the below-grade spaces will be located above the design flood elevation. Entrance thresholds for station entrances and ancillary facilities will be raised above the design flood elevation. In addition, the station will have watertight structures around elevator headhouses and canopy entrances to stations, watertight equipment hatches and manholes, and flood gates or deployable barriers for station entrances. The sidewalk gratings in Second Avenue above the tunnel built in the 1970s will be eliminated and no new sidewalk gratings will be installed.

For more information on the 2018 Supplemental EA design, please see the Supplemental EA and FONSI available on MTA's website (https://www.mta.info/project/second-avenue-subway-phase-2/supplemental-environmental-assessment-eis and https://www.mta.info/document/23861).

3.1.3 2020 Re-evaluation Design (Currently Approved Design): 106th Street Station

The 2020 Re-evaluation did not include any modifications to the 106th Street Station from the 2018 Supplemental EA design.

3.2 Currently Proposed Design Modification for the 106th Street Station: Reduced Width for Station Box and Platform

The approved design for the 106th Street Station is illustrated in **Figure 3.2**. This station's tracks and platform will be relatively shallow beneath Second Avenue, with the platform approximately 37 feet below street level., The station will extend from approximately East 106th Street to East 109th Street and will include two standalone, off-street entrance structures and two standalone, off-street ancillary facilities:

- **106th Street Station Entrance 1:** Off-street at the northeast corner of Second Avenue and East 106th Street, with stairs, escalators, and an elevator
- **106th Street Station Entrance 2:** Off-street at the southeast corner of Second Avenue and East 108th Street, with stairs, escalators, and an elevator
- **106th Street Station Ancillary 1:** Southeast corner of Second Avenue and East 106th Street
- **106th Street Station Ancillary 2:** Northeast corner of Second Avenue and East 109th Street

This station will have a mezzanine level above the platform level. The two station entrances will connect to the mezzanine level; connections between the mezzanine and the center platform will be via elevator and

stairs. **Appendix 2, "Station Plans,"** provides plans for the station at street level, mezzanine level, and platform level.

As part of the currently proposed design modifications, MTA is now evaluating a potential modification at the 106th Street Station that would reduce the width of the station box by 2 feet (see **Figure 3.3**). This modification would reduce the area to be excavated using cut-and-cover construction, thereby decreasing the amount of soil to be excavated and the amount of reinforced concrete needed for the station. This would also result in a minor reduction in quantities needed for finishes throughout the station. As design advances, MTA will determine whether this design modification is feasible and can be incorporated into the Project.

This design modification would reduce the width of the station platform by 2 feet, from 28 feet to 26 feet. In connection with this change, the platform stairs would be narrowed from 13 feet wide to 11 feet wide.

No changes would occur to the number, location, or dimensions of any station entrances, including those that are ADA-compliant. With the currently proposed design modification, entrances and ancillary facilities at the 106th Street Station would remain the same as in the approved design:

- **106th Street Station Entrance 1:** Off-street at the northeast corner of Second Avenue and East 106th Street, with stairs, escalators, and an elevator
- **106th Street Station Entrance 2:** Off-street at the southeast corner of Second Avenue and East 108th Street, with stairs, escalators, and an elevator
- **106th Street Station Ancillary 1:** Southeast corner of Second Avenue and East 106th Street
- **106th Street Station Ancillary 2:** Northeast corner of Second Avenue and East 109th Street

With the currently proposed design modification, the 106th Street Station would continue to have a mezzanine level above the platform level. The two station entrances will connect to the mezzanine level; connections between the mezzanine and the center platform will be via elevator and stairs.

With the narrower platform and narrower platform stairs, the 106th Street Station would continue to be adequate to handle passenger flows and to meet the requirements of NFPA 130 for passenger flow and egress during emergencies. Consistent with NYCT design standards for SAS2, all stations are being designed to operate at pedestrian LOS C and stairs, escalators, elevators, and turnstiles are being designed and will be operated to minimize queuing in the peak hour. **Appendix 1, "Pedestrian Circulation Analyses,"** provides an analysis of pedestrian flows at the station with the currently proposed design modification in comparison to pedestrian flows with the approved design and **Appendix 3, "Path of Travel Information,"** provides information on ADA path of travel for the currently proposed design modification.

SAS2 is being designed to accommodate NYCT ridership forecasts, which were updated in connection with development of the extended preliminary engineering reflected in the 2018 Supplemental EA design. As noted earlier, the predicted passenger flows during the AM peak hour at the 106th Street Station will be as follows:

- Entering the station and boarding the trains: 2,362 passengers
- Alighting the trains and exiting the station: 756 passengers

Appendix 1.2, "Pedestrian Circulation Analysis, Currently Proposed Design Modification – 106th Street Station," presents the updated analysis of pedestrian conditions with the currently proposed design modification. This analysis concludes that pedestrian elements at the 106th Street Station would remain adequate to handle anticipated pedestrian volumes, including the following.

- The platform VCEs would clear the projected peak 15-minute passenger alighting load within NYCT's guideline time (see page 4 of **Appendix 1.2**); and
- Mezzanine-to-street VCEs and fare arrays would operate at LOS B or better during the peak 15-minute period (see page 4 of **Appendix 1.2**).

As discussed in **Section 2.2**, the new subway is being designed to comply with NFPA 130 and the New York State Building Code with respect to fire-life safety and emergency egress. For each station, detailed analyses of emergency egress have been conducted to ensure that the design complies with the standards. Updated modeling related to emergency egress for the 106th Street Station concluded that with the currently proposed design modification, the 106th Street Station would continue to meet the requirements

of NFPA 130 for passenger flow and egress during emergencies. This was based on three-dimensional modeling of the design fire event at various locations within the station in combination with modeling of passenger flows during an emergency evacuation, to evaluate passengers' ability to clear the platform and evacuate to points of safety, which include areas of refuge and the street.

With the currently proposed design modification, the 106th Street Station would continue to meet NYCT's current flood design standards, which were updated following Superstorm Sandy. The 106th Street Station will be within the 100-year floodplain (1 percent annual chance of flooding) mapped by FEMA (see the floodplain map in **Appendix 4**). With the currently proposed design modification, critical electrical and ventilation equipment supporting the new subway system will be located above the design flood elevation in the station's entrance buildings and ancillary facilities. All ingress points into the below-grade spaces will be located above the design flood elevation. Entrance thresholds for station entrances and ancillary facilities will be raised above the design flood elevation. In addition, the station will have watertight structures around elevator headhouses and canopy entrances to stations, watertight equipment hatches and manholes, and flood gates or deployable barriers for station entrances.

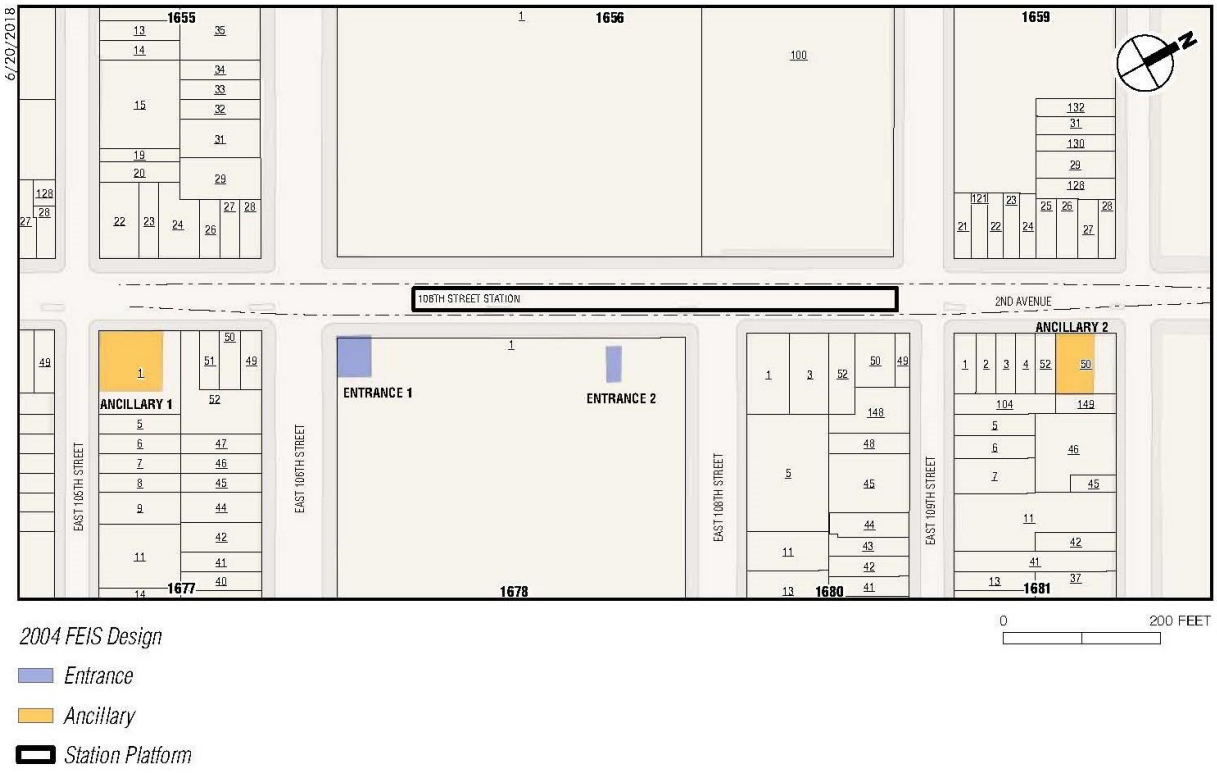
Appropriate station drainage will be provided at all levels of the station. As described in **Section 2.3**, throughout SAS2, there will be track drains and piping systems along the tunnels and stations that will flow to sump pits located in each station and at the tunnel low point. Pump rooms at each sump pit location with three high-capacity pumps (one normal, one standby, and one emergency) will pump the collected water up to street level for discharge to the New York City sewer system in accordance with NYCDEP requirements. The tunnels and pump rooms will have "pump car manifolds," that will allow for a NYCT subway pump car to assist with water removal as needed for other type of water ingress conditions, such as water main breaks.

Figure 3.3 illustrates the currently proposed design modification at the 106th Street Station. **Table 6.1** in **Section 6** below provides a summary of the design for the 106th Street Station evaluated in the 2004 FEIS, the 2018 Supplemental EA, the 2020 Re-evaluation, and the currently proposed design modification.

Appendix 1 provides an analysis of pedestrian flows at the 106th Street station, **Appendix 2.1, "Station Plans – 106th Street Station,"** provides plans for the 106th Street Station at street level, mezzanine level, and platform level, and **Appendix 3.1, "Path of Travel Information – 106th Street Station** provides information on ADA path of travel at the station.

Overall, based on the information presented above, the currently proposed design modifications at the 106th Street Station would not result in new or different adverse impacts from those identified in the 2004 FEIS, the 2018 Supplemental EA, or the 2020 Re-evaluation.

Figure 3.1 – 106th Street Station: Comparison of 2004 FEIS Design and 2018 Supplemental EA Design (Figure 2-1a from 2018 Supplemental EA)



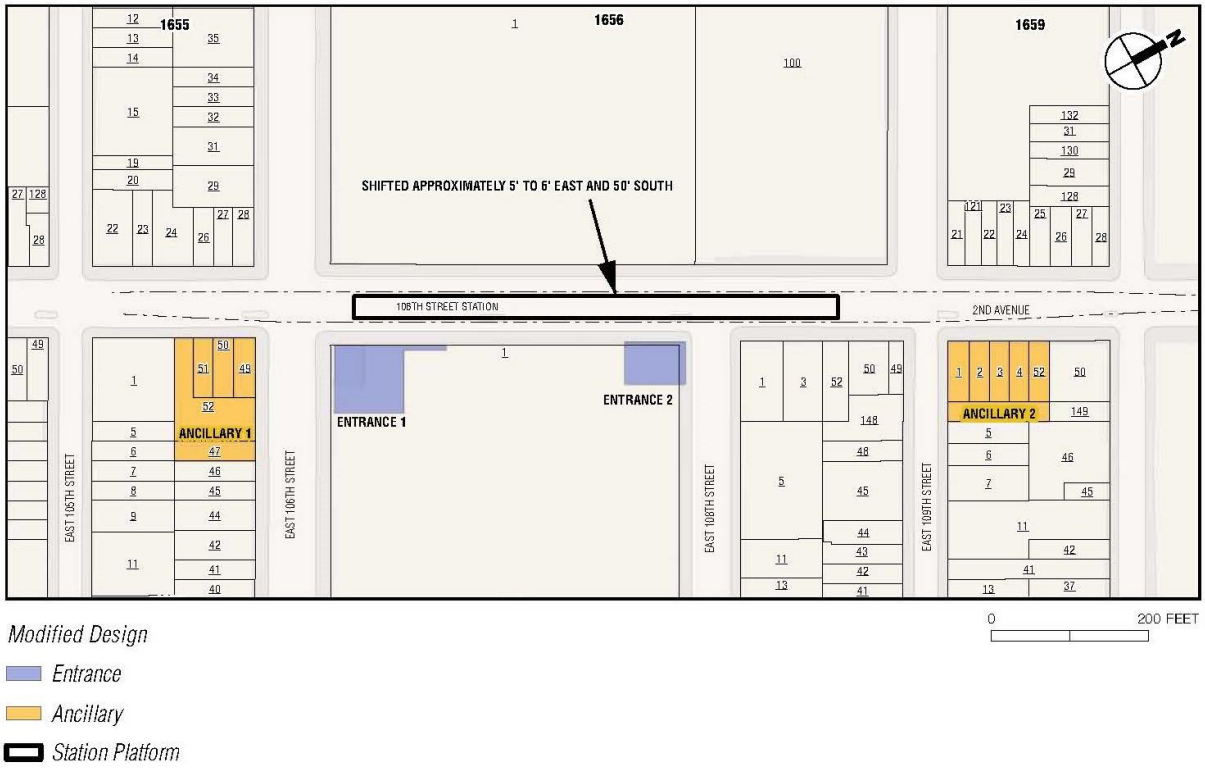


Figure 3.2 –106th Street Station Cutaway Diagram:
Approved Design and Currently Proposed Design Modification

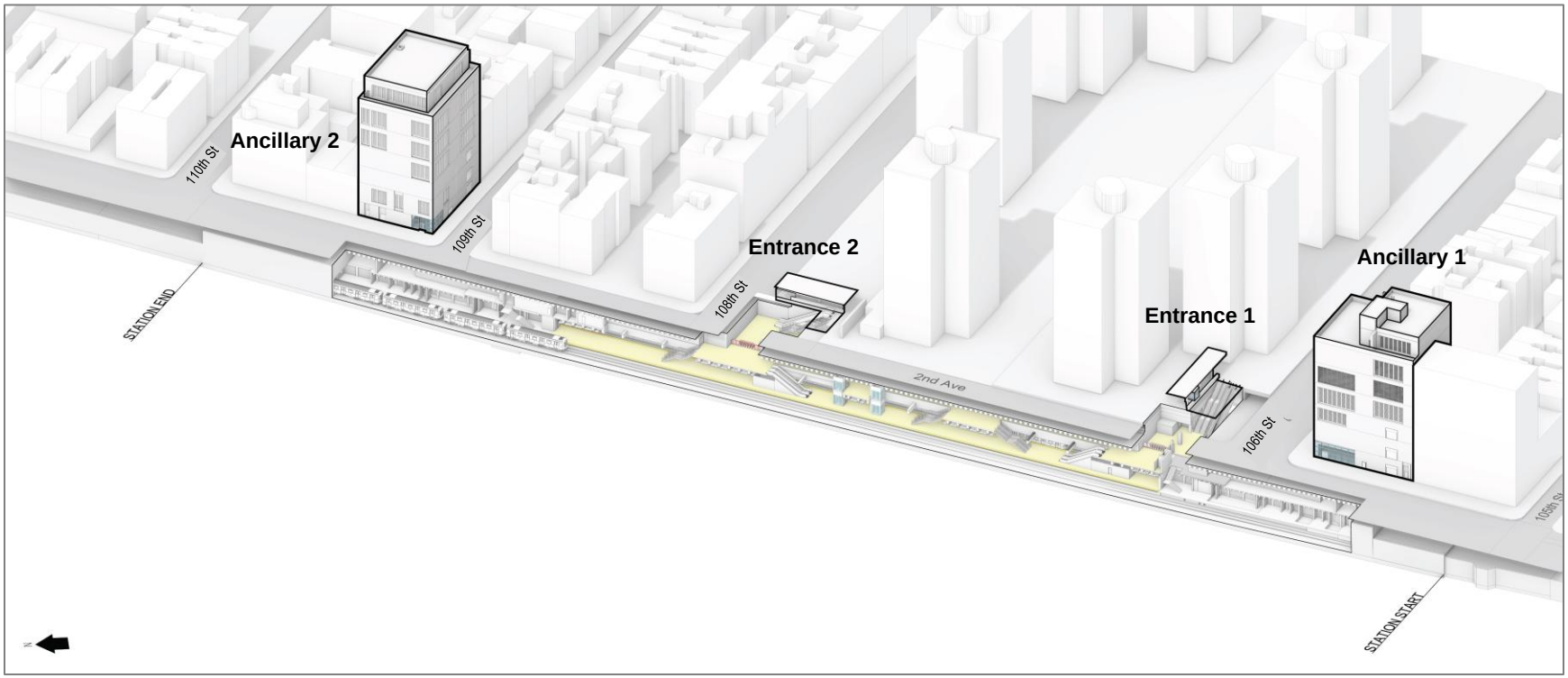
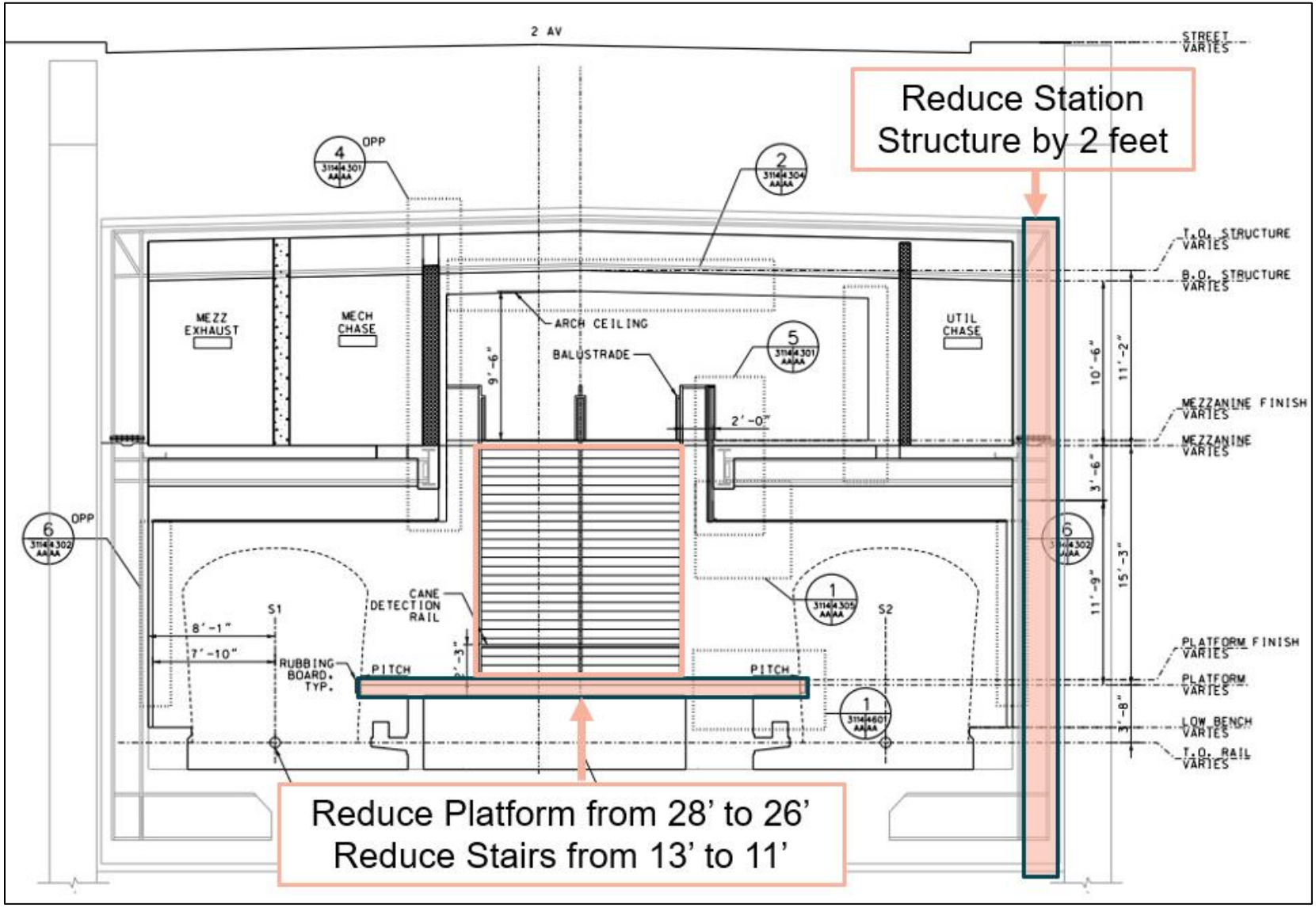


Figure 3.3 – Currently Proposed Design Modification at 106th Street Station: Reduced Width for Station Box and Platform



4 PROPOSED DESIGN MODIFICATION: 116TH STREET STATION

4.1 Design Changes Since the FEIS and ROD: 116th Street Station

4.1.1 2004 FEIS Design: 116th Street Station

The 2004 FEIS design for the 116th Street Station included a two-track configuration with an island platform and a mezzanine level above the platform level. The station had two entrances and two standalone above-ground ancillary facilities. In the 2004 FEIS, those were as follows:

- **116th Street Station Entrance 1:** Off-street at the northeast corner of Second Avenue and East 116th Street; this was combined with some ancillary functions.
- **116th Street Station Entrance 2:** In the sidewalk at the southeast corner of Second Avenue and East 118th Street (stairs only)
- **116th Street Station Ancillary 1:** Near the southeast corner of Second Avenue and East 116th Street
- **116th Street Station Ancillary 2:** Near the northeast corner of Second Avenue and East 118th Street

The 116th Street Station will incorporate an existing tunnel segment below Second Avenue that was constructed in the 1970s as part of earlier plans for the subway. However, the 1970s design did not include a 116th Street Station, so the existing tunnel is not configured to accommodate a station. With the 2004 FEIS design, the 116th Street Station would have been constructed via cut-and-cover construction for the length of the station (from approximately East 115th Street to East 119th Street) to allow demolition and reconstruction of the existing tunnel segment that is already present in this location.

The 2004 FEIS design included a widened tunnel area (a “bellmouth”) beneath Second Avenue north of the 116th Street Station, from approximately 120th Street to approximately 122nd Street, that would be used for removing the Project’s TBM from the completed tunnel. The 2004 FEIS design for the Project also included an option for storage tracks extending north from this bellmouth to approximately East 129th Street. In the 2004 FEIS design, the bellmouth area would include space for four tracks: two that would curve westward to 125th Street and two continuing northward. The tracks extending northward would be used for train storage. The 2004 FEIS also noted that the storage tracks eventually could facilitate a future extension to the Bronx, if a northward extension to the South Bronx were planned later. The bellmouth and tail tracks would be constructed using cut-and-cover excavation.

While the 2004 FEIS design identified the potential for a future extension of tunnels to the Bronx, that extension was not part of the Second Avenue Subway project. It was not part of the purpose and need for the full-length subway and no route was identified for such an extension. The 2004 FEIS described that the new subway system is being designed to facilitate connections to the Bronx in the future, either via the 129th Street storage tracks, a bellmouth at 122nd Street if the storage tracks are not constructed, or via storage tracks that will extend west of the 125th Street Station, which could eventually extend to the Bronx.

4.1.2 2018 Supplemental EA Design: 116th Street Station

The 2018 Supplemental EA evaluated a modified design for the 116th Street Station based on Preliminary Engineering for Phase 2. As in the 2004 FEIS design, the 2018 Supplemental EA design for the 116th Street Station had a two-track island platform with a mezzanine level above the platform level. Design modifications for the 116th Street Station in the 2018 Supplemental EA design included the following:

- The station was shifted slightly to the north to avoid a small curve
- Station entrances were enlarged and relocated to accommodate updated passenger projections and better accommodate ADA accessibility. With this change, the two entrances were as follows:
  - **116th Street Station Entrance 1:** Off-street at the northeast corner of Second Avenue and East 116th Street, with escalators, stairs, and an elevator
  - **116th Street Station Entrance 2:** Off-street at the northeast corner of Second Avenue and East 118th Street, with escalators, stairs, and an elevator

- Ancillary facilities were enlarged to accommodate more above-ground functions, other design modifications, and ground-floor retail space and relocated to better meet station ventilation needs and avoid new buildings not present when the 2004 FEIS was completed. Larger ancillary facilities would also allow improved construction staging and access. With this change, the two ancillary facilities were as follows:
  - **116th Street Station Ancillary 1:** Northeast corner of Second Avenue and East 115th Street
  - **116th Street Station Ancillary 2:** Southwest corner of Second Avenue and East 120th Street

Figure 4.1 provides a comparison of the 2004 FEIS design and the 2018 Supplemental EA design; this figure is excerpted from the 2018 Supplemental EA (where it was Figure 2-2a).

SAS2 is being designed to accommodate NYCT ridership forecasts, which were updated in connection with development of the extended preliminary engineering reflected in the 2018 Supplemental EA design. The predicted passenger flows during the AM peak hour at the 116th Street Station will be as follows:

- Entering the station and boarding the trains: 1,963 passengers
- Alighting the trains and exiting the station: 782 passengers

Consistent with NYCT design standards for SAS2, all stations are being designed to operate at pedestrian LOS C and stairs, escalators, elevators, and turnstiles are being designed and will be operated to minimize queuing in the peak hour. **Appendix 1, "Pedestrian Circulation Analyses,"** provides an analysis of pedestrian flows at the 116th Street Station with the 2018 Supplemental EA design (see **Appendix 1.1, "Pedestrian Circulation Analyses, 2018 Extended Preliminary Engineering Design – All SAS2 Stations**).

The analyses presented in **Appendix 1.1** conclude that pedestrian elements at the 116th Street Station with the 2018 Supplemental EA design would be adequate to handle anticipated pedestrian volumes, including the following:

- The platform VCEs would clear the projected peak 15-minute passenger alighting load within NYCT's guideline time (see page 11 of **Appendix 1.1**); and
- Mezzanine-to-street elevators would have sufficient capacity to handle projected passenger loads and fare arrays would operate at LOS A during the peak 15-minute period (see page 11 of **Appendix 1.1**).

Following Superstorm Sandy in 2012, which caused extreme flooding in New York City, including in East Harlem, NYCT updated its flood design standards. In addition, FEMA prepared updated preliminary floodplain maps that reflected the flooding that occurred. The design changes for the 116th Street Station incorporated in the 2018 Supplemental EA design included modifications to reflect NYCT's updated flood design standards as well as the updated FEMA mapping. A portion of the 116th Street Station will be within the 500-year floodplain (0.2 percent annual chance of flooding) on FEMA's preliminary (2015) floodplain map (see **Appendix 4** for the floodplain map). All critical electrical and ventilation equipment supporting the new subway system will be above the design flood elevation in the station's entrance buildings and ancillary facilities. All ingress points into the below-grade spaces will also be above the design flood elevation. Entrance thresholds for station entrances and ancillary facilities will be raised above the design flood elevation. In addition, the station will have watertight structures around elevator headhouses and canopy entrances to stations, watertight equipment hatches and manholes, and flood gates or deployable barriers for station entrances. The sidewalk gratings present in Second Avenue above the tunnel built in the 1970s will be eliminated and no new sidewalk gratings will be installed.

Similar to the 2004 FEIS design, the 2018 Supplemental EA design for the 116th Street Station would require cut-and-cover excavation for the length of the station (from East 115th Street to East 120th Street), including demolition and reconstruction of the existing tunnel that is currently in place beneath Second Avenue in that location. Consistent with the 2004 FEIS design, existing building vaults and entrances may be affected during construction and some underpinning of existing buildings adjacent to the excavation area may be required.

The 2018 Supplemental EA design eliminated the potential storage tracks beneath Second Avenue north of East 125th Street extending to East 129th Street. As described in the 2018 Supplemental EA, advanced

operations analysis concluded that the location of these storage tracks was not compatible with the efficient dispatching of trains from storage into revenue service. The 2018 Supplemental EA design also reduced the size of the bellmouth structure beneath Second Avenue and shifted it southward so that it could connect to the 116th Street Station. Instead of the 2004 FEIS design's bellmouth location between East 120th and East 122nd Streets, the bellmouth in the 2018 Supplemental EA design would be between East 118th and East 120th Streets. Proposed construction activities for the Project were revised so that the bellmouth area would be used for launching the TBM at the start of tunneling, rather than for removing it from the completed tunnel. The site of the 116th Street Station Ancillary 2 (between East 119th and East 120th Streets) was enlarged to better accommodate construction staging related to the TBM activities. Overall, these modifications to the bellmouth reduced the amount of cut-and-cover excavation that will be required along Second Avenue north of the 116th Street Station.

For more information on the 2018 Supplemental EA design, please see the Supplemental EA and FONSI available on MTA's website (https://www.mta.info/project/second-avenue-subway-phase-2/supplemental-environmental-assessment-eis and https://www.mta.info/document/23861).

4.1.3 2020 Re-evaluation Design (Currently Approved Design): 116th Street Station

In the 2020 design modification evaluated in the 2020 Re-evaluation, the design of the 116th Street Station was modified to take better advantage of the existing 1970s tunnel segment by incorporating the existing tunnel segment into the station instead of demolishing and reconstructing it. No changes were proposed to the locations or sizes of the station's ancillary facilities or entrances.

The 2020 Re-evaluation design for the 116th Street Station removed the station's full-length mezzanine and instead included four smaller, separate mezzanines. This included mezzanines for public use at the station's two entrances and mezzanines serving back-of-house space at the station's two ancillary facilities. At each station entrance, elevators and escalators/stairs would connect the street level to the mezzanine level, where the fare control area would be located, and then separate elevators and escalators/stairs would connect the mezzanine level and the platform. **Figure 4.2** illustrates the approved design for the 116th Street Station and **Figure 4.3** illustrates the connection between mezzanine level and platform in the approved design.

An updated analysis of pedestrian conditions was prepared for the 2020 Re-evaluation design and is provided in **Appendix 1, "Pedestrian Circulation Analyses"**—see **Appendix 1.3, "Pedestrian Circulation Analyses, 2020 Re-evaluation Design – 116th Street Station**. Consistent with NYCT design standards for SAS2, all stations are being designed to operate at pedestrian LOS C and stairs, escalators, elevators, and turnstiles are being designed and will be operated to minimize queuing in the peak hour.

The analyses presented in **Appendix 1.3** conclude that pedestrian elements at the 116th Street Station with the 2020 Re-evaluation design would be adequate to handle anticipated pedestrian volumes, including the following:

- The platform VCEs would clear the projected peak 15-minute passenger alighting load within NYCT's guideline time (see page 4 of **Appendix 1.3**); and
- Mezzanine-to-street elevators would have sufficient capacity to handle projected passenger loads and fare arrays would operate at LOS A during the peak 15-minute period (see pages 4 and 5 of **Appendix 1.3**).

The changes to the mezzanine design at the 116th Street Station in the 2020 Re-evaluation design substantially reduced the amount of cut-and-cover construction needed for the station. Rather than cut-and-cover excavation for the full length of the station, four smaller areas of cut-and-cover excavation would be needed—at Ancillary 1 (near East 115th Street), at Entrance 1 (near East 116th Street), at Entrance 2 (near East 118th Street), and at the northern end of the station near Ancillary 2 (at 120th Street).

Even with less excavation than in the 2004 FEIS, the excavation areas in the 2020 Re-evaluation design for the 116th Street Station would nonetheless require relocation of utilities within Second Avenue for the length of the station, between approximately East 115th Street and East 120th Street, including a large (60-inch) water main and all other utilities in its proximity. The utility relocations and excavation would result in substantial construction zones in the street and related disruptions to vehicular and pedestrian traffic due

to lane closures and sidewalk narrowing. Similar to the 2004 FEIS design, existing building vaults and entrances may be affected during construction and some underpinning of existing buildings adjacent to the excavation areas may be required.

The 2020 Re-evaluation design for the 116th Street Station would require the same construction activities to create the TBM launch area and bellmouth as the 2018 Supplemental EA design. While the 2020 Re-evaluation design involved re-use of the existing tunnel for the 116th Street Station, construction of the TBM launch and bellmouth would involve demolition, rather than reuse, of the existing tunnel segment from approximately East 119th to East 120th Street. The existing tunnel segment would be replaced by a new, larger tunnel to be built using cut-and-cover construction. This new, larger tunnel segment would serve as the location for launching the TBM that will construct the new tunnels north of East 120th Street. It would also be sized to create a bellmouth that would accommodate future track connections northward under Second Avenue for possible service to the Bronx, if a future extension is eventually planned.

For more information on the 2020 Re-evaluation design, please see the 2020 Re-evaluation available on MTA's website (https://www.mta.info/document/80676; https://www.mta.info/document/75876; and https://www.mta.info/document/80671).

4.2 Currently Proposed Design Modification for the 116th Street Station: Lower Mezzanines and Reconfigured Tunnel Boring Machine Launch Site

4.2.1 Modification to Create Lower Station Mezzanines

The approved design for the 116th Street Station is illustrated in **Figure 4.2**. This station's tracks and platform will be relatively shallow beneath Second Avenue, with the platform approximately 39 feet below street level. The station will extend from approximately East 115th Street to East 120th Street and will include two standalone, off-street entrance structures and two standalone, off-street ancillary facilities:

- **116th Street Station Entrance 1:** Off-street at the northeast corner of Second Avenue and East 116th Street
- **116th Street Station Entrance 2:** Off-street at the northeast corner of Second Avenue and East 118th Street
- **116th Street Station Ancillary 1:** Northeast corner of Second Avenue and East 115th Street
- **116th Street Station Ancillary 2:** Southwest corner of Second Avenue and East 120th Street

As part of the currently proposed design modifications, MTA is now proposing a modification for the 116th Street Station to reduce the amount of cut-and-cover construction and associated utility relocation needed at the station.

The 2020 Re-evaluation design for the 116th Street Station removed the station's full-length mezzanine and instead included four smaller, separate mezzanines above the platform. The currently proposed design modification would change the mezzanine design at the 116th Street Station so that these four separate station mezzanines are below the station platform rather than above it. As in the 2020 Re-evaluation design for the 116th Street Station, the station would not have a full-length mezzanine and instead would have four smaller, separate mezzanines—mezzanines for public use at the station's two entrances and mezzanines serving back-of-house space at the station's two ancillary facilities.

With this currently proposed design modification, entrances and ancillary facilities at the 116th Street Station would remain the same as in the approved (2020) design. The station would include two standalone, off-street entrance structures and two standalone, off-street ancillary facilities:

- **116th Street Station Entrance 1:** Off-street at the northeast corner of Second Avenue and East 116th Street with elevators
- **116th Street Station Entrance 2:** Off-street at the northeast corner of Second Avenue and East 118th Street with elevators
- **116th Street Station Ancillary 1:** Northeast corner of Second Avenue and East 115th Street

- **116th Street Station Ancillary 2:** Southwest corner of Second Avenue and East 120th Street

With the currently proposed design modification for the 116th Street Station, the mezzanine segments connecting to the station's entrances (and the separate, non-public mezzanine segments serving back-of-house spaces) would be 15 feet below the platform level rather than above the platform level.

In addition, with the currently proposed design modification for the 116th Street Station, both station entrances would be reconfigured as elevator-only entrances. Elevators would provide the most efficient connection between the 116th Street Station's street-level entrances and its mezzanine level below the platform. The mezzanine would be approximately 56 feet (five stories) below street level. Access to this level via escalators would require a series of "switchback" escalators that would be inefficient for moving large volumes of people. In contrast, the proposed elevators at the station would be high-capacity,[2] high-speed elevators that can quickly move people between the mezzanine and the street. Each entrance would have multiple elevators (four at Entrance 1 and three at Entrance 2), providing a high level of redundancy.

Elevators are better protected from the weather than escalators and therefore less susceptible to disruptions. In NYCT's extensive experience operating and maintaining escalators and elevators, escalators have historically resulted in more difficulties, are more frequently out of service, and require more frequent outages. Unlike escalators, elevator machinery is contained in elevator machine rooms that can be protected from weather, litter, vandalism, or other factors affecting operations.

At each entrance, passengers would pass through the fare control area at street level to reach the elevators. The elevators would connect the street level to the below-platform mezzanine level, and then separate elevators and escalators/stairs would connect the mezzanine level to the center platform above. The changes to the number of elevators, escalators, and stairs are summarized in **Table 4.1** below. **Figure 4.4** provides a cutaway diagram of the station illustrating the placement of the mezzanine below the platform. **Figures 4.5 through 4.7** provide a cross section of 116th Street Station Entrance 1, a cutaway diagram of the entrance, and illustrative renderings of the entrance at street level with the currently proposed design modification; **Figures 4.8 through 4.10** provide the same illustrations for Entrance 2. These cross sections and cutaways diagram illustrate how both entrances would connect to the new lower mezzanine. In addition, **Appendix 2.2, "Station Plans – 116th Street Station,"** provides plans for the station at street level, mezzanine level, and platform level.

[2] These elevators would be approximately 10 feet by 15 feet, which is large enough to accommodate a medical gurney, if needed.

Table 4.1 – Comparison of Public Elevators, Escalators, and Stairs at 116th Street Station: Approved Design vs. Currently Proposed Design Modification

Entrance Location	Number in 2020 Approved Design	Number in Currently Proposed Design Modification
Entrance 1: 116th Street		
Street-to-Mezzanine Elevators	1	4
Street-to-Mezzanine Escalators/Stairs	6	0
Mezzanine-to-Platform Elevators	1	1
Mezzanine-to-Platform Escalators/Stairs	2	2
Entrance 2: 118th Street		
Street-to-Mezzanine Elevators	1	3
Street-to-Mezzanine Escalators/Stairs	6	0
Mezzanine-to-Platform Elevators	1	1
Mezzanine-to-Platform Escalators/Stairs	1	1
Station Total		
Street-to-Mezzanine Elevators	2	7
Street-to-Mezzanine Escalators/Stairs	12	0
Mezzanine-to-Platform Elevators	2	2
Mezzanine-to-Platform Escalators/Stairs	3	3

With the currently proposed design modification, the 116th Street Station would continue to be adequate to handle passenger flows and to meet the requirements of NFPA 130 for passenger flow and egress during emergencies. Consistent with NYCT design standards for SAS2, all stations are being designed to operate at pedestrian LOS C and stairs, escalators, elevators, and turnstiles are being designed and will be operated to minimize queuing in the peak hour. **Appendix 1, "Pedestrian Circulation Analyses,"** provides an analysis of pedestrian flows at the station with the currently proposed design modification in comparison to pedestrian flows with the approved design and **Appendix 3, "Path of Travel Information,"** provides information on ADA path of travel for the currently proposed design modification.

SAS2 is being designed to accommodate NYCT ridership forecasts, which were updated in connection with development of the extended preliminary engineering reflected in the 2018 Supplemental EA design. As noted earlier, the predicted passenger flows during the AM peak hour at the 116th Street Station will be as follows:

- Entering the station and boarding the trains: 1,963 passengers
- Alighting the trains and exiting the station: 782 passengers

Appendix 1.4, "Pedestrian Circulation Analysis, Currently Proposed Design Modification – 116th Street Station," presents the updated analysis of pedestrian conditions with the currently proposed design modification. This analysis concludes that pedestrian elements at the 116th Street Station would remain adequate to handle anticipated pedestrian volumes, including the following.

- The mezzanine-to-platform VCEs would clear the projected peak 15-minute passenger alighting load within NYCT's guideline time (see page 4 of **Appendix 1.4**); and
- Mezzanine-to-street elevators would have sufficient capacity to handle projected passenger loads and fare arrays would operate at LOS A during the peak 15-minute period (see pages 4 and 5 of **Appendix 1.4**).

In addition to the elevator-only entrances, the 116th Street Station would continue to have four separate emergency egress stairs—one at each entrance and ancillary facility. **Table 4.2** compares the number of emergency egress stairs and the vertical distances between mezzanine and street level in the approved design and with the currently proposed design modification. The same egress paths and egress capacity would be provided as in the approved design.

As discussed in **Section 2.2**, the new subway is being designed to comply with NFPA 130 and the New York State Building Code with respect to fire-life safety and emergency egress. For each station, detailed analyses of emergency egress have been conducted to ensure that the design complies with the standards. The 116th Street Station would continue to meet the requirements of NFPA 130 for passenger flow and egress during emergencies. This was based on three-dimensional modeling of the design fire event at various locations within the station in combination with modeling of passenger flows during an emergency evacuation, to evaluate passengers' ability to clear the platform and evacuate to points of safety, which include areas of refuge and the street.

Table 4.2 – Comparison of Emergency Egress at 116th Street Station: Approved Design vs. Currently Proposed Design Modification

Emergency Egress Location	2020 Approved Design		Currently Proposed Design Modification	
	Number of Egress Stairs, Mezzanine to Street Level	Vertical Distance, Mezzanine to Street Level	Number of Egress Stairs, Mezzanine to Street Level	Vertical Distance, Mezzanine to Street Level
Ancillary 1	1	24	1	56
Entrance 1	1	24	1	56
Entrance 2	1	24	1	56
Ancillary 2	1	24	1	56
Station Total	**4**		**4**	

Table 6.1 in **Section 6** below provides a summary of the design for the 116th Street Station evaluated in the 2004 FEIS, the 2018 Supplemental EA, the 2020 Re-evaluation, and the currently proposed design modification.

Appendix 1 provides an analysis of pedestrian flows at the 116th Street Station, **Appendix 2** provides plans for the 116th Street Station at street level, mezzanine level, and platform level, and **Appendix 3** provides information on ADA path of travel for the station.

With the currently proposed design modification, the 116th Street Station would continue to meet NYCT's current flood design standards, which were updated following Superstorm Sandy. A portion of the 116th Street Station will be within the 500-year floodplain (0.2 percent annual chance of flooding) mapped by FEMA(see the floodplain map in **Appendix 4**). With the currently proposed design modification, critical electrical and ventilation equipment supporting the new subway system will be located above the design flood elevation in the station's entrance buildings and ancillary facilities. All ingress points into the below-grade spaces will be located above the design flood elevation. Entrance thresholds for station entrances and ancillary facilities will be raised above the design flood elevation. In addition, the station will have watertight structures around elevator headhouses and canopy entrances to stations, watertight equipment hatches and manholes, and flood gates or deployable barriers for station entrances.

Appropriate station drainage will be provided at all levels of the station, including the new lower mezzanine level. As described in **Section 2.3**, throughout SAS2, there will be track drains and piping systems along the tunnels and stations that will flow to sump pits located in each station and at the tunnel low point. Pump rooms at each sump pit location with three high-capacity pumps (one normal, one standby, and one emergency) will pump the collected water up to street level for discharge to the New York City sewer system in accordance with NYCDEP requirements. The tunnels and pump rooms will have "pump car manifolds,"

which will allow for a NYCT subway pump car to assist with water removal as needed for other type of water ingress conditions, such as water main breaks.

Overall, based on the information presented above, the currently proposed design modifications at the 116th Street Station would not result in new or different adverse impacts from those identified in the 2004 FEIS, the 2018 Supplemental EA, or the 2020 Re-evaluation. As discussed below in **Section 4.2.3**, the currently proposed design modifications would substantially reduce the amount of street-level construction activity during construction of the station in comparison to the original 2004 FEIS design, the 2018 Supplemental EA design, and the 2020 Re-evaluation design.

4.2.2 Modification to Tunnel Boring Machine Launch Site

As part of the currently proposed design modifications, MTA is also proposing changes to the bellmouth area from which the TBM will be launched. With these modifications, the Project would no longer require demolition and reconstruction of the existing tunnel segment between approximately East 119th and East 120th Streets. The TBM launch area would use the existing tunnel rather than a widened bellmouth. In this area, the columns within the existing tunnel would be rearranged so that the TBM can be assembled in the existing tunnel. This would eliminate much of the excavation at street level that would otherwise be needed to construct the TBM launch area.

With elimination of the wider TBM launch box at the northern end of the station, the Project would no longer provide a bellmouth for possible future connections beneath Second Avenue continuing northward toward the Bronx. The tunnel would no longer have the width to provide capacity for four tracks—two running tracks curving north to 125th Street and two tracks continuing north under Second Avenue. As noted earlier, the optional storage tracks that the 2004 FEIS design included under Second Avenue between East 125th Street and East 129th Street were removed from the Project in the 2018 Supplemental EA design.

While the 2004 FEIS design identified that the storage tracks under Second Avenue could eventually facilitate a future extension to the Bronx, if a northward extension to the South Bronx were planned later, that extension was not part of the Second Avenue Subway project. It was not part of the purpose and need for the full-length subway and no route was identified for such an extension. The 2004 FEIS stated, “The purpose of the Second Avenue Subway is to address the problems and deficiencies in access and mobility associated with an overburdened transit infrastructure that is struggling to accommodate existing customers and the continuing growth on Manhattan’s East Side.” The 2004 FEIS also described that the new subway system is being designed to facilitate connections to the Bronx in the future, either via the 129th Street storage tracks, a bellmouth at 122nd Street if the storage tracks are not constructed, or via storage tracks that will extend west of the 125th Street Station, which could eventually extend to the Bronx.

The 2004 FEIS did not identify a potential route for a future extension to the Bronx. Previous studies (prior to 1950) showed potential extensions using existing rail rights-of-way. However, existing MTA subway lines in the Bronx are either operating at capacity and/or are not sized to accommodate the new Second Avenue Subway. The only other rail corridor that might have allowed connection, Amtrak’s Northeast Corridor, is currently in construction to accommodate the planned Penn Station Access project that will bring Metro-North Railroad service to the southern and eastern parts of the Bronx, and therefore is not available to accommodate new subway service. Moreover, the Penn Station Access project will provide transit access to neighborhoods in the Bronx that currently have limited transit service.

Removal of the bellmouth from the Project as part of the currently proposed design modification does not preclude the possibility of future connections to the Bronx. Given that there is no current conceptual plan for how a future extension would work, multiple alternative possibilities remain for a future connection. Tunnels could still be extended northward from the curve at 125th Street, or tunnels could be extended westward under 125th Street using the storage tracks that will extend west of the 125th Street Station to provide passenger transfer points to northbound service available on other existing subway routes.

Based on the information presented above, eliminating the bellmouth from the north end of the 116th Street Station would not result in new or different adverse impacts from those identified in the 2004 FEIS, the 2018 Supplemental EA, or the 2020 Re-evaluation and would reduce the amount of street-level construction

activity in comparison to the original 2004 FEIS design, the 2018 Supplemental EA design, and the 2020 Re-evaluation design (see **Section 4.2.3**).

4.2.3 Summary of Changes to Construction Activities at the 116th Street Station with Currently Proposed Design Modification

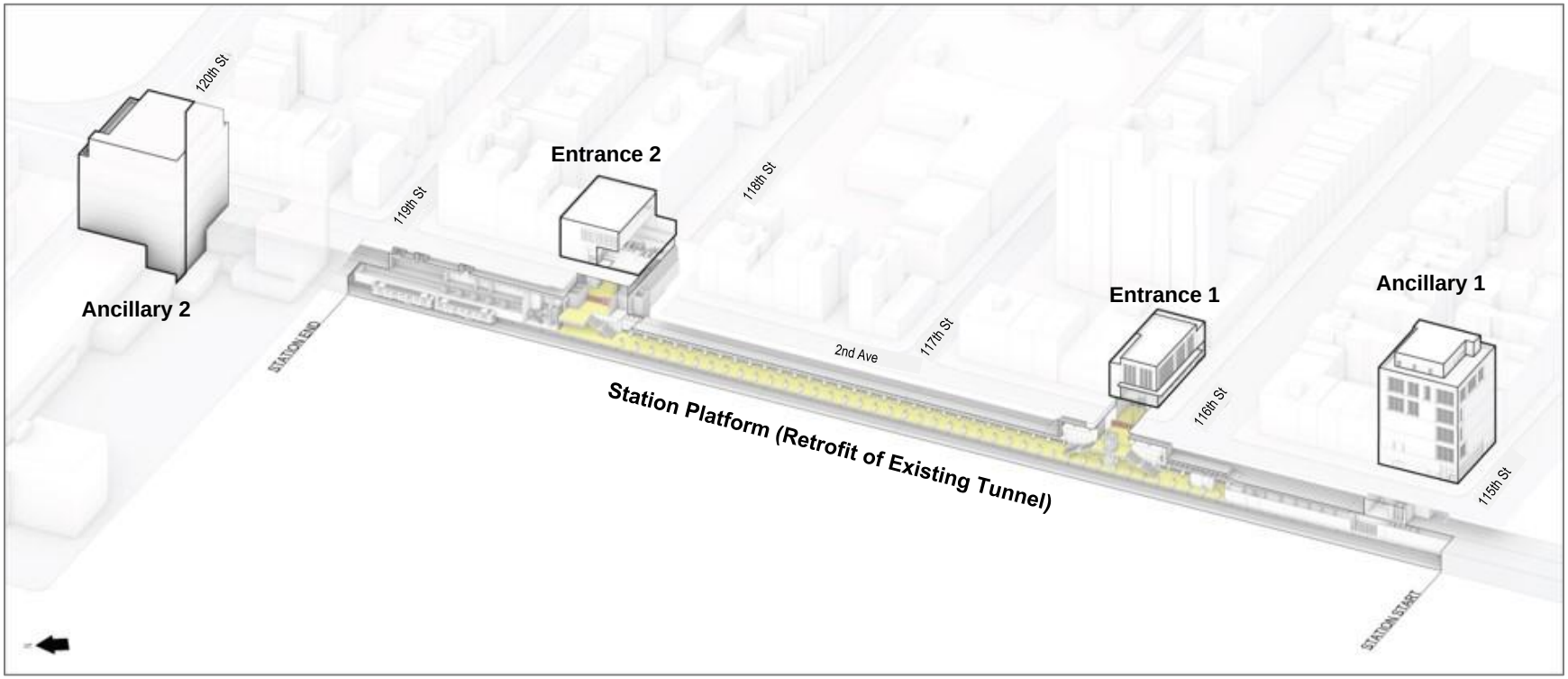
In combination, the currently proposed design modifications at the 116th Street Station would eliminate most areas of cut-and-cover construction and associated utility relocation in Second Avenue. **Figure 4.11** illustrates the areas of cut-and-cover construction anticipated with the 2018 Supplemental EA design, the 2020 Re-evaluation design, and the currently proposed design modification.

The reduction of excavated area would reduce the utility relocations required for the Project, which would have involved extensive disruption and substantial construction zones within Second Avenue for the length of the station in the previous designs. The reduction of excavated area would substantially reduce disruptions to traffic and pedestrian flows at the station construction site in comparison to the original 2004 FEIS design, the 2018 Supplemental EA design, and the 2020 Re-evaluation design. Below-ground excavation for the station's mezzanines, which would be approximately 15 feet deeper than the track level, would not increase noise or vibration at adjacent properties, the need for underpinning of adjacent structures, or otherwise increase risk associated with station construction.

Table 6.1 in **Section 6** below provides a summary of the design for the 116th Street Station evaluated in the 2004 FEIS, the 2018 Supplemental EA, the 2020 Re-evaluation, and the currently proposed design modification.

Figure 4.1 – 116th Street Station: Comparison of 2004 FEIS Design and 2018 Supplemental EA Design (Figure 2-2a from 2018 Supplemental EA)

Figure 4.2 – Approved Design for 116th Street Station: Cutaway Diagram



This cutaway diagram illustrates the approved design with the mezzanine level above the platform

Figure 4.3 – Approved Design for 116th Street Station: Connection Between Mezzanine and Platform Below

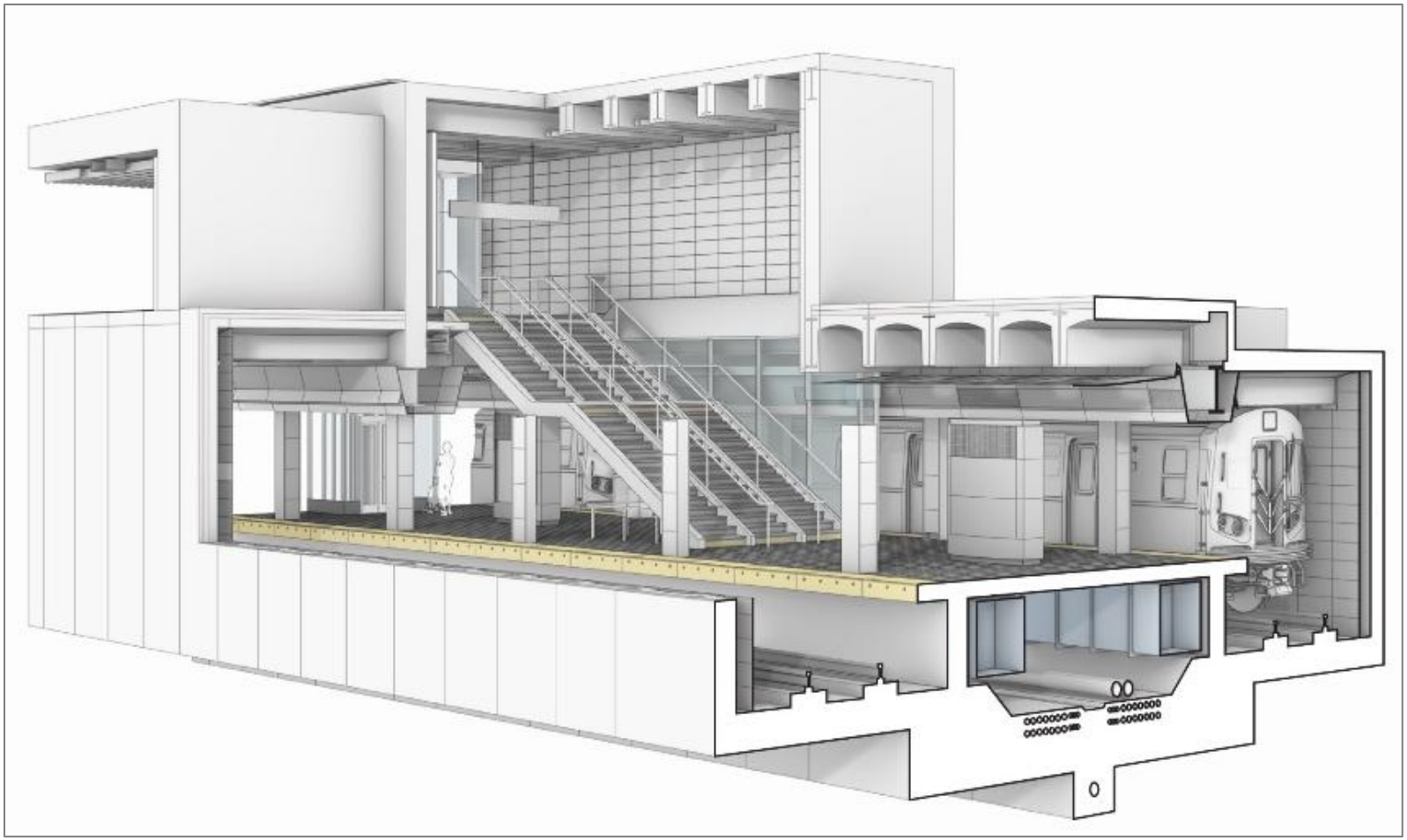
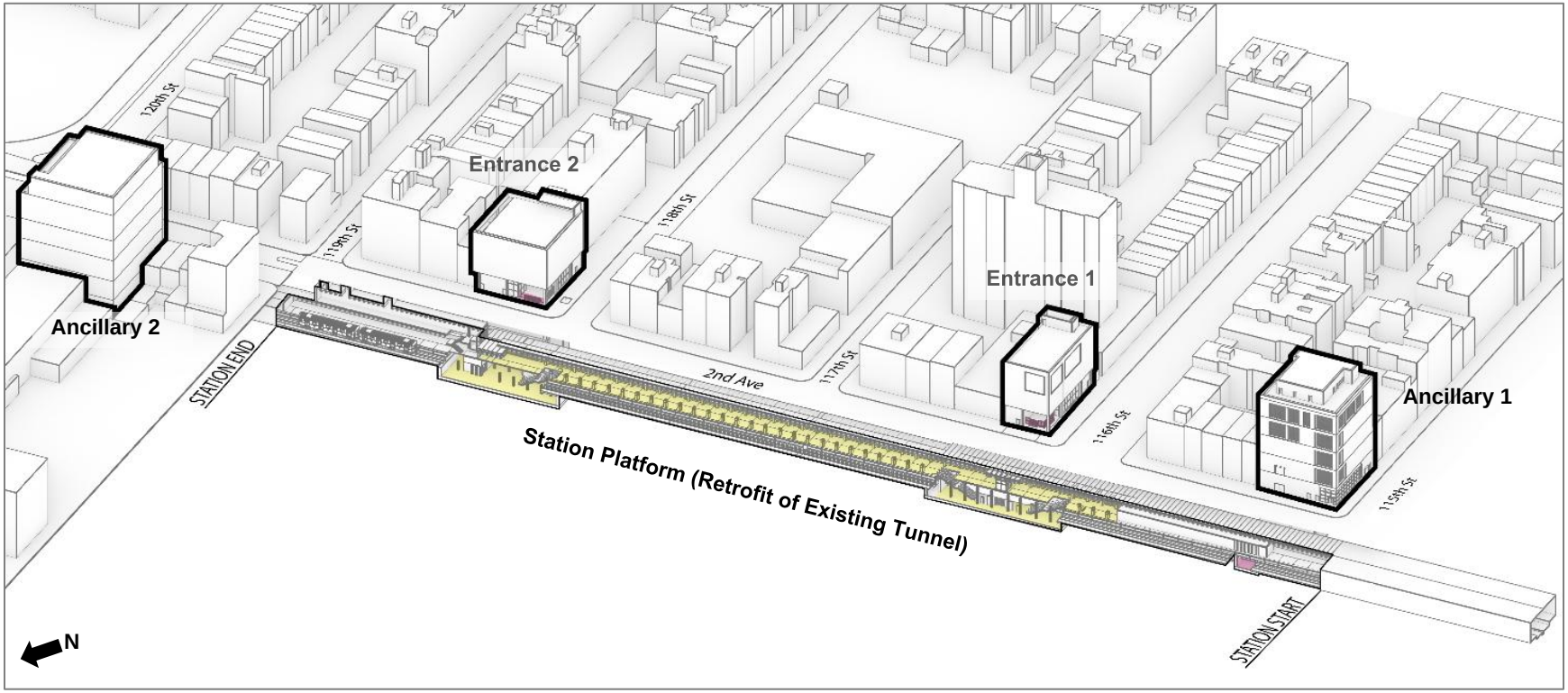


Figure 4.4 – Currently Proposed Design Modification for 116th Street Station: Cutaway Diagram



This cutaway diagram illustrates the currently proposed design modification with the mezzanine level below the platform

Above-grade station elements, including Ancillary 1, Ancillary 2, Entrance 1, and Entrance 2, would remain the same as in the currently approved design

Figure 4.5 – Currently Proposed Design for 116th Street Station Entrance 1: Section Looking North

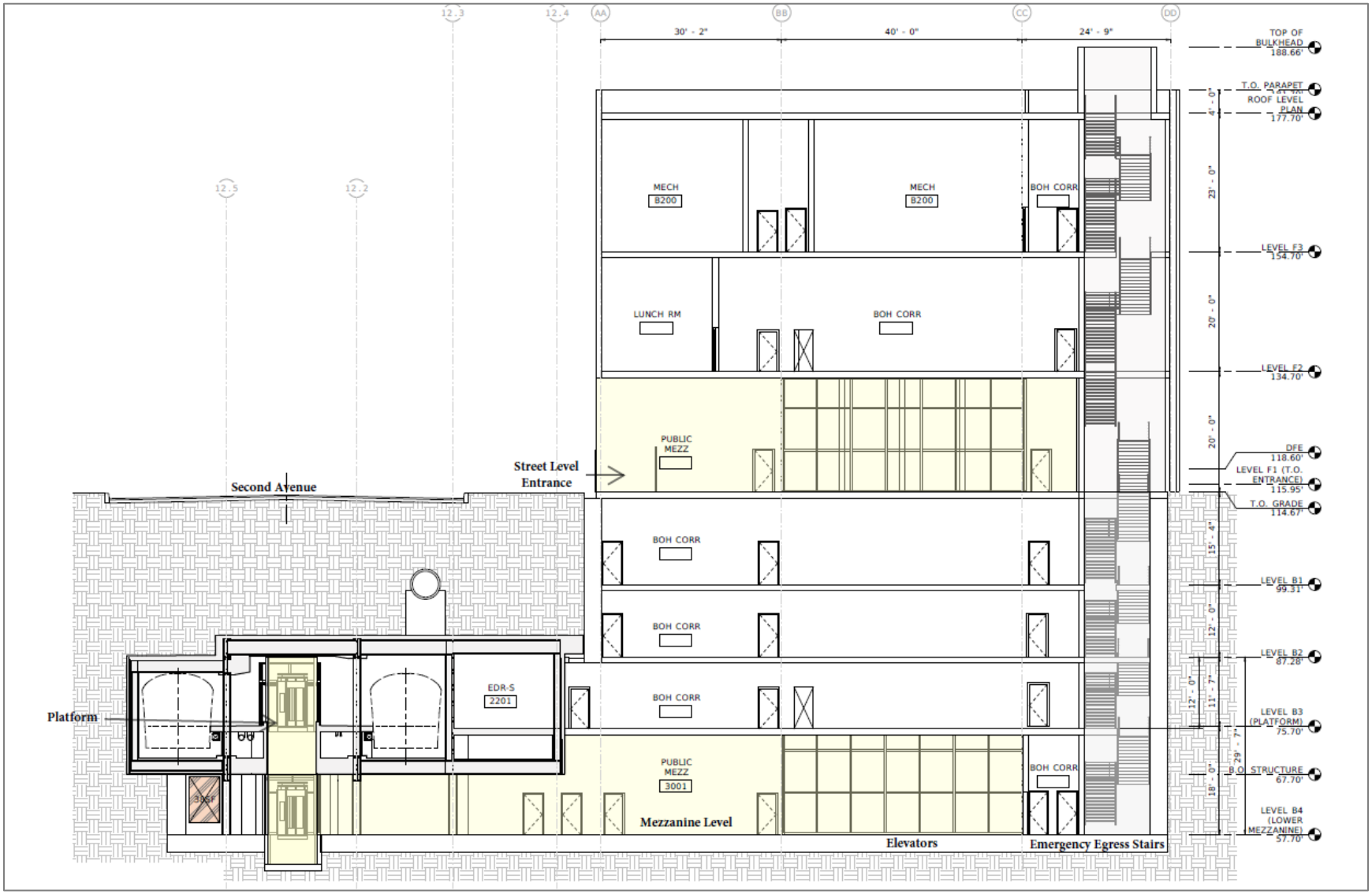


Figure 4.6 – Currently Proposed Design for 116th Street Station Entrance 1: Cutaway

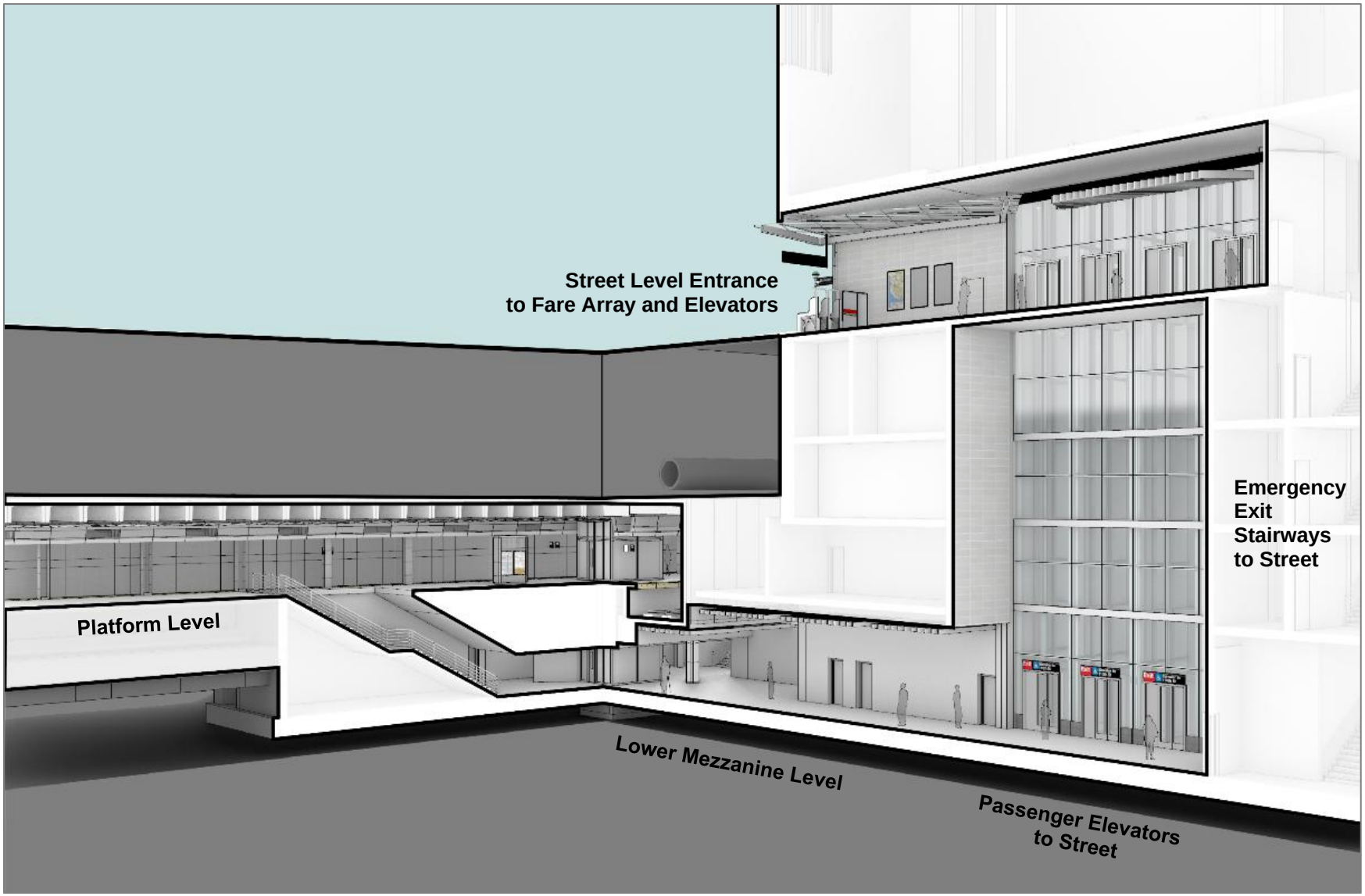


Figure 4.7 – Currently Proposed Design for 116th Street Station Entrance 1: Illustrative Renderings

Figure 4.8 – Currently Proposed Design for 116th Street Station Entrance 2: Section Looking North

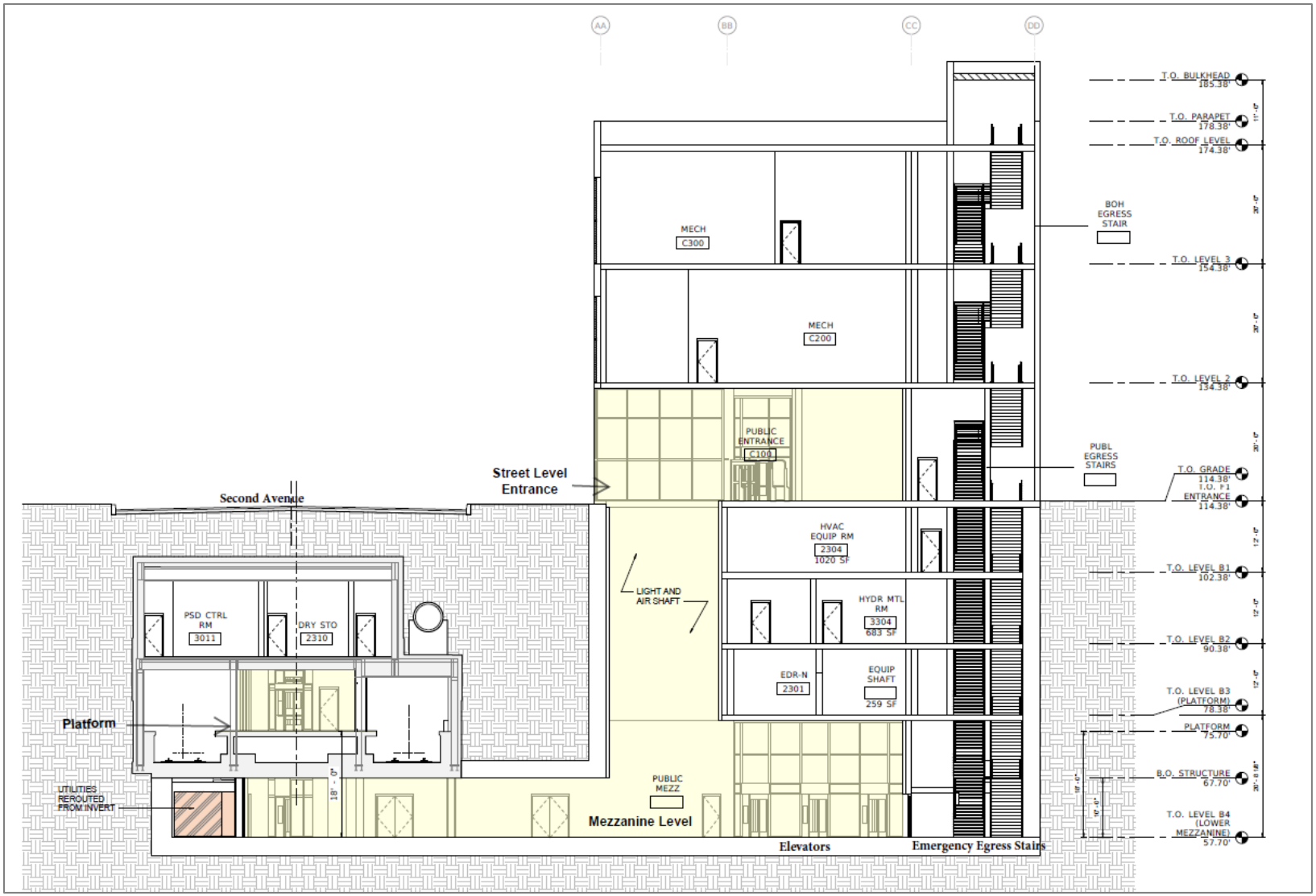


Figure 4.9 – Currently Proposed Design for 116th Street Station Entrance 2: Cutaway

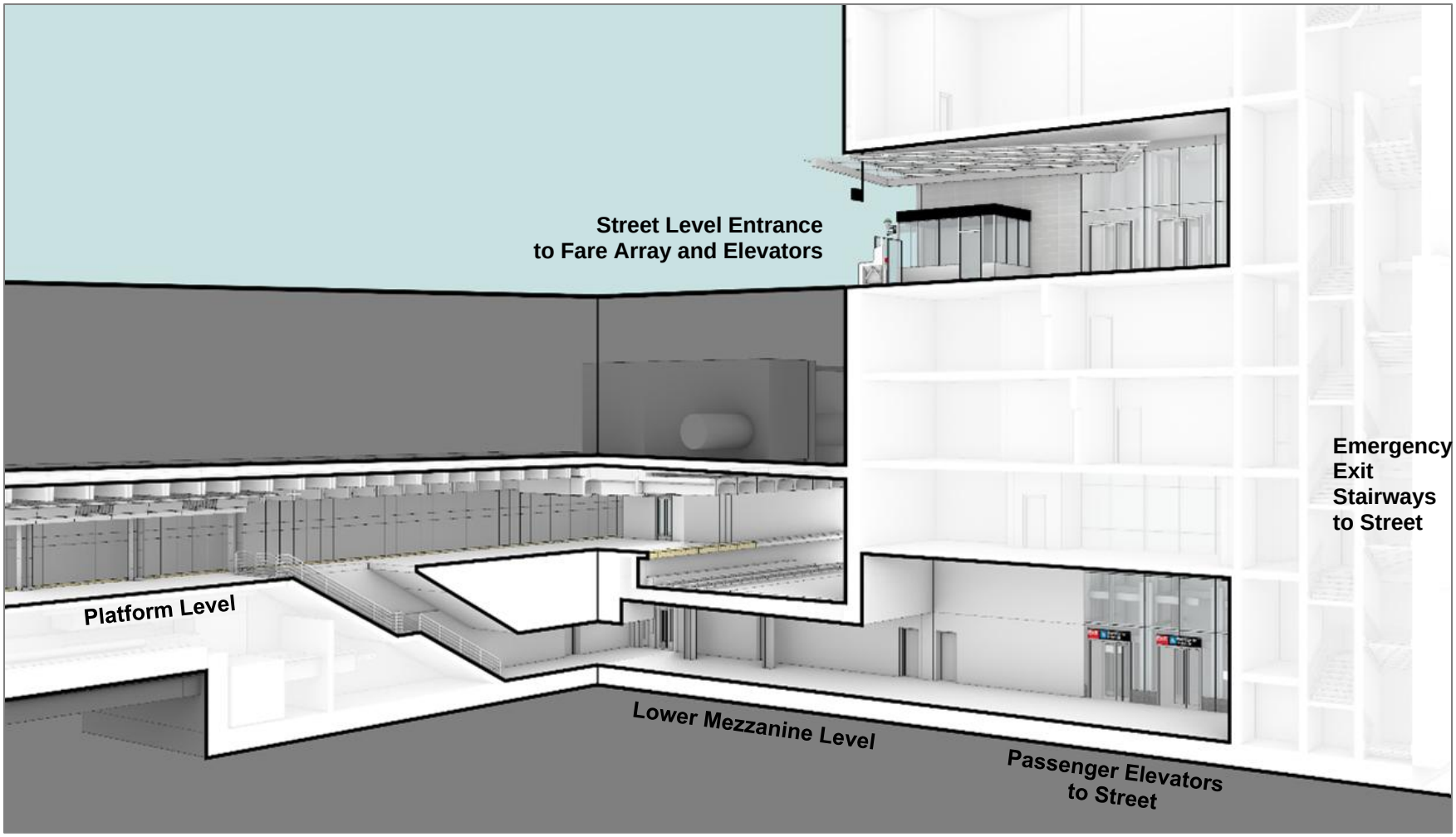


Figure 4.10 – Currently Proposed Design for 116th Street Station Entrance 2: Illustrative Renderings

Figure 4.11 – Comparison of Cut-and-Cover Construction Area at 116th Street Station: 2018 Supplemental EA Design, 2020 Re-evaluation Design, and Currently Proposed Design Modification

5 PROPOSED DESIGN MODIFICATION: 125TH STREET STATION

5.1 Design Changes Since the FEIS and ROD: 125th Street Station

5.1.1 2004 FEIS Design: 125th Street Station

The 2004 FEIS design for the 125th Street Station was a three-track station with one island platform and one side platform, a mezzanine above the platform level, and a direct transfer to the 125th Street Station on the Lexington Avenue (Nos. 4, 5, and 6) subway line. The station had three entrances and multiple above-ground ancillary facilities. In the 2004 FEIS design, those were as follows:

- **125th Street Station Entrance 1:** Within the sidewalk at the southeast corner of East 125th Street and Lexington Avenue (where an existing entrance to the Lexington Avenue subway line is today); this entrance would be combined with some ancillary functions included in Ancillary 1
- **125th Street Station Entrance 2:** Off-street at the southwest corner of East 125th Street and Lexington Avenue; this entrance could be combined with some ancillary functions
- **125th Street Station Entrance 3:** In the median of Park Avenue beneath the Metro-North Railroad tracks and station just south of East 125th Street; this entrance could be combined with some ancillary functions
- **125th Street Station Ancillary 1:** Southeast corner of Third Avenue and East 125th Street
- **125th Street Station Ancillary 2:** South side of East 125th Street midblock between Lexington Avenue and Park Avenue

The 2004 FEIS design also included tracks for train storage west of the 125th Street Station. Two tunnels housing storage tracks (also called “tail tracks”) extended west of the 125th Street Station to about midway between Fifth and Lenox Avenues.

5.1.2 2018 Supplemental EA Design: 125th Street Station

In the 2018 Supplemental EA design, the 125th Street Station was modified to reduce construction activity on 125th Street, which is a major commercial and retail corridor in Harlem. The tunnel and station box were lowered, to allow more construction using TBM and mining rather than cut-and-cover construction, and ancillary facilities were relocated from East 125th Street to East 124th Street to shift activities away from 125th Street. The 2018 Supplemental EA design incorporated the following changes to the 125th Street Station from the 2004 FEIS design:

- The station was shifted approximately 115 feet west and about 20 feet deeper to allow for mining construction techniques, which would substantially reduce surface-level disruption along 125th Street and reduce construction disruption to the Lexington Avenue line.
- The station layout was changed from a three-track configuration to a two-track, center island platform configuration, which would continue to provide adequate capacity and would make the station suitable for construction via mining and tunnel boring rather than cut-and-cover construction.
- Connections between the new 125th Street Station and the existing 125th Street Station on the Lexington Avenue line (Nos. 4, 5, and 6 trains) were reconfigured to provide additional transfer capacity and better distribute those transfers along both the Second Avenue Subway mezzanine and the Lexington Avenue line platforms.
- Station entrances were enlarged and relocated to accommodate updated passenger projections and an additional location option for Entrance 2 was added. With this change, the three station entrances were as follows:
  - **125th Street Station Entrance 1:** Off-street at the southeast corner of Lexington Avenue and East 125th Street; existing Lexington Avenue sidewalk entrance to be eliminated
  - **125th Street Station Entrance 2:** Off-street at the southwest corner of Lexington Avenue and East 125th Street (original location) or off-street at northwest corner of intersection (preferred)

  - **125th Street Station Entrance 3:** Off-street at Park Avenue and 125th Street, which included access from the southeast corner of the intersection and access within the adjacent median of Park Avenue

- Ancillary facilities were enlarged to accommodate more above-ground functions, other design modifications, and ground-floor retail space and relocated to better meet station ventilation needs and shift construction activities away from busy 125th Street. With this change, the two ancillary facilities were as follows:
  - **125th Street Station Ancillary 1:** Southeast corner of Lexington Avenue and East 124th Street
  - **125th Street Station Ancillary 2:** Southwest corner of Park Avenue and East 124th Street

The 2018 Supplemental EA design for the 125th Street Station included four utility tunnels at the mezzanine level to connect the station's back-of-house areas with the station's two ancillary buildings: two tunnels at the east end of the station, referred to as Tunnels T1 and T2, and two tunnels at the west end of the station, Tunnels T3 and T4. These tunnels provided conduits for station-related utilities.

For more information on the 2018 Supplemental EA design, please see the Supplemental EA and FONSI available on MTA's website (https://www.mta.info/project/second-avenue-subway-phase-2/supplemental-environmental-assessment-eis and https://www.mta.info/document/23861).

The 2018 Supplemental EA design also included tracks for train storage west of the 125th Street Station. The storage tracks and associated tunnels would extend farther west than anticipated in the 2004 FEIS design to provide greater train storage capacity. The tracks would end either just east of or just west of Malcolm X Boulevard/Lenox Avenue, depending on the design option selected.

5.1.3 2020 Re-evaluation Design (Currently Approved Design): 125th Street Station

As part of the prior cost containment measures evaluated in the 2020 Re-evaluation, the 125th Street Station was modified as follows:

- Equipment and back-of-house space was relocated from the lowest level of Ancillary 1/Entrance 1 closer to the street where possible and the height of Ancillary 1 was increased to accommodate this design change
- Entrance 2 in either the preferred or original location: Deferred to a future phase of the Project
- Entrance 3: This off-street entrance at Park Avenue and East 125th Street, which previously included access from the southeast corner of the intersection and access within the adjacent median of Park Avenue, was modified to eliminate the entrance component in the Park Avenue median; the entrance component at the southeast corner was converted to elevator-only
- Ancillary 1: Increased in height to accommodate relocated equipment and back-of-house space
- Ancillary 2: Potential relocation from the west side of Park Avenue to the east side (co-located with Entrance 3), depending on results of coordination with the private property owner

In connection with the relocation of Ancillary 2, one of the utility tunnels connecting back-of-house spaces on the mezzanine level to Ancillary 2, Tunnel T4 (beneath Park Avenue), was eliminated. Three utility tunnels remained in the 2020 Re-evaluation design—Tunnels T1 and T2 at the east end of the station and Tunnel T3 at the west end of the station. These tunnels extended south from the station at the mezzanine level to connect to the ancillary facilities.

For more information on the 2020 Re-evaluation design, please see the 2020 Re-evaluation available on MTA's website (https://www.mta.info/document/80676; https://www.mta.info/document/75876; and https://www.mta.info/document/80671).

The 2020 Re-evaluation design also included tracks for train storage west of the 125th Street Station. The longer of the potential train storage options was selected, so these storage tracks and associated tunnels would extend to a point west of Malcolm X Boulevard/Lenox Avenue.

5.2 Currently Proposed Design Modification for the 125th Street Station: Modifications to Utility Tunnels

The approved design for the 125th Street Station is illustrated in **Figure 5.1**. This station's tracks and platform will be deep beneath 125th Street, with the platform approximately 120 feet below street level. The station will extend from approximately Lexington Avenue to midway between Park and Fifth Avenues and will include two standalone, off-street entrance structures and two standalone, off-street ancillary facilities:

- **125th Street Station Entrance 1:** Off-street at the southeast corner of East 125th Street and Lexington Avenue, and removal of the existing sidewalk entrance to the Lexington Avenue subway line at that corner; with escalators, stairs, and elevator
- **125th Street Station Entrance 3:** Off-street at the southeast corner of Park Avenue and East 125th Street, with elevators
- **125th Street Station Ancillary 1:** Northeast corner of Lexington Avenue and East 124th Street
- **125th Street Station Ancillary 2:** Northeast corner of Park Avenue and East 124th Street

The approved design also includes a third entrance at the 125th Street Station, Entrance 3, which is not illustrated in **Figure 5.1**. The 2020 Re-evaluation design, which is now the approved design for the station, deferred Entrance 3 to a later phase of the Second Avenue Subway.

The approved design also includes three utility tunnels providing connections between the station's mezzanine level and the ancillary facilities. These three tunnels are Tunnels T1 and T2 at the east end of the station and Tunnel T3 at the west end of the station under Park Avenue. These tunnels will extend south from the station at the mezzanine level to connect to the ancillary facilities. As part of the currently proposed design modifications, to compensate for the previous elimination of a fourth utility tunnel, Tunnel T4, at the 125th Street Station, the current design modification includes enlarging Tunnel T3 to the size previously contemplated for Tunnel T4. Tunnel T3 will be at the west end of the station, beneath Park Avenue, and will connect back-of-house spaces on the mezzanine level to Ancillary 2. The below-grade area where the enlarged Tunnel T3 will be located is a location that was originally contemplated for a connection to Entrance 1 in the 2004 FEIS design. **Figure 5.2** illustrates the proposed change to Tunnel T3.

At the east end of the 125th Street Station, the currently proposed design modification includes a reduction to the height of Tunnel T2, one of the utility tunnels connecting back-of-house spaces on the mezzanine level to Ancillary 1. This would reduce the amount of rock excavation required and the amount of reinforced concrete needed during construction of the station. The design modification would not result in changes to the function or accessibility of Tunnel T2 and would not affect the design of the station platforms, mezzanine, or back-of-house areas. **Figure 5.3** illustrates the proposed change to Tunnel T2.

Figure 5.4 provides a plan view of the 125th Street Station showing the locations of the three utility tunnels with the currently proposed design modifications.

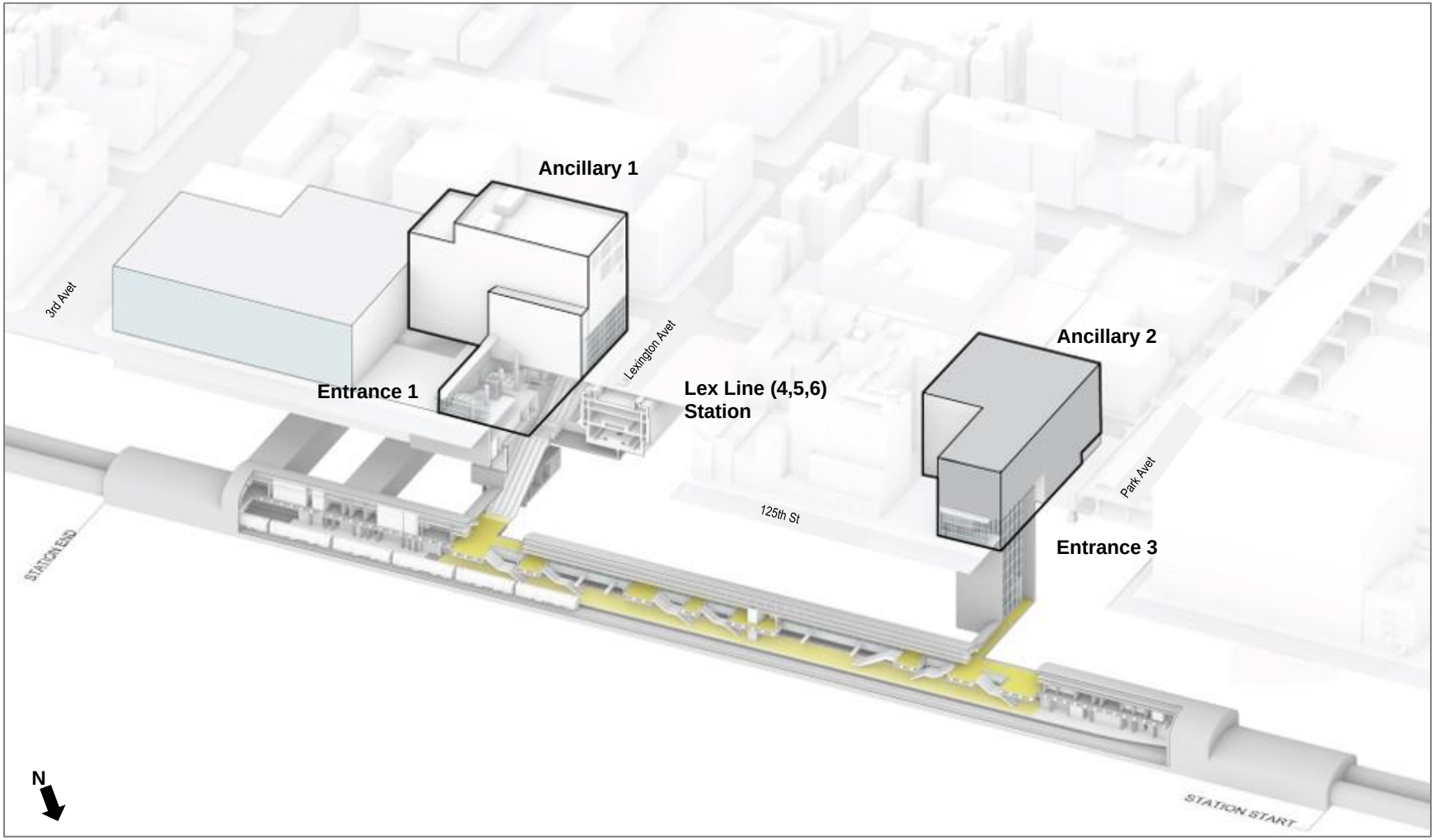
With the currently proposed design modifications to the utility tunnels, no changes would occur to passenger spaces, including entrances and vertical circulation elements, and no changes would occur at the track level. The Project would continue to have storage tracks extending westward past the station to a terminus west of Malcolm X Boulevard/Lenox Avenue.

Table 6.1 in **Section 6** below provides a summary of the design for the 125th Street Station evaluated in the 2004 FEIS, the 2018 Supplemental EA, the 2020 Re-evaluation, and the currently proposed design modification.

Appendix 3, "Pedestrian Circulation Analyses," provides an analysis of pedestrian flows at the 125th Street Station (see A**ppendix 1.1, "Pedestrian Circulation Analysis, 2018 Extended Preliminary Engineering Design – All SAS2 Stations"** and **Appendix 1.5, "Pedestrian Circulation Analysis, 2020 Re-evaluation Design – 125th Street Station." Appendix 2.3, "Station Plans – 125th Street Station,"** provides plans for the 125th Street Station at street level, mezzanine level, and platform level and **Appendix 3, "Path of Travel Information,"** provides information on ADA path of travel for the station.

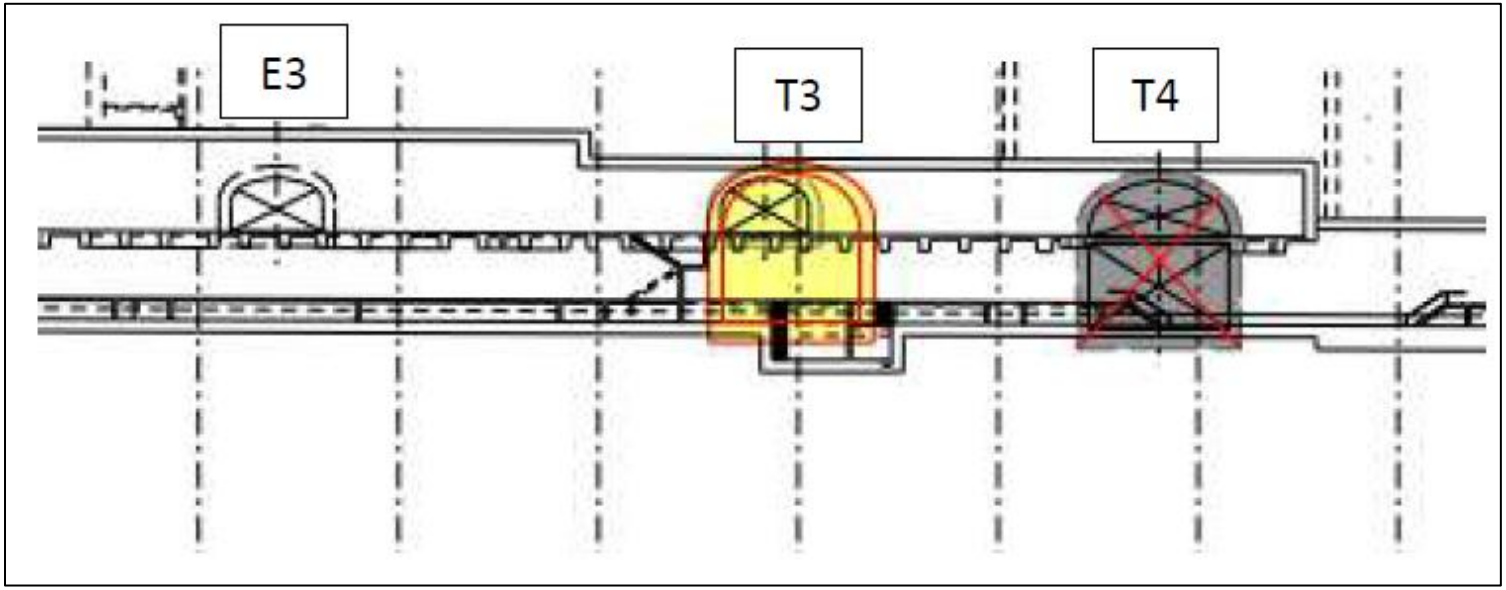
Overall, based on the information presented above, the currently proposed design modifications at the 125th Street Station would not result in new or different adverse impacts from those identified in the 2004 FEIS, the 2018 Supplemental EA, or the 2020 Re-evaluation.

Figure 5.1 – 125th Street Station Cutaway Diagram
Approved Design and Currently Proposed Design Modification



Note: The below-ground utility tunnels connecting the station box to the ancillary facilities are not shown on this cutaway diagram

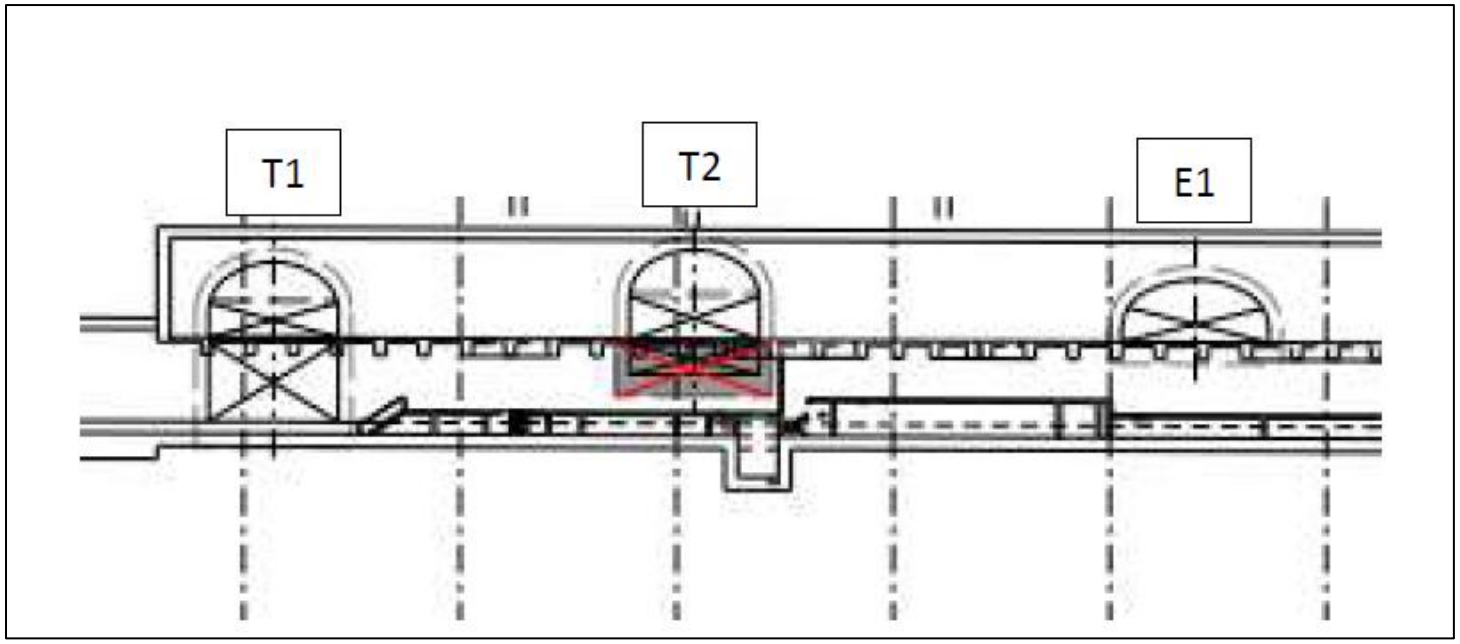
Figure 5.2 – Proposed Modifications to Utility Tunnel T3 at West End of 125th Street Station (Park Avenue): Section View



Utility Tunnel T4 was eliminated from the station in the 2020 Re-evaluation design

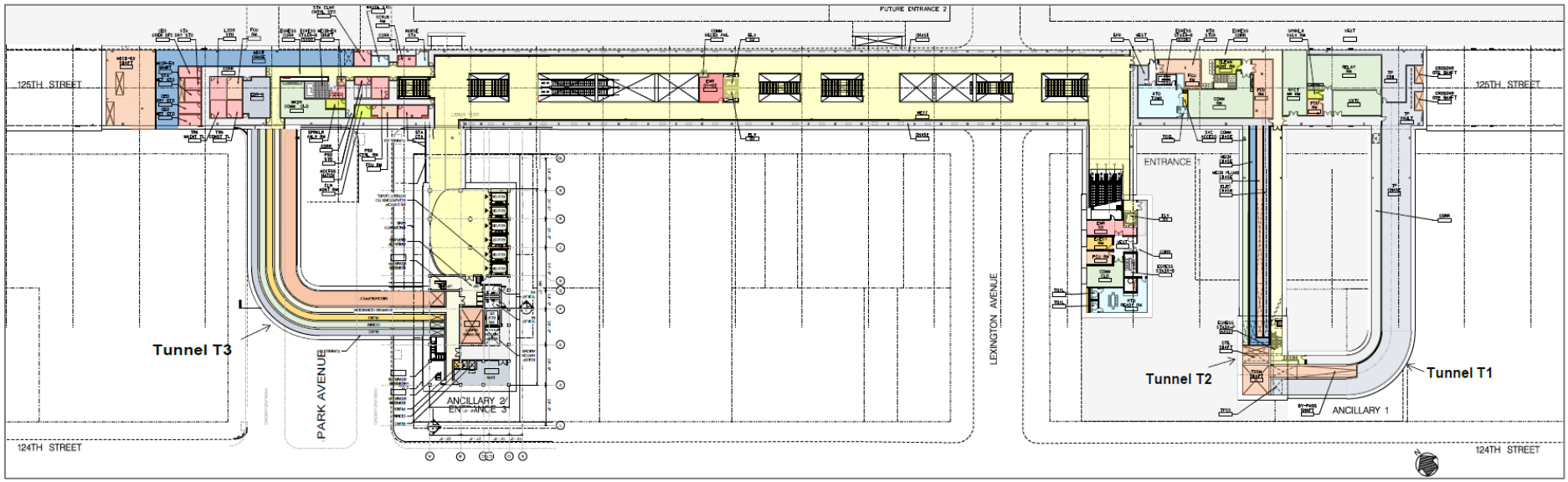
The currently proposed design modification would increase Utility Tunnel T3 to the size shown in yellow

Figure 5.3 – Proposed Modifications to Utility Tunnel T2 at East End of 125th Street Station: Section View



The currently proposed design modification would reduce the size of Utility Tunnel T2

Figure 5.4 – Currently Proposed Design Modification: Utility Tunnels at 125th Street Station



6 POTENTIAL EFFECTS OF THE CURRENTLY PROPOSED DESIGN MODIFICATIONS

Table 6.1 summarizes the design for SAS2 evaluated in the 2004 FEIS, 2018 Supplemental EA, 2020 Re-evaluation, and the currently proposed design modifications.

Table 6.2 provides an assessment of the effects of the currently proposed design modification in comparison to effects of the SAS2 Project as previously described in the previous NEPA documents, including the 2004 FEIS, the 2018 Supplemental EA, and the 2020 Re-evaluation. The table includes each of the resource areas that have been previously evaluated as part of the NEPA environmental review for the Project. The table presents a summary of the conclusions related to the previous stages of design and identifies whether the proposed design modification would alter any of those previous conclusions.

Based on this Re-evaluation, including the assessment presented in **Table 6.2**, the currently proposed modification would not result in any new adverse environmental impacts not previously identified and the conclusions of the Project's 2004 Final Environmental Impact Statement and Record of Decision remain valid.

7 PUBLIC AND STAKEHOLDER OUTREACH

Since 2017, MTA has initiated a comprehensive community outreach program that included establishing a physical presence in the heart of East Harlem at the Project's Community Information Center (CIC) at 69 East 125 Street, with a fully bilingual staff.

The CIC and MTA's outreach team have served as a resource to elected officials, community-based organizations, stakeholders, and the community at large by providing updates and fielding questions and concerns on the Project and Project status; educating groups, such as students from local elementary, middle, and high schools, at the CIC and in their environs; participating in workshops/forums/public events; holding educational pop-ups along the Project alignment; coordinating inspections and access agreements with residents and business owners; creating and distributing a Project newsletter; and creating other Project-related materials. The CIC team has also visited local schools to provide presentations on the Project, including curricula related to Science, Technology, Engineering, and Mathematics (STEM), to educators and students. Over the past eight years, MTA has held almost 500 meetings and information sessions to provide information about SAS2, both at the CIC and at other locations including local apartment buildings, schools, and local Community Board meetings. The Second Avenue Subway Project has received widespread support for its anticipated transit benefits.

In addition to the robust project-wide outreach, MTA has established a Construction Advisory Committee for the utility relocation work being conducted in advance of other Project construction. The 106th Street Station Area Residents Construction Advisory Committee is made up of residents of buildings from East 104th Street to East 112th Street, including tenant leaders from the Franklin Plaza Association and Gaylord White Houses, as well as property owners and tenants of the local buildings along the alignment. MTA has also established a Business Advisory Committee made up of representatives of merchants, schools, and organizations in the same area. Both groups also include representation from East Harlem elected officials' offices, New York City agencies such as NYCDEP, FDNY, NYPD, the New York City Department of Transportation, the Department of Sanitation of New York, the New York City Department of Health and Mental Hygiene, Community Board 11, and community-based organizations that focus on quality of life for residents of East Harlem.

Information on the SAS2 public outreach activities, including fact sheets, brochures, and presentations, is available on MTA's website (https://www.mta.info/project/second-avenue-subway-phase-2).

In addition, MTA held a briefing meeting with New York City emergency services providers on May 22, 2025, which was attended by FDNY, also representing Emergency Medical Services, and NYPD. At the meeting, MTA provided an update on the Second Avenue Phase 2 project, including details of the design and construction methods for each station, and a specific update on the proposed new design elements of

a lower mezzanine and elevators from the street at the 116th Street Station. Both FDNY and NYPD responded favorably to the design features presented and had no comments or questions about them.

On June 3, 2025, MTA held a virtual public meeting to present Project updates and answer questions from the community. During the meeting, MTA responded to comments and questions and invited the public to submit additional comments and questions about the project via the project website. MTA has prepared a document summarizing the comments received and responding to those comments that will be available on the Project website. Approximately 100 people attended the June 3 virtual meeting, and 48 people submitted a total of 63 substantive comments or questions during the meeting.[3] Nine people submitted a total of 12 substantive comments and questions after the meeting, including two who also commented during the meeting. In addition to substantive comments, MTA also received several non-substantive comments, such as requests to repeat slides during the meeting. Specifically, people commented and asked questions about the following topics:

- General station design, including fare arrays, platform doors, artwork, and retail space (13 comments);
- Design of the 116th Street Station, including placement of the mezzanine below the platform and the use of elevator-only entrances (11 comments);
- Design of the 125th Street Station, including transfers to the Metro-North 125th Street Station (10 comments);
- Other topics related to system design, including provision of broadband service and signaling technology (2 comments);
- Ancillary buildings, including their purpose and planned locations (4 comments);
- Property acquisition and displacement (2 comments);
- Construction impacts, including air quality and vibration monitoring (10 comments);
- Project costs (2 comments);
- Scheduling and phasing of construction and estimated completion date for Phase 2 (8 comments);
- Potential future extensions of the subway, including westward under 125th Street and northward to the Bronx (10 comments);
- Public outreach (1 comment);
- Permanent Project effects (2 comments).

Overall, since the proposed cost-containment measures now under consideration would reduce the overall impact of the Project during construction and reduce Project costs, and based on feedback received during the public meeting and comment period, MTA does not anticipate substantial public controversy regarding the proposed design modifications.

8 CONCLUSION

This Re-evaluation has been prepared in accordance with 23 CFR Part 771.129 and in accordance with the Record of Decision issued in 2004 for the Second Avenue Subway. Based on this Re-evaluation, including the assessment presented in **Table 6.2**, the currently proposed design modifications would not result in any new adverse environmental impacts not previously identified and the conclusions of the Project's 2004 Final Environmental Impact Statement and Record of Decision remain valid.

[3] A total of 22 comments or questions were received during the meeting from people who registered as "Anonymous Attendee." For purposes of tallying commenters, these were each counted as separate commenters, but in fact some of the anonymous attendees may have made more than one comment, so that the total number of people who commented during the meeting may be fewer than 48. These individuals may also be the same as some of the people who submitted comments after the meeting, so that the total number of people who commented may be lower.

Table 6.1 – Comparison of Design for SAS2: 2004 FEIS, 2018 Supplemental EA, 2020 Re-evaluation, and Currently Proposed Design Modification

Project Component	2004 FEIS Design	2018 Supplemental EA Design	2020 Re-evaluation Design	Currently Proposed Design Modification
106th Street Station	Two-track station from approximately East 106th Street to approximately East 109th Street with an island platform and a mezzanine above the platform level. Two entrances and two standalone above-ground ancillary facilities: ▪ **Entrance 1:** Off-street at the northeast corner of Second Avenue and East 106th Street ▪ **Entrance 2:** Off-street near the southeast corner of Second Avenue and East 108th Street ▪ **Ancillary 1:** Northeast corner of Second Avenue and East 105th Street ▪ **Ancillary 2:** Near the southeast corner of Second Avenue and East 110th Street	The 2018 Supplemental EA design modified the 106th Street Station, including the following: ▪ **Station box and platform:** Shifted about 50 feet south and 5-6 feet east ▪ **Entrance 1**: Enlarged to accommodate anticipated passenger demand ▪ **Entrance 2:** Enlarged to accommodate anticipated passenger demand and ADA access; relocated ▪ **Ancillary 1:** Enlarged to accommodate more above-ground functions, other design modifications, and ground-floor retail space; relocated to better meet station ventilation needs and avoid new building on previous site ▪ **Ancillary 2:** Enlarged to accommodate more above-ground functions other design modifications, and ground-floor retail space, and to accommodate construction staging; relocated to better meet station ventilation needs and avoid new building on previous site	The 2020 Re-evaluation did not modify the design for the 106th Street Station.	The currently proposed design modification includes a potential design modification at this station to reduce the width of the station box and station platform by 2 feet, from 28 feet to 26 feet. This would also involve narrowing platform stairs by 2 feet. No changes would occur to the number, location, path of travel, or dimensions of any station entrances.

Project Component	2004 FEIS Design	2018 Supplemental EA Design	2020 Re-evaluation Design	Currently Proposed Design Modification
116th Street Station	Two-track station from approximately East 116th Street to approximately East 119th Street with an island platform and a mezzanine above the platform level. Two entrances and two standalone above-ground ancillary facilities: ▪ **Entrance 1:** Off-street at the northeast corner of Second Avenue and East 116th Street; this would be combined with some ancillary functions ▪ **Entrance 2:** In the sidewalk at the southeast corner of Second Avenue and East 118th Street (stairs only) ▪ **Ancillary 1:** Near the southeast corner of Second Avenue and East 116th Street ▪ **Ancillary 2:** Near the northeast corner of Second Avenue and East 118th Street ▪ **Bellmouth structure and TBM launch box:** Widened tunnel area for launch of TBM between East 120th and East 122nd Streets (north of the 116th Street Station); provided space for two running tracks curving westward to 125th Street and two tracks heading north beneath Second Avenue	The 2018 Supplemental EA design modified the 116th Street Station, including the following: ▪ **Station box and platform:** Shifted about 30 feet north ▪ **Entrance 1:** Enlarged to accommodate anticipated passenger demand ▪ **Entrance 2:** Enlarged to accommodate anticipated passenger demand and ADA access; relocated to better align with platform ▪ **Ancillary 1:** Enlarged to accommodate more above-ground functions, other design modifications, and ground-floor retail space, and to accommodate construction staging; relocated to better meet station ventilation needs and avoid new building on adjacent property ▪ **Ancillary 2:** Enlarged to accommodate more above-ground functions, other design modifications, and ground-floor retail space; relocated to better meet ventilation needs and provide staging for TBM operations ▪ **Bellmouth structure and TBM launch box:** Narrowed and shifted south to a location between East 118th Street and East 120th Street, to connect with 116th St Station	The 2020 Re-evaluation design modified the 116th Street Station, including the following: ▪ Design modifications to re-use existing tunnel structure rather than demolish and rebuild it ▪ Removed full-length mezzanine and instead provided mezzanine segments at each entrance and ancillary facility ▪ No change to the size or location of entrances or ancillary facilities	The currently proposed design modification includes the following changes to the design of the 116th Street Station: ▪ No change to the size or location of entrances or ancillary facilities relocation of the mezzanine from above the platform level to below the platform level ▪ At both entrances, elimination of street-to-mezzanine stair or escalator access; elevator-only access only ▪ No change to the size or location of entrances or ancillary facilities ▪ Elimination of the bellmouth from the Project, such that the tunnel would no longer have the width to provide capacity for four tracks ▪ Modification of the TBM launch area to use the existing tunnel rather than a widened bellmouth area, which would no longer exists in the currently proposed design modification.

Project Component	2004 FEIS Design	2018 Supplemental EA Design	2020 Re-evaluation Design	Currently Proposed Design Modification
125th Street Station	Three-track station from approximately Third Avenue to approximately Park Avenue with one island platform and one side platform and a direct transfer to the Lexington Avenue line 125th Street Station. Three entrances and two standalone above-ground ancillary facilities: ▪ **Entrance 1:** Within the sidewalk at the southeast corner of East 125th Street and Lexington Avenue; this would be combined with some ancillary functions as part of Ancillary 1 ▪ **Entrance 2:** Off-street at the southwest corner of East 125th Street and Lexington Avenue; this would be combined with some ancillary functions ▪ **Entrance 3:** In the median of Park Avenue beneath the Metro-North Railroad tracks and station just south of East 125th Street; this entrance could be combined with some ancillary functions ▪ **Ancillary 1:** Southeast corner of Third Avenue and East 125th Street ▪ **Ancillary 2:** South side of East 125th Street midblock between Lexington Avenue and Park Avenue	The 2018 Supplemental EA design modified the 125th Street Station, including the following: ▪ **Station tunnel alignment and station box:** Lowered about 20 feet and shifted 115 feet west ▪ **Station track configuration:** Modified from 3-track to 2-track station ▪ **Entrance 1:** Enlarged and relocated to accommodate anticipated passenger demand ▪ **Entrance 2 original location:** Enlarged to accommodate anticipated passenger demand ▪ **Entrance 2 (preferred location):** Added new entrance location for station that can provide higher capacity for passenger transfers ▪ **Entrance 3:** Enlarged to accommodate anticipated passenger demand; included two access points – one in the median of Park Avenue and one at the southeast corner of Park Avenue and East 125th Street ▪ **Ancillary 1:** Enlarged to accommodate more above-ground functions, other design modifications, and ground-floor retail space, and to accommodate construction staging; relocated to align with shifted station box and to shift construction activities away from 125th Street ▪ **Ancillary 2:** Enlarged to accommodate more above-ground functions, other design modifications, and ground-floor retail space, and to accommodate construction staging; relocated to align with shifted station box and to shift construction activities away from 125th Street	The 2020 Re-evaluation design modified the 125th Street Station, including the following: ▪ **Deep spaces at 125th Street Station:** Equipment and back-of-house space relocated from lowest level of Ancillary 1/ Entrance 1 closer to the street where possible ▪ **Entrance 2 (either location):** Deferred to a future phase of the Project ▪ **Entrance 3:** Modified so that it no longer included two access points; the access point in the Park Avenue median was removed, and the access point at the southeast corner of Park Avenue and East 125th Street was retained and converted to elevator-only ▪ **Ancillary 1:** Increased in height ▪ **Ancillary 2:** Potential relocation from the west side of Park Avenue to the east side of Park Avenue at the northeast corner of Park Avenue and East 124th Street, depending on results of private property owner coordination; elimination of one utility tunnel connecting to Ancillary 2 (Tunnel T4)	The currently proposed design modification proposes the following changes to two of the utility tunnels connecting back-of-house spaces on the mezzanine level of the 125th Street Station to the station's ancillary facilities: ▪ Enlargement of Tunnel T3 at the west end of the station, connecting to Ancillary 2 ▪ Reduction in size for Tunnel T2, at the east end of the station, connecting to Ancillary 1

Project Component	2004 FEIS Design	2018 Supplemental EA Design	2020 Re-evaluation Design	Currently Proposed Design Modification
Storage Tracks	The 2004 FEIS design included two locations for underground train storage tracks: ▪ **Optional storage tracks beneath Second Avenue north of 125th Street to 129th Street**; these could also be used for a future extension northward ▪ **Storage tracks west of 125th Street Station** to a point between Fifth Avenue and Lenox Avenue / Malcolm X Boulevard these could also be used for a future extension westward	The 2018 Supplemental EA design modified planned storage tracks, including the following: ▪ **Optional storage tracks beneath Second Avenue north of 125th Street:** Removed ▪ **Storage tracks west of 125th Street Station:** extended farther west to accommodate additional train storage, with a two-train-capacity and three-train-capacity (preferred) option; also added new ancillary facility (Ancillary A) at the terminus of the storage tracks	Following the 2018 Supplemental EA, MTA selected the three-train-capacity storage option for the 125th Street storage tracks. The 2020 Re-evaluation design modified the 125th Street storage tracks, including the following: ▪ Relocation of the ancillary facility to avoid a new building on the previous site ▪ Design modifications to reduce the size of the ancillary facility	The currently proposed design modification does not include modifications to storage tracks.

Table 6.2 – Potential Effects of Proposed Design Modification

Analysis Area	Impacts and Any Mitigation as Initially Disclosed			New Impacts or Updated Analysis	Change in Impacts
	2004 FEIS Design	*2018 Supplemental EA Design*	*2020 Re-evaluation Design*	*Currently Proposed Design Modification*	
Transportation	Overall, the 2004 FEIS described that the completed Second Avenue Subway Project would have a beneficial impact from the introduction of new transit service. The 2004 FEIS identified potential impacts to pedestrian conditions at two crosswalks at the 125th Street and Park Avenue intersection, which would be mitigated through widening of the painted striped crossing zone.	In addition to the potential impacts to pedestrian conditions at two crosswalks at 125th Street and Park Avenue, the 2018 Supplemental EA identified additional potential impacts to pedestrian conditions at two additional crosswalks: Second Avenue at 106th Street and Second Avenue at 108th Street. Similar to the 2004 FEIS, these impacts could be mitigated by widening the painted striped crossing zone. The overall SAS2 Project would continue to have a beneficial impact from the introduction of new transit service.	The 2020 Re-evaluation design reduced the full-length mezzanine at the 116th Station to separate mezzanine sections at each entrance, which would maintain acceptable passenger flows at the station and therefore would not result in adverse effects on pedestrian conditions. The 2020 Re-evaluation design deferred Entrance 2 at the 125th Street Station to later phases of the Second Avenue Subway. The 2020 Re-evaluation design included revisions to Entrance 3 at the 125th Street Station. This entrance previously included two access points, on in the median of Park Avenue and the other at the southeast corner of Park Avenue and East 125th Street. The access point in the Park Avenue median was removed and the access point at the southeast corner of Park Avenue and East 125th Street was retained and converted to an elevator-only entrance (with six elevators). No new transportation impacts were identified in the 2020 Re-evaluation.	The currently proposed design modifications would include the following changes to pedestrian accommodations: ▪ 106th Street Station: Potential reduction in width of the station, platform, and stairs by two feet. ▪ 116th Street Station: Relocation of the mezzanine from above the platform to below the platform, and reconfiguration of both entrances to be elevator-only. At the 125th Street Station, the currently proposed design modification would also reconfigure utility tunnels connecting the station box to the ancillary facilities; but these tunnels would not be used by the public or affect station layout of public spaces.	With the proposed two-foot reduction in the width of the platform and stairs at the 106th Street Station, the available space would continue to be adequate to handle passenger flows and to meet NFPA 130 requirements (see **Appendix 1**). At the 116th Street Station, the change in the station's two entrances and the mezzanine configuration would not change passenger connectivity or flows. Horizontal walking distances from the street entrance to the passenger elevators, from passenger elevators at the mezzanine level to the vertical circulation elements (escalators and elevator) leading to the platform would remain the same. The station would continue to be adequate to handle passenger flows and to meet NFPA 130 emergency egress requirements (see **Appendix 1**). The modified utility tunnels at the 125th Street would not affect the design of the station platforms, mezzanine, or back-of-house area, and would not affect pedestrian flows. Therefore, the currently proposed design modification would not result in any new impacts related to transportation.
Land Use and Economics	The 2004 FEIS described that the overall Second Avenue Subway would result in beneficial impacts related to enhanced transit supporting economic growth and vitality. Above-ground elements of the 2004 FEIS design included two entrances and two ancillary facilities at each new station.	With the 2018 Supplemental EA design, entrances and ancillary facilities were generally larger than in the 2004 FEIS design and specific locations were shifted. An additional option for Entrance 2 at the 125th Street Station was added, a new ancillary facility was added near the 125th Street curve (i.e., where the tunnel would curve from Second Avenue to 125th Street), and two options for an ancillary facility (Ancillary A) at the terminus of the tail tracks along 125th Street were added (one just east and one just west of Lenox Avenue/Malcom X Boulevard). The larger and new structures would be designed to blend in with the surrounding urban context of the neighborhood. The 2018 Supplemental EA also noted that a recent rezoning and modifications of the Special Transit Land Use District (STLUDs) along the Phase 2 alignment encouraged development that is compatible with, and accommodating to, the new Second Avenue Subway facilities. The 2018 Supplemental EA did not identify any new adverse effects related to land use and economics.	Above-ground changes associated with the 2020 Re-evaluation design included deferment of Entrance 2 at the 125th Street Station and a revision to Entrance 3, an increase in height of Ancillary 1 at the 125th Street Station, potential relocation of Ancillary 2 from the west side to the east side of Park Avenue, and reduction in size of and minor shift in location of Ancillary A at the tail tracks (note that the site west of Lenox Avenue/Malcolm X Boulevard was selected for Ancillary A). None of these changes would substantially affect the overall dense urban context of the entrance and ancillary facility locations. As such, the 2020 Re-evaluation did not identify any new impacts related to land use and economics.	The currently proposed design modifications would include potential reduction in the width of the station, platform, and stairs by two feet at the 106th Street Station. At the 116th Street Station, the currently proposed design modifications would include relocation of the mezzanine from above the platform to below the platform and reconfiguration of both entrances to be elevator-only. At the 125th Street Station, the currently proposed design modification would reconfigure utility tunnels connecting the station box to the ancillary facilities.	The currently proposed design modifications would primarily reconfigure interior spaces of the 106th,116th, and 125th Street Stations and would not substantially change visible or above-ground elements of the Second Avenue Subway. Therefore, the currently proposed design modifications would not result in any new impacts related to land use and economics.

Analysis Area	Impacts and Any Mitigation as Initially Disclosed			New Impacts or Updated Analysis	Change in Impacts
	2004 FEIS Design	*2018 Supplemental EA Design*	*2020 Re-evaluation Design*	*Currently Proposed Design Modification*	
Acquisitions, Displacements, & Relocation	The 2004 FEIS described that the Second Avenue Subway project overall would require acquisition of property for off-street entrances and ancillary facilities, and that all property would be acquired in compliance with the Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally-Assisted Programs, and the Uniform Act Standards, as implemented by 49 CFR Part 24, for Federal acquisitions. The 2004 FEIS identified 12 full property acquisitions and 4 partial property acquisitions associated with SAS2, resulting in displacement of an estimated 42 employees and 36 residents.	The 2018 Supplemental EA design included larger entrances and ancillary facilities and the addition of a new option for Entrance 2 at the 125th Street Station, a new ancillary facility near the 125th Street curve (i.e., where the tunnel would curve from Second Avenue to 125th Street), and two options for an ancillary facility (Ancillary A) at the terminus of the tail tracks along 125th Street (one just east and one just west of Lenox Avenue/Malcom X Boulevard). The 2018 Supplemental EA design also shifted the specific locations of ancillary facilities and entrances. With these changes, the 2018 Supplemental EA estimated that property acquisitions for the entire alignment of Phase 2 of the Second Avenue Subway would result in displacement of 170 residents and 157 to 505 employees (depending on site options for Ancillary A and the design of Entrance 2 at the 125th Street Station).	The 2020 Re-evaluation design deferred Entrance 2 at the 125th Street Station and revised Entrance 3, and relocated Ancillary A to an adjacent property and reduced its size (note that the site west of Lenox Avenue/Malcolm X Boulevard was selected for Ancillary A). With the design modifications included in the 2020 Re-evaluation, the total number of employees along the entire alignment of Phase 2 that would be displaced as a result of property acquisitions was lower than described in the 2018 Supplemental EA, with an estimated 129 employees displaced. It should be noted that Ancillary A was subsequently relocated to another adjacent property, which was evaluated in a NEPA Re-evaluation in 2025. This relocation would result in displacement of an estimated 80 additional employees, for a total of 209 employees for Phase 2 overall (the 129 employees displaced by the 2020 Re-evaluation design and the 80 additional employees) This would be within the range estimated in the 2018 Supplemental EA (157 to 505).	The currently proposed design modifications would include potential reduction in the width of the station, platform, and stairs by two feet at the 106th Street Station. At the 116th Street Station, the currently proposed design modifications would include relocation of the mezzanine from above the platform to below the platform and reconfiguration of both entrances to be elevator-only. At the 125th Street Station, the currently proposed design modification would reconfigure utility tunnels connecting the station box to the ancillary facilities.	The currently proposed design modifications would not result in any changes to property acquisitions or displacements. Property acquisitions and displacements for the overall Phase 2 project would continue to be conducted in accordance with the Project's approved Full Funding Grant Agreement (FFGA) with FTA, dated November 4, 2023, which establishes the conditions for property acquisition for the SAS2 project. In addition, MTA will acquire the property in compliance with the Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally-Assisted Programs, and the Uniform Act Standards, as implemented by 49 CFR Part 24, for Federal acquisitions.
Neighborhoods & Populations (Social Conditions)	Overall, the 2004 FEIS concluded that introduction of new subway service would result in beneficial impacts related to enhanced transit supporting economic growth and vitality.	The 2018 Supplemental EA noted that while specific locations of some SAS2 entrances and ancillary facilities were different than in the 2004 FEIS design, they would be in the same general locations as previously proposed and continue to be designed to blend in with the surrounding urban context of the neighborhood. Ancillary A and an ancillary facility at the 125th Street curve were added in the 2018 Supplemental EA design. These new facilities would similarly be in a densely developed urban commercial corridor and no adverse effects with respect to social conditions were identified.	The 2020 Re-evaluation design reconfigured interior portions of the 106th Street and 116th Street Stations, deferred Entrance 2 at the 125th Street Station and revised Entrance 3, increased the height of Ancillary 1 at the 125th Street Station, evaluated a potential relocation of Ancillary 2 from the west side to the east side of Park Avenue, and relocated Ancillary A to an adjacent property and reduced its size. The 2020 Re-evaluation did not identify any new adverse effects on social conditions with these changes.	The currently proposed design modifications would include potential reduction in the width of the station, platform, and stairs by two feet at the 106th Street Station. At the 116th Street Station, the currently proposed design modifications would include relocation of the mezzanine from above the platform to below the platform and reconfiguration of both entrances to be elevator-only. At the 125th Street Station, the currently proposed design modification would reconfigure utility tunnels connecting the station box to the ancillary facilities.	The currently proposed design modifications would primarily reconfigure interior spaces of the 106th,116th, and 125th Street Stations and would not substantially change visible or above-ground elements of the Second Avenue Subway. Therefore, the proposed design modification would not result in any new impacts related to social conditions. Since 2017, MTA has initiated a comprehensive community outreach program that included establishing a physical presence in the heart of East Harlem at the Project's Community Information Center (CIC) at 69 East 125 Street, with a fully bilingual staff. Over the past eight years, MTA has held almost 500 meetings and information sessions to provide information about SAS2, both at the CIC and at other locations including local apartment buildings, schools, and local Community Board meetings.

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	2004 FEIS Design	*2018 Supplemental EA Design*	*2020 Re-evaluation Design*	*Currently Proposed Design Modification*	
Visual Resources and Aesthetics	The 2004 FEIS described the potential appearance of above-ground elements, including ancillary facilities and entrances, and described design measures that would be included to minimize adverse effects on neighborhoods where they are located. As described in the FEIS, ancillary facility dimensions were estimated at about 25 to 40 feet wide (depending if combined with an entrance), 75 feet deep, and up to 75 feet high. They were to be designed to be compatible with surrounding urban context. Subway entrances would generally include primary entrances supported by smaller secondary entrances on properties near street corners or within sidewalk spaces at street corners.	The 2018 Supplemental EA design included larger entrances and ancillary facilities and the addition of a new option for Entrance 2 at the 125th Street Station, a new ancillary facility near the 125th Street curve (i.e., where the tunnel would curve from Second Avenue to 125th Street), and two options for an ancillary facility (Ancillary A) at the terminus of the tail tracks along 125th Street (one just east and one just west of Lenox Avenue/Malcom X Boulevard). The 2018 Supplemental EA design also shifted the specific locations of ancillary facilities and entrances. The 2018 Supplemental EA confirmed that, while there would be a minor shift in ancillary facility and entrance locations and they would be larger in size (footprint and height) than presented in the 2004 FEIS, they would be similar in visual character and setting. In addition, they would continue to incorporate materials and design elements that would be compatible with the urban design of the surrounding area. As such, the 2018 Supplemental EA did not identify any new adverse effects related to visual resources and aesthetics.	Above-ground changes associated with the 2020 Re-evaluation design included deferment of Entrance 2 at the 125th Street Station, a revision to Entrance 3 at the 125th Street Station, an increase in height of Ancillary 1 at the 125th Street Station and potential relocation of Ancillary 2 at the 125th Street Station from the west side to the east side of Park Avenue, and reduction in size of and minor shift in location of Ancillary A at the tail tracks. The 2020 Re-evaluation noted that the change in size of Ancillary 1 and potential relocation of Ancillary 2 at the 125th Street Station, and the change in size and minor shift in location of Ancillary A, would remain in context with the surrounding character along the 125th Street corridor. The 2020 Re-evaluation did not identify any new impacts related to visual resources and aesthetics.	The currently proposed design modifications would include potential reduction in the width of the station, platform, and stairs by two feet at the 106th Street Station. At the 116th Street Station, the currently proposed design modifications would include relocation of the mezzanine from above the platform to below the platform and reconfiguration of both entrances to be elevator-only. At the 125th Street Station, the currently proposed design modification would reconfigure utility tunnels connecting the station box to the ancillary facilities.	The currently proposed design modifications, including the conversion of the 116th Street Station entrances to elevator-only, would not substantially change visible or above-ground elements of the Second Avenue Subway. Station entrance structures and ancillary buildings would be in the same location and the same size as in the approved design. Therefore, the currently proposed design modification would not result in any new impacts related to visual resources and aesthetics.
Air Quality	The 2004 FEIS noted that ancillary facilities would generally have exhaust gratings and louvers primarily through the roof to minimize the amount of surface area needed at street level, with fresh air intake through louvers located toward the rear yard (away from vehicular traffic on the street side). Exhaust vents would be placed a minimum of 10 feet from operable windows in other buildings. The air emitted from the ancillary facilities would be air from the subway's tunnels and stations. Similar to subway vents throughout this city, this air would include some dust generated by train brakes and the interaction between the train wheels and the rails. The 2004 FEIS also concluded that the Second Avenue Subway Project would result in beneficial effects on air quality from improved transit access and reduced reliance on automobiles.	The 2018 Supplemental EA design included larger entrances and ancillary facilities and the addition of a new option for Entrance 2 at the 125th Street Station, a new ancillary facility near the 125th Street curve (i.e., where the tunnel would curve from Second Avenue to 125th Street), and two options for an ancillary facility (Ancillary A) at the terminus of the tail tracks along 125th Street (one just east and one just west of Lenox Avenue/Malcom X Boulevard). The 2018 Supplemental EA design also shifted the specific locations of ancillary facilities and entrances. The new ancillary facilities would incorporate the design measures stated in the 2004 FEIS (i.e., roof exhaust and rear yard air intake, and minimum 10 feet distance from operable windows in other buildings). The 2018 Supplemental EA design also maintained the transit improvements that would have an overall beneficial effect on air quality. As such, the 2018 Supplemental EA did not identify any new adverse effects related to air quality.	The 2020 Re-evaluation design reconfigured interior portions of the 106th Street and 116th Street Stations, deferred Entrance 2 at the 125th Street Station and revised Entrance 3, increased the height of Ancillary 1 at the 125th Street Station, evaluated a potential relocation of Ancillary 2 at that station from the west side to the east side of Park Avenue, and relocated Ancillary A to an adjacent property and reduced its size. These changes would not meaningfully alter the ventilation functions of the ancillary facilities and the locations would remain similar to the 2018 Supplemental EA design. As such, the 2020 Re-evaluation did not identify any new adverse effects on air quality.	The currently proposed design modifications would include potential reduction in the width of the station, platform, and stairs by two feet at the 106th Street Station. At the 116th Street Station, the currently proposed design modifications would include relocation of the mezzanine from above the platform to below the platform and reconfiguration of both entrances to be elevator-only. At the 125th Street Station, the currently proposed design modification would reconfigure utility tunnels connecting the station box to the ancillary facilities.	The currently proposed design modifications, including the conversion of the 116th Street Station entrances to elevator-only, would not substantially affect ventilation or emissions. Therefore, the currently proposed design modification would not result in any new impacts related to air quality.

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	2004 FEIS Design	*2018 Supplemental EA Design*	*2020 Re-evaluation Design*	*Currently Proposed Design Modification*	
Noise & Vibration	The 2004 FEIS concluded that the Second Avenue Subway Project would not result in adverse noise impacts. MTA committed to designing all above-ground mechanical equipment (including ancillary facilities) so that the noise level produced when the equipment is in use would not exceed 60 dBA as measured from the façade of the nearest residential property. The 2004 FEIS also concluded that the Project would not result in significant adverse vibration impacts, but that it would have potential significant adverse ground-borne noise impacts in the absence of mitigation measures. MTA committed to mitigating ground-borne noise impacts using resilient track fasteners or track support structures or other similar measures, which were predicted to reduce impacts to below FTA's impact thresholds.	The 2018 Supplemental EA design included larger entrances and ancillary facilities and the addition of a new option for Entrance 2 at the 125th Street Station, a new ancillary facility near the 125th Street curve (i.e., where the tunnel would curve from Second Avenue to 125th Street), and two options for an ancillary facility (Ancillary A) at the terminus of the tail tracks along 125th Street (one just east and one just west of Lenox Avenue/Malcom X Boulevard). The 2018 Supplemental EA design also shifted the specific locations of ancillary facilities and entrances. The new ancillary facilities would incorporate the commitments stated in the 2004 FEIS (i.e., above-ground mechanical equipment would not exceed 60 dBA as measured at the façade of the nearest residential property). In addition, the 2018 Supplemental EA design incorporated use of a dry cooler system, which would eliminate the need for rooftop cooling towers and therefore remove a source of noise at ancillary facilities. As with the ancillary facilities in the 2004 FEIS design, the new ancillary facilities would not generate substantial vibration and ground-borne noise impacts. As such, the 2018 Supplemental EA did not identify any new adverse effects related to noise and vibration.	The 2020 Re-evaluation design reconfigured interior portions of the 106th Street and 116th Street Stations, deferred Entrance 2 at the 125th Street Station and revised Entrance 3, increased the height of Ancillary 1 at the 125th Street Station, evaluated a potential relocation of Ancillary 2 at that station from the west side to the east side of Park Avenue, and relocated Ancillary A to an adjacent property and reduced its size. These changes would not meaningfully alter the mechanical functions of the ancillary facilities and the locations would remain similar to the 2018 Supplemental EA design. As such, the 2020 Re-evaluation did not identify any new adverse effects on noise and vibration.	The currently proposed design modifications would include potential reduction in the width of the station, platform, and stairs by two feet at the 106th Street Station. At the 116th Street Station, the currently proposed design modifications would include relocation of the mezzanine from above the platform to below the platform and reconfiguration of both entrances to be elevator-only. At the 125th Street Station, the currently proposed design modification would reconfigure utility tunnels connecting the station box to the ancillary facilities.	The currently proposed design modifications would not substantially alter mechanical functions or noise-producing elements of SAS2. Therefore, the currently proposed design modification would not result in any new impacts related to noise and vibration.
Ecosystems (Vegetation & Wildlife)	Given that the proposed subway would be underground and above-ground components (i.e., ancillary facilities) would be on existing developed sites, the 2004 FEIS concluded that the Project would not result in adverse effects related to aquatic and terrestrial vegetation and wildlife.	The 2018 Supplemental EA design included larger entrances and ancillary facilities, shifted their specific locations, and added two new ancillary facilities and entrance options. Like the other planned ancillary facilities and entrances, the new facilities and shifted locations would be on existing developed sites and would not adversely affect vegetation and wildlife.	The 2020 Re-evaluation design reconfigured interior portions of the 106th Street and 116th Street Stations, deferred Entrance 2 at the 125th Street Station and revised Entrance 3, increased the height of Ancillary 1 at the 125th Street Station, evaluated a potential relocation of Ancillary 2 at that station from the west side to the east side of Park Avenue, and relocated Ancillary A to an adjacent property and reduced its size. Similar to the 2018 Supplemental EA design, the new planned sites for these ancillary facilities were developed and no new adverse effects to vegetation and wildlife were identified.	An updated review of information available through the U.S. Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (IPaC) mapping application, the monarch butterfly (*Danaus plexippus*), which is a candidate species for federal listing, may be present in the Project area. In addition, review of a New York State mapping tool for state-protected species indicated the potential presence of the peregrine falcon (*Falco peregrinus*), which is listed by the New York State Department of Environmental Conservation (NYSDEC) as endangered in New York State. **Appendix 4** provides information on the federally protected species.	The currently proposed design modifications would primarily reconfigure interior spaces of the 106th, 116th, and 125th Street Stations and no habitat would be removed. Therefore, the currently proposed design modifications would not result in any new impacts related to vegetation and wildlife.

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	2004 FEIS Design	*2018 Supplemental EA Design*	*2020 Re-evaluation Design*	*Currently Proposed Design Modification*	
Water Resources	The 2004 FEIS concluded that the Project would not result in adverse effects related to groundwater, floodplains, and water quality. It noted that portions of the study area in East Harlem along the SAS2 alignment are within 100- and 500-year floodplains. The new tunnels and stations would be constructed to be resistant to water infiltration. Any groundwater that enters the tunnels would be drained to sumps (low points) and then pumped to the sewer system.	The 2018 Supplemental EA design included larger entrances and ancillary facilities, shifted their specific locations, and added two new ancillary facilities and entrance options. Like the other planned ancillary facilities and entrances, the new facilities and shifted locations would be on existing developed sites and would not adversely affect water resources. Following Superstorm Sandy in 2012, NYCT updated its flood design standards and FEMA prepared updated preliminary floodplain maps that reflected the flooding that occurred. The design changes for the 106th Street and 116th Street Stations incorporated in the 2018 Supplemental EA design included modifications to reflect NYCT's updated flood design standards as well as the updated FEMA mapping. The 106th Street Station will be located in the 100-year (1% annual chance) floodplain and a portion of the 116th Street Station will be within the 500-year (0.2 percent annual chance) floodplain.	The 2020 Re-evaluation design reconfigured interior portions of the 106th Street and 116th Street Stations, deferred Entrance 2 at the 125th Street Station and revised Entrance 3, increased the height of Ancillary 1 at the 125th Street Station, evaluated a potential relocation of Ancillary 2 at that station from the west side to the east side of Park Avenue, and relocated Ancillary A to an adjacent property and reduced its size. Similar to the 2018 Supplemental EA design, the new planned sites for these ancillary facilities were developed and no new adverse effects to water resources were identified.	The currently proposed design modifications would include potential reduction in the width of the station, platform, and stairs by two feet at the 106th Street Station. At the 116th Street Station, the currently proposed design modifications would include relocation of the mezzanine from above the platform to below the platform and reconfiguration of both entrances to be elevator-only. At the 125th Street Station, the currently proposed design modification would reconfigure utility tunnels connecting the station box to the ancillary facilities.	The currently proposed design modifications would primarily reconfigure interior spaces of the planned SAS2 stations and would not affect water resources. With the proposed design modifications, the 106th and 116th Stations would continue to meet NYCT's current flood design standards, which were updated following Superstorm Sandy in light of the extensive flooding that occurred in New York City, including in East Harlem. Appropriate station drainage would be provided at all levels of the stations. Therefore, the currently proposed design modifications would not result in any new impacts related to water resources.
Energy & Natural Resources	The 2004 FEIS stated that power for the Second Avenue Subway would be obtained from the existing Con Edison electrical grid, distributed through substations within the below-ground station boxes. The estimated power usage would be a very small fraction of the total energy consumed in New York City.	The 2018 Supplemental EA design included larger entrances and ancillary facilities, shifted their specific locations, and added two new ancillary facilities and entrance options. However, no new impacts with respect to energy were identified in the 2018 Supplemental EA. Energy supply would continue to be coordinated with Con Edison. The 2018 Supplemental EA noted that due to new flood protection standards, substations would be required to be above ground and located in ancillary facilities, but this would not affect their function or result in new adverse impacts.	The 2020 Re-evaluation design reconfigured interior portions of the 106th Street and 116th Street Stations, deferred Entrance 2 at the 125th Street Station and revised Entrance 3, increased the height of Ancillary 1 at the 125th Street Station, evaluated a potential relocation of Ancillary 2 at that station from the west side to the east side of Park Avenue, and relocated Ancillary A to an adjacent property and reduced its size. No new impacts related to energy were identified.	The currently proposed design modifications would include potential reduction in the width of the station, platform, and stairs by two feet at the 106th Street Station. At the 116th Street Station, the currently proposed design modifications would include relocation of the mezzanine from above the platform to below the platform and reconfiguration of both entrances to be elevator-only. At the 125th Street Station, the currently proposed design modification would reconfigure utility tunnels connecting the station box to the ancillary facilities.	The proposed reconfigurations of interior spaces at the planned SAS2 stations and conversion of the 116th Street Station to elevator-only would not substantially alter energy consumption of the overall SAS2 project. Energy supply would continue to be coordinated with Con Edison. Therefore, the currently proposed design modifications would not result in any new impacts related to energy and natural resources.
Geology & Soils	The 2004 FEIS noted that a substantial amount of excavation of soil and bedrock would be required for the Project, but no adverse impacts to geological or soils conditions were identified.	The 2018 Supplemental EA design included larger entrances and ancillary facilities, shifted their specific locations, and added two new ancillary facilities and entrance options. While the new ancillary facilities would require excavation in new areas, the larger sites for the previously planned ancillary facilities and entrances allowed some excavation to shift from Second Avenue to the offsite locations, reducing excavation in Second Avenue. In addition, the 2018 Supplemental EA design included design modifications to increase the areas of mining in place of cut-and-cover construction, particularly at the 125th Street Station, which would substantially reduce the amount of excavated materials from an estimated 465,000 cubic yards to about 150,000 cubic yards. The 2018 Supplemental EA did not identify any new impacts related to geology and soils.	The 2020 Re-evaluation design included deferment of Entrance 2 and a revision to Entrance 3, and elimination of deep user spaces at Entrance 1/Ancillary 1 at the 125th Street Station, as well as modifying the station design at the 116th Street Station, which would reduce the amount of excavation required as part of Phase 2. The 2018 Supplemental EA did not identify any new impacts related to geology and soils.	The currently proposed design modifications would include potential reduction in the width of the station, platform, and stairs by two feet at the 106th Street Station. At the 116th Street Station, the currently proposed design modifications would include relocation of the mezzanine from above the platform to below the platform and reconfiguration of both entrances to be elevator-only. At the 125th Street Station, the currently proposed design modification would reconfigure utility tunnels connecting the station box to the ancillary facilities.	The currently proposed design modifications would reduce the amount of excavation at the 106th, 116th, and 125th Street Stations. Therefore, the proposed design modification would not result in any new impacts related to geology and soils.

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Hazardous Materials	The 2004 FEIS included a preliminary Environmental Site Assessment (ESA) for the full-length Second Avenue Subway, and noted that areas to be disturbed would be further evaluated closer to initiation of construction. All disturbed materials would be handled and disposed of in accordance with all applicable regulations. Hazardous materials associated with operation of the new subway would conform to all applicable regulations and NYCT standards.	The 2018 Supplemental EA included a Contaminated Material Screening Assessment, focusing on sites for proposed acquisition (i.e., entrance and ancillary facility sites), which identified 29 sites along the SAS2 alignment recommended for further investigation. Given the alignment's urban setting and long history of dense development, the screening recommended Phase I Environmental Site Assessments (ESAs) be conducted for each site that would be acquired, which may then recommend further assessments (e.g., Phase II investigations). As with the 2004 FEIS design, disturbed materials would be handled and disposed of in accordance with all applicable regulations and hazardous materials associated with operation of the new subway would conform to all applicable regulations and NYCT standards.	Phase I ESAs were conducted at all planned acquisitions sites (i.e., entrance and ancillary facility sites), including new sites that were identified in the 2020 Re-evaluation design. In general, the Phase I ESAs identified Recognized Environmental Conditions (RECs) and recommended Phase II Environmental Site Investigations. As with the 2004 FEIS and 2018 Supplemental EA designs, disturbed materials would be handled and disposed of in accordance with all applicable regulations and hazardous materials associated with operation of the new subway would conform to all applicable regulations and NYCT standards.	The currently proposed design modifications would include potential reduction in the width of the station, platform, and stairs by two feet at the 106th Street Station. At the 116th Street Station, the currently proposed design modifications would include relocation of the mezzanine from above the platform to below the platform and reconfiguration of both entrances to be elevator-only. At the 125th Street Station, the currently proposed design modification would reconfigure utility tunnels connecting the station box to the ancillary facilities.	The currently proposed design modifications would not result in any changes to property acquisitions or require further site investigations beyond those recommended in the previous analyses. As with the 2004 FEIS, 2018 Supplemental EA, and 2020 Re-evaluation designs, disturbed materials would be handled and disposed of in accordance with all applicable regulations and hazardous materials associated with operation of the new subway would conform to all applicable regulations and NYCT standards. Therefore, the currently proposed design modifications would not result in any new impacts related to hazardous materials.
Public Services	The 2004 FEIS did not identify adverse impacts to community facilities and emergency services. The 2004 FEIS noted that emergency staircases would be provided for evacuation of stations and tunnels and to allow access by emergency services personnel in emergency situations. Beneficial effects would result from improved transit access to community facilities.	The 2018 Supplemental EA design included larger entrances and ancillary facilities, shifted their specific locations, and added two new ancillary facilities and entrance options. The 2018 Supplemental EA design continued to incorporate emergency egress and emergency access measures into the design in accordance with applicable design requirements. No new impacts with respect to public services were identified.	The 2020 Re-evaluation design reconfigured interior portions of the 106th Street and 116th Street Stations, deferred Entrance 2 at the 125th Street Station and revised Entrance 3, increased the height of Ancillary 1 at the 125th Street Station, evaluated a potential relocation of Ancillary 2 at that station from the west side to the east side of Park Avenue, and relocated Ancillary A to an adjacent property and reduced its size. With each of these changes, emergency egress and emergency access measures were included in the design, and no new impacts to public services were identified.	The currently proposed design modifications would include potential reduction in the width of the station, platform, and stairs by two feet at the 106th Street Station. At the 116th Street Station, the currently proposed design modifications would include relocation of the mezzanine from above the platform to below the platform and reconfiguration of both entrances to be elevator-only. At the 125th Street Station, the currently proposed design modification would reconfigure utility tunnels connecting the station box to the ancillary facilities.	The currently proposed design modifications would continue to include emergency egress and emergency access measures, and would meet NFPA 130 requirements for passenger flow and egress. All stations would have multiple emergency egress stairs in compliance with NFPA 130. The analysis was based on three-dimensional modeling of the design fire event at various locations within each station in combination with modeling of passenger flows during an emergency evacuation, to evaluate passengers' ability to clear the platform and evacuate to points of safety, which include areas of refuge and the street. Therefore, the currently proposed design modifications would not result in any new impacts related to public services.
Utilities	The 2004 FEIS design noted utilities within the streetbed would be relocated or protected, as needed, with construction of the Project. All utilities would be restored once the Project is operational, and some utilities would benefit from new infrastructure.	New ancillary facilities added with the 2018 Supplemental EA design would require utility connections for water, sewer, and energy, but no adverse impacts related to the supply of these services were identified and utility connections would be coordinated with the appropriate service providers. The 2018 Supplemental EA noted that design modifications were incorporated for the overall SAS2 project that reduced utility impacts, such as making minor shifts to avoid the Empire City Subway utility duct along Second Avenue and creating a deeper tunnel for the subway along 125th Street, which would reduce potential conflicts with utilities.	The 2020 Re-evaluation design reconfigured interior portions of the 106th Street and 116th Street Stations, deferred Entrance 2 at the 125th Street Station and revised Entrance 3, increased the height of Ancillary 1 at the 125th Street Station, evaluated a potential relocation of Ancillary 2 at that station from the west side to the east side of Park Avenue, and relocated Ancillary A to an adjacent property and reduced its size. Modification of the station design at the 116th Street Station would reduce potential utility relocation needs in these areas. The 2020 Re-evaluation did not identify new impacts related to utilities were identified.	The currently proposed design modifications would include potential reduction in the width of the station, platform, and stairs by two feet at the 106th Street Station. At the 116th Street Station, the currently proposed design modifications would include relocation of the mezzanine from above the platform to below the platform and reconfiguration of both entrances to be elevator-only. At the 125th Street Station, the currently proposed design modification would reconfigure utility tunnels connecting the station box to the ancillary facilities.	The currently proposed design modifications at the 106th Street Station would not affect utilities. The currently proposed design modifications at the 116th Street Station would eliminate most areas of cut-and-cover construction within Second Avenue at this area, further reducing potential conflicts with existing utilities and the need for their relocation. The currently proposed modifications to station utility tunnel at the 125th Street Station would not affect the function of utilities supply. Therefore, the currently proposed design modification would not result in any new impacts related to utilities. With the proposed design modifications, the 106th and 116th Stations would continue to meet NYCT's current flood design standards, which were updated following Superstorm Sandy in light of the extensive flooding that occurred in New York City, including in East Harlem. Appropriate station drainage would be provided at all levels of the stations.

Analysis Area	Impacts and Any Mitigation as Initially Disclosed			New Impacts or Updated Analysis	Change in Impacts
	2004 FEIS Design	*2018 Supplemental EA Design*	*2020 Re-evaluation Design*	*Currently Proposed Design Modification*	
Historic, Cultural, & Archaeological Resources	As the result of Section 106 consultation during preparation of the 2004 FEIS, FTA, MTA, and the New York State Historic Preservation Office (SHPO) executed a Programmatic Agreement setting forth procedures to be followed to document and protect historic properties that could be adversely affected by the Project.	The 2018 Supplemental EA design removed the underground connection between Entrance 3 at the 125th Street Station and the State and National Register-eligible Metro-North Railroad Harlem-125th Street Station, which eliminated a potential adverse effect identified in the 2004 FEIS. The 2018 Supplemental EA also noted that entrances and ancillary facilities would be larger than in the 2004 FEIS design, but they would be designed to be compatible with the surrounding areas. Potential construction effects on historic resources would continue to be addressed with Construction Protection Plans, as needed. As with the 2004 FEIS, design elements that could affect historic resources would continue to be coordinated with SHPO add evaluated in accordance with the 2004 Programmatic Agreement. Supplemental archaeological investigations were undertaken to evaluate potential effects in areas that were not previously evaluated, such as the expanded footprints and relocations of entrances and ancillary facilities, as well as the newly proposed entrance options and ancillary facility options. As with the 2004 FEIS, the 2018 Supplemental EA identified areas of archaeological sensitivity along much of the proposed SAS2 alignment. In addition, the 2018 Supplemental EA identified a more recently established zone of sensitivity for potential human remains in East Harlem near the 125th Street curve. Measures to assess, document, and protect potential archaeological resources were stipulated in the 2004 Programmatic Agreement.	With the 2020 Re-evaluation design, an additional historic resource was identified within the modified 200-foot Area of Potential Effect. This resource would be included in a Project Construction Protection Plan, as needed, in accordance with the 2004 Programmatic Agreement. No new adverse effects to historic resources were identified. An additional area of archaeological sensitivity was identified within the modified Area of Potential Effect, for which additional archaeological investigation was recommended. Measures to document and protect these resources would continue to be consistent with the 2004 Programmatic Agreement.	The currently proposed design modifications would include potential reduction in the width of the station, platform, and stairs by two feet at the 106th Street Station. At the 116th Street Station, the currently proposed design modifications would include relocation of the mezzanine from above the platform to below the platform and reconfiguration of both entrances to be elevator-only. At the 125th Street Station, the currently proposed design modification would reconfigure utility tunnels connecting the station box to the ancillary facilities.	The currently proposed design modifications would primarily reconfigure interior spaces of the planned SAS2 stations and would not change the Area of Potential Effect for historic architectural resources or archaeological resources. Therefore, the currently proposed design modifications would not result in any new adverse effects to historic, cultural, and archaeological resources.
Parklands & Recreation	The 2004 FEIS did not identify adverse impacts to parks along the SAS2 alignment.	The 2018 Supplemental EA noted that several new recreational resources were within about a block of the SAS2 alignment that were not identified in the 2004 FEIS, but none would be affected by the Project. As such, no new impacts to parklands or recreation were identified in the 2018 Supplemental EA.	The 2020 Re-evaluation design reconfigured interior portions of the 106th Street and 116th Street Stations, deferred Entrance 2 at the 125th Street Station and revised Entrance 3, increased the height of Ancillary 1 at the 125th Street Station, evaluated a potential relocation of Ancillary 2 at that station from the west side to the east side of Park Avenue, and relocated Ancillary A to an adjacent property and reduced its size. None of these changes were in proximity to any recreational or open space resources and no new impacts to parklands or recreation were identified.	The currently proposed design modifications would include potential reduction in the width of the station, platform, and stairs by two feet at the 106th Street Station. At the 116th Street Station, the currently proposed design modifications would include relocation of the mezzanine from above the platform to below the platform and reconfiguration of both entrances to be elevator-only. At the 125th Street Station, the currently proposed design modification would reconfigure utility tunnels connecting the station box to the ancillary facilities.	The currently proposed design modifications would primarily reconfigure interior spaces of the planned SAS2 stations and would not change the overall footprint of the Project. Therefore, the currently proposed design modifications would not result in any new adverse impacts related to parklands and recreation.

Analysis Area	Impacts and Any Mitigation as Initially Disclosed			New Impacts or Updated Analysis	Change in Impacts
	2004 FEIS Design	*2018 Supplemental EA Design*	*2020 Re-evaluation Design*	*Currently Proposed Design Modification*	
Construction Impacts	The 2004 FEIS described the extensive construction impacts that would occur during construction of the Second Avenue Subway and the measures that would be implemented to reduce those impacts where possible. For SAS2, the 2004 FEIS described that the alignment would be constructed primarily using cut-and-cover construction excavation, with a TBM for portions of the tunnel beneath 125th Street. The 2004 FEIS design included a widened tunnel area (a "bellmouth") beneath Second Avenue from approximately 120th Street to approximately 122nd Street, that would be used for removing the Project's TBM from the completed tunnel. The 2004 FEIS design for the Project also included an option for storage tracks extending north from this bellmouth to approximately East 129th Street.	The Preliminary Engineering design for the Project evaluated in the 2018 Supplemental EA included modified construction techniques to reduce the impacts of construction and particularly the surface impacts along 125th Street that would occur with the 2004 FEIS design. Modifications included a deeper tunnel under 125th Street that would allow for increased use of mining techniques and reduced cut-and-cover construction, as well as modification of the 125th Street Station from a three-track to a two-track station, allowing for a more condensed station box and a substantial reduction in excavated material. For the 106th Street and 116th Street Stations, the primary construction technique remained cut-and-cover construction, consistent with the 2004 FEIS design. At the 116th Street Station, the existing tunnel segment present beneath Second Avenue would be demolished and reconstructed. The 2018 Supplemental EA design eliminated the potential storage tracks beneath Second Avenue north of East 125th Street and reduced the size of the bellmouth structure beneath Second Avenue and shifted it southward to connect to the 116th Street Station, to reduce the area of cut-and-cover required on Second Avenue.	The 2020 Re-evaluation considered design modifications that would further reduce the Project's construction impacts from those evaluated in the 2018 Supplemental EA. At the 116th Street Station, the 2020 Re-evaluation design substantially reduced in the amount of cut-and-cover excavation by eliminating the full-length mezzanine and replacing it with four separate mezzanine segments. With this change, cut-and-cover construction would be limited to the four areas around the new entrances and ancillary facilities. The design for the TBM launch and bellmouth area would also require cut-and-cover construction. Even with these modifications, the more limited areas of cut-and-cover excavation at the 116th Street Station would require extensive utility relocation for the length of the station, including a large (60-inch) water main and all other utilities in its proximity. The utility relocations and excavation would result in substantial construction zones in the street and related disruptions to vehicular and pedestrian traffic due to lane closures and sidewalk narrowing. The 2020 Re-evaluation design also included changes at the 125th Street Station to reduce the Project footprint and the amount of excavated materials, including the elimination of one utility tunnel (Tunnel T4) at the western end of the station. The 2020 Re-evaluation design also avoided complications associated with constructing underneath the Metro-North Railroad viaduct with removal of and entrance access point for Entrance 3 within the Park Avenue median.	The currently proposed design modifications would reduce the amount of excavation required at the 106th Street and 116th Street Stations; reduce the amount of reinforced concrete needed at the stations; and reduce quantities of materials needed for station finishes. At the 106th Street Station, the currently proposed design modifications would reduce the area to be excavated using cut-and-cover construction, thereby decreasing the amount of soil to be excavated and the amount of reinforced concrete needed for the station. At the 116th Street Station, the currently proposed design modifications would substantially reduce the area of cut-and-cover excavation needed, eliminating all but one area of cut-and-cover construction (an area near 120th Street for the TBM launch site). These changes would eliminate the need for utility relocation and reconstruction, which would substantially reduce the areas that must be disturbed at the surface and greatly reduce disruptions to traffic and pedestrian flows. At the 125th Street Station, no notable changes would occur in construction activities with the currently proposed design modifications. One utility tunnel to be mined beneath Park Avenue would be larger, and another utility tunnel to be mined at the east end of the station would be smaller. Taking into account the previous elimination of Tunnel T4, the increase in size of Tunnel T3, and the reduction in size of Tunnel T2, the amount of rock excavation and the reinforced concrete work at the station would be reduced.	The currently proposed design modifications for the 106th Street Station would reduce the size of the excavation area and the size of the station, which would result in a small reduction in the number of truck trips associated with removing excavated materials and delivery supplies. The currently proposed design modifications at the 116th Street Station would eliminate most areas of cut-and-cover construction and associated utility relocation in Second Avenue. This would greatly reduce disruptions to traffic and pedestrian flows; and shorten the duration of construction disruption at the surface. The changes would also result in fewer truck trips during construction. Below-ground excavation for the station's mezzanines, which would be approximately 15 feet deeper than the track level, would not increase the need for underpinning of adjacent structures or otherwise change the Project's potential effects on adjacent properties. Overall, the currently proposed design modifications would greatly reduce the amount of excavation required for the 116th Street Station from the original design contemplated in the 2004 FEIS and 2018 Supplemental EA and from the 2020 design modification evaluated in the 2020 Re-evaluation. At the 125th Street Station, no notable changes would occur in construction activities with the currently proposed design modifications. Overall, the construction impacts with the currently proposed design modifications would be reduced from those previously disclosed in the 2004 FEIS, 2018 Supplemental EA, and 2020 Re-evaluation.

Analysis Area	Impacts and Any Mitigation as Initially Disclosed			New Impacts or Updated Analysis	Change in Impacts
	2004 FEIS Design	*2018 Supplemental EA Design*	*2020 Re-evaluation Design*	*Currently Proposed Design Modification*	
Secondary / Cumulative Effects	The 2004 FEIS noted that indirect effects of the new subway once it is operational would be beneficial by expanding transit options and supporting local and regional economic growth and productivity. The shift of passengers from the Lexington Avenue (4/5/6) line to the new Second Avenue Subway may direct patrons away from businesses near the Lexington Avenue stations, but may also increase patronage near the new Second Avenue Subway stations. The Lexington Avenue line would continue to be well-used, and businesses in these areas were not expected to be affected greatly. With respect to cumulative effects, the 2004 FEIS stated that the Second Avenue Subway would result in beneficial cumulative impacts with other large-scale transportation projects planned at the time of the 2004 FEIS, including the East Side Access Project and the No. 7 train extension to the far West Side of Manhattan. These transportation projects were to provide an overall benefit to the regional transportation system.	The 2018 Supplemental EA design included larger entrances and ancillary facilities, shifted their specific locations, and added two new ancillary facilities and entrance options. These changes did not substantially change the overall development program of the SAS2 design and the 2018 Supplemental EA did not identify any new potential indirect and cumulative effects.	The 2020 Re-evaluation design reconfigured interior portions of the 106th Street and 116th Street Stations, deferred Entrance 2 at the 125th Street Station and revised Entrance 3, increased the height of Ancillary 1 at the 125th Street Station, evaluated a potential relocation of Ancillary 2 at that station from the west side to the east side of Park Avenue, and relocated Ancillary A to an adjacent property and reduced its size. These changes did not substantially change the overall development program of the SAS2 design and the 2020 Re-evaluation did not identify any new potential indirect and cumulative effects.	The currently proposed design modifications would include potential reduction in the width of the station, platform, and stairs by two feet at the 106th Street Station. At the 116th Street Station, the currently proposed design modifications would include relocation of the mezzanine from above the platform to below the platform and reconfiguration of both entrances to be elevator-only. At the 125th Street Station, the currently proposed design modification would reconfigure utility tunnels connecting the station box to the ancillary facilities.	The currently proposed design modifications would not substantially change the overall development program of the SAS2 design. Therefore, the currently proposed design modifications would not result in any new impacts related to indirect or cumulative effects.

APPENDICES
(Not Included)

APPENDIX 1

Pedestrian Circulation Analyses

1.1 Pedestrian Circulation Analysis, 2018 Extended Preliminary Engineering Design – All SAS2 Stations

1.2 Pedestrian Circulation Analysis, Currently Proposed Design Modification – 106th Street Station

1.3 Pedestrian Circulation Analysis, 2020 Re-evaluation Design – 116th Street Station

1.4 Pedestrian Circulation Analysis, Currently Proposed Design Modification – 116th Street Station

1.5 Pedestrian Circulation Analysis, 2020 Re-evaluation Design – 125th Street Station

APPENDIX 2

Station Plans

2.1 Station Plans – 106th Street Station

2.2 Station Plans – 116th Street Station

2.3 Station Plans – 125th Street Station

APPENDIX 3

Path of Travel Information

106th Street Station

116th Street Station

125th Street Station

APPENDIX 4

Updated Natural Resources Information