5.10 TRANSIT AND PEDESTRIANS

5.10.1 Introduction

This section analyzes the conceptual construction scenarios that could occur when the water mains are connected from the proposed Shaft 33B to the existing trunk main distribution system. As discussed in Section 5.1, "Project Description," NYCDEP water supply objectives for a large part of Manhattan involve connecting Shaft 33B to an existing trunk main located on Third Avenue, ideally between E. 55th and E. 56th Streets but could be as far north as E. 61st Street. As there are many potential water main connection routes, a reasonable worst-case route and two additional representative routes were considered to address the transportation-related issues that could occur with the construction of the water main connections along these routes. The actual construction would be undertaken by NYCDDC in coordination with NYCDOT Office of Construction Mitigation and Coordination (OCMC). The transit and pedestrians impact assessment presented in this EIS considers the weekday AM, midday, and PM peak periods. Although double shifts, night work, and weekend work could also occur, activities during these time periods are comparatively lower than those assessed for the typical weekday peak periods. Hence, the findings presented for the selected analysis time periods reflect the reasonable worst-case conditions in the Study Area.

Detailed descriptions of the likely surface disruptions are provided in Section 5.9, "Traffic and Parking" for water main connections. This section focuses on specific elements pertained to transit service and pedestrian operations. As with traffic and parking, potential construction-related impacts were evaluated for the reasonable worst-case First Avenue route and the two additional representative routes, including the Sutton Place route and the E. 59th Street/E. 61st Street route. For the First Avenue route, four construction options were explored. While these options could possibly be implemented as part of the two additional representative routes as well, they are described only for the First Avenue route.

First Avenue Route

The Base Scenario of the First Avenue route would occur in segments over an approximately 41-month[1] period and include concurrent construction of two water mains along the east side of First Avenue between E. 59th and E. 55th Streets, eventually leading to the distribution connection point on Third Avenue. Along First Avenue, there would not be any taking of sidewalk space, whereas, along E. 55th and E. 56th Streets between First and Third Avenues, a nominal amount of the north sidewalk (2 feet from the north curb) would be taken to maintain the optimum use of the traffic lanes. The other three construction options for the First Avenue route are as follows.

[1] This 41-month duration assumes no water main construction would occur during "black-out dates," which are typically imposed by NYCDOT in this area of Manhattan. The black-out dates include the period between Thanksgiving and the New Year. During this period, roadways would be restored.

- Scenario A – same as the Base Scenario, except part of the east sidewalk would also be taken for construction.
- Scenario B – two mains constructed one at a time, with less roadway closure requirements than Scenario A during the construction of the first main and the same roadway closure requirements as Scenario A during the construction of the second main; no sidewalk taking along First Avenue would be required under this scenario.
- Scenario C – one main constructed on First Avenue and one main constructed on Sutton Place, with the same roadway closure requirements as the first stage of Scenario B plus construction along Sutton Place; no sidewalk taking along First Avenue or Sutton Place would be required under this scenario.

Sutton Place Route

The Sutton Place route would require a construction period of approximately 51 months and involve constructing two mains along Sutton Place (similar to the Base Scenario for the First Avenue route but assumed to occur on the west side of the street). Along E. 55th and E. 56th Streets, the connections for this route would also require traversing the respective segments from Sutton Place to First Avenue. In addition, extending the two mains from the preferred Shaft Site to Sutton Place would require construction along the south side of E. 59th Street between First Avenue and Sutton Place[2] and temporarily converting this roadway segment from two-way to one-way westbound operations. To maintain adequate width for travel lanes, two feet of the north sidewalk in this segment would be temporarily converted to roadway space. Along E. 55th and E. 56th Streets, the same two-foot taking of the north sidewalk, as described for the First Avenue route, would occur between First Avenue and Sutton Place.

E. 59th Street/E. 61st Street Route

The E. 59th Street/E. 61st Street route would require a construction period of approximately 31 months and involve constructing one main along the south side of E. 59th Street from First Avenue to Third Avenue and connecting it to the existing trunk main between E. 59th and E. 60th Streets. The other main would travel up the west side of First Avenue to E. 61st Street, proceed west along the center of E. 61st Street to Third Avenue, and then connect to the existing trunk main between E. 60th and E. 61st Streets.

The assessments of potential temporary construction-related transit and pedestrian impacts for each of the above water main connection routes are addressed below. Since the construction efforts are not anticipated to generate a perceptible number of transit and pedestrian trips, the impact evaluation was conducted in the context of anticipated disruptions to vehicular space that may affect transit service and to pedestrian space that may restrict pedestrian flow. Where appropriate, quantitative analyses were conducted to support this evaluation. While the other

[2] Sutton Place ends at E. 59th Street and continues northward as York Avenue.

three construction options (Scenarios A, B, and C) could be undertaken in similar fashions for all three connection routes, they are described in the context of the First Avenue route.

5.10.2 Existing Conditions

Transit Analysis

The area in which construction-related activities would occur is within the upper East Midtown and lower Upper East Side sections of Manhattan. In this area, transit service is available at the E. 59th Street station (4, 5, 6, and N, R, W lines), at the E. 63rd Street station (F line), and at the E. 53rd Street station (6, and E and V lines), the Roosevelt Island Tramway at Second Avenue and E. 60th Street, and numerous local bus routes, as follows.

- **M15** – The M15 operates at all times between Second Avenue/E. 126th Street in East Harlem and South Ferry. Some buses from E. 126th Street terminate at Houston Street; others end their routes at Park Row/City Hall (on weekdays only). The M15 operates daily between South Ferry and Second Avenue/E. 126th Street with service frequencies of 4 minutes in the AM peak period (7:00 to 9:00 a.m.), 6 minutes in the midday (11:00 a.m. to 1:00 p.m.) and 5 minutes in the PM peak period (4:00 to 7:00 p.m.). Some buses operate between Park Row/City Hall and Second Avenue/E. 126th Street with a frequency of 8 minutes in all peak periods.
- **M15 Limited** – The M15 Limited operates daily between South Ferry (every day) or Park Row/City Hall (weekdays only) and Second Avenue/E. 126th Street, making limited stops north of Houston Street. It has service frequencies of 3, 6, and 5 minutes in the AM, midday, and PM peak periods, respectively.
- **M31** – The M31 operates daily between Eleventh Avenue/W. 54th Street and York Avenue/E. 92nd Street via York Avenue and E. 57th Street. It has service frequencies of 3, 8, and 6 minutes in the AM, midday, and PM peak periods, respectively.
- **M57** – The M57 operates daily between Broadway/W. 72nd Street and York Avenue/E. 60th Street via West End Avenue and E. 57th Street. It has service frequencies of 10 minutes in the AM and midday peak periods and 8 minutes in the PM peak period.
- **M98** – The M98 operates weekday only peak period limited-stop service between Fort Tryon Park in Washington Heights and Lexington Avenue/E. 34th Street in Murray Hills. It has service frequencies of 8 minutes in the AM peak period and 11 minutes in the PM peak period.
- **M101** – The M101 operates local and limited-stop service daily between Fort George Avenue in Washington Heights and The Cooper Union in the East Village. It has service frequencies of approximately 6 minutes during daytime hours.
- **M102** – The M102 operates local service daily between W. 147th Street in Harlem and The Cooper Union in the East Village. It has service frequencies of 11, 12, and 10 minutes in the AM, midday, and PM peak periods, respectively.

- **M103** – The M103 operates local service daily between E. 125th Street in East Harlem and City Hall. It has service frequencies of 10, 12, and 10 minutes in the AM, midday, and PM peak periods, respectively.
- Several Queens-Manhattan (QM) express bus routes that operate during weekdays travel through the area. These routes have stops at the eastbound approach of E. 57th Street at Third Avenue and also at the northbound approach of Third Avenue at E. 56th Street.

As stated in Section 3.10, "Transit and Pedestrians," of Chapter 3, "Impact Methodologies," since the construction of water main connections would not generate a perceptible number of trips to the available transit service in the Study Area, no quantitative analysis was conducted.

Pedestrian Operations Analysis

As with transit use, the proposed project would not generate a perceptible number of pedestrian trips to the Study Area. However, since the construction of the water main connections could result in a temporary taking of existing sidewalk space (as detailed in Section 5.10.4 "Future Conditions With the Project"), a quantitative analysis was conducted for the affected pedestrian elements.

The sidewalks most likely to be affected by construction of the water main connections, primarily under Scenario A of the First Avenue route and the E. 59th Street/E. 61st Street route, were assessed for the AM, midday, and PM peak periods. Existing pedestrian volumes on these sidewalks range from approximately 400 to 800 pedestrians during peak hours. Figure 5.10-1 depicts the peak 15-minute volumes, used for analysis, on the First Avenue east sidewalks between E. 55th and E. 59th Streets. Peak 15-minute volumes for the E. 59th Street south sidewalk west of First Avenue are shown on Figure 4.10-1.

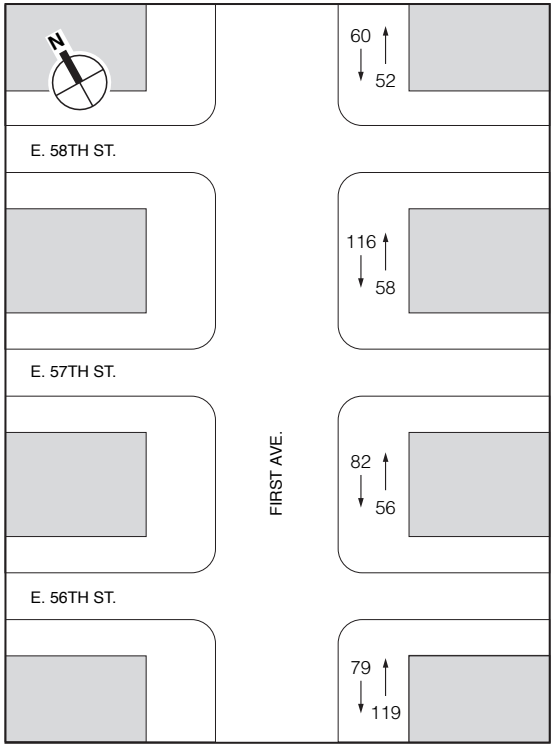
As shown in Table 5.10-1, all analysis sidewalks are currently operating at acceptable levels (15 PFM or less) during the AM, midday, and PM peak periods. For the analysis of the E. 59th Street south sidewalk, a narrower effective width than the one used for the preferred Shaft Site analysis was used to account for more restrictive sidewalk space further west from the First Avenue and E. 59th Street intersection.

5.10.3 Future Conditions Without the Project

Transit Analysis

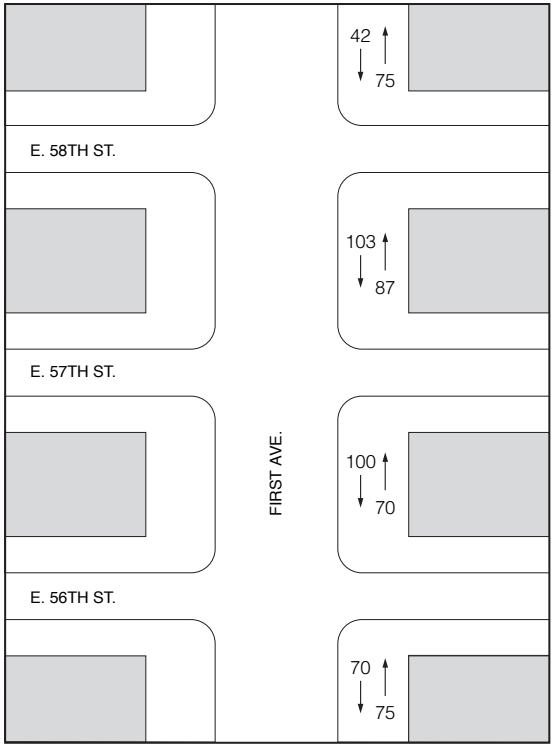
In addition to all existing transit service described above continuing to operate within the Study Area in the Future Without the Project, the Metropolitan Transportation Authority (MTA) is currently studying the feasibility of implementing a bus rapid transit (BRT) program in New York City. The on-going study efforts for this transit program have identified 15 potential corridors, of which 5 would ultimately be chosen for implementation of the pilot program. The First/Second Avenue corridor is one of the 15 routes under consideration. Some of the possible measures that are considered as part of the BRT program and that may be implemented on First

AM PEAK 15-MINUTE PEDESTRIAN VOLUMES

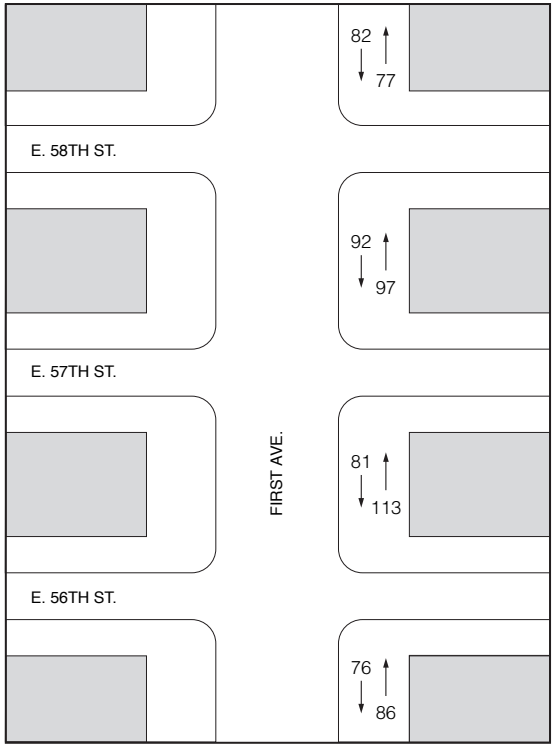


NOT TO SCALE

MIDDAY PEAK 15-MINUTE PEDESTRIAN VOLUMES



PM PEAK 15-MINUTE PEDESTRIAN VOLUMES



NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION
PROPOSED SHAFT 33B TO CITY WATER TUNNEL NO. 3
STAGE 2-MANHATTAN LEG
WATER MAIN CONNECTIONS

2004 EXISTING PEDESTRIAN VOLUMES
WATER MAIN STUDY AREA - SCENARIO A

FIGURE 5.10-1

Avenue in the Future Without the Project include: all-day bus lanes, peak hour by direction bus lanes, bump-outs, new vehicles, and Intelligent Transportation System (ITS) strategies.

Table 5.10-1
2004 Existing Conditions: Sidewalk LOS Analysis

Location	Sidewalk	Effective Width (feet)	15-Minute Two-Way Volume	Average		Platoon	
				PFM	LOS	PFM	LOS
AM Peak Period							
First Avenue between E. 58th and E. 59th Streets	East	5	112	1	A	5+	B
First Avenue between E. 57th and E. 58th Streets	East	4.5	174	3	A	7-	B
First Avenue between E. 56th and E. 57th Streets	East	9.5	138	1	A	5-	A
First Avenue between E. 55th and E. 56th Streets	East	7	198	2	A	6	B
E. 59th Street between First and Second Avenues	South	9	110	1	A	5-	A
Midday Peak Period							
First Avenue between E. 58th and E. 59th Streets	East	5	117	2	A	6	B
First Avenue between E. 57th and E. 58th Streets	East	4.5	190	3	A	7-	B
First Avenue between E. 56th and E. 57th Streets	East	9.5	170	1	A	5+	B
First Avenue between E. 55th and E. 56th Streets	East	7	145	1	A	5+	B
E. 59th Street between First and Second Avenues	South	9	89	1	A	5-	A
PM Peak Period							
First Avenue between E. 58th and E. 59th Streets	East	5	159	2	A	6	B
First Avenue between E. 57th and E. 58th Streets	East	4.5	189	3	A	7-	B
First Avenue between E. 56th and E. 57th Streets	East	9.5	194	1	A	5+	B
First Avenue between E. 55th and E. 56th Streets	East	7	162	2	A	6	B
E. 59th Street between First and Second Avenues	South	9	105	1	A	5-	A

Note: PFM = pedestrians per foot per minute

Pedestrian Operations Analysis

Pedestrian conditions in the Future Without the Project were assessed to establish a future baseline against which potential construction impacts would be evaluated. Since there are no major future developments nearby that would generate a perceptible number of pedestrian trips at the analysis locations, the No Build peak period pedestrian levels were estimated by only applying a background growth of 0.50 percent per year projected over four years. As such, the peak 15-minute No Build pedestrian volumes are approximately the same as those depicted for existing conditions in Figure 5.10-1. As shown in Table 5.10-2, all analysis elements are expected to continue operating at favorable levels during the AM, midday, and PM peak periods.

Table 5.10-2
2008 No Build Conditions: Sidewalk LOS Analysis

Location	Sidewalk	Effective Width (feet)	15-Minute Two-Way Volume	Average		Platoon	
				PFM	LOS	PFM	LOS
AM Peak Period							
First Avenue between E. 58th and E. 59th Streets	East	5	114	2	A	6	B
First Avenue between E. 57th and E. 58th Streets	East	4.5	177	3	A	7-	B
First Avenue between E. 56th and E. 57th Streets	East	9.5	141	1	A	5-	A
First Avenue between E. 55th and E. 56th Streets	East	7	202	2	A	6	B
E. 59th Street between First and Second Avenues	South	9	112	1	A	5-	A
Midday Peak Period							
First Avenue between E. 58th and E. 59th Streets	East	5	120	2	A	6	B
First Avenue between E. 57th and E. 58th Streets	East	4.5	194	3	A	7-	B
First Avenue between E. 56th and E. 57th Streets	East	9.5	173	1	A	5+	B
First Avenue between E. 55th and E. 56th Streets	East	7	148	1	A	5+	B
E. 59th Street between First and Second Avenues	South	9	91	1	A	5-	A
PM Peak Period							
First Avenue between E. 58th and E. 59th Streets	East	5	163	2	A	6	B
First Avenue between E. 57th and E. 58th Streets	East	4.5	193	3	A	7-	B
First Avenue between E. 56th and E. 57th Streets	East	9.5	198	1	A	5+	B
First Avenue between E. 55th and E. 56th Streets	East	7	166	2	A	6	B
E. 59th Street between First and Second Avenues	South	9	107	1	A	5-	A

Note: PFM = pedestrians per foot per minute

5.10.4 Future Conditions With the Project

First Avenue Route

Transit Analysis

As detailed in Section 5.9, "Traffic and Parking," surface disruptions from the construction of the water main connections for the preferred Shaft Site would occur in segments and is expected to take approximately 41 months to complete and as stated above, it is not expected to result in a perceptible number of transit trips. Hence, the Build assessment addresses the potential disturbance construction may have on transit service in the Study Area.

Base Scenario

The Base Scenario would include concurrent construction, in segments, of two water mains along the east side of First Avenue between E. 55th and E. 59th Streets, then across E. 55th and E. 56th Streets, eventually leading to the distribution connection point on Third Avenue. During construction, bus service would be maintained along First Avenue. However, the use of the east curb lane for bus-only traffic during the PM peak period would be interrupted. The construction of the water main connections along First Avenue may also interfere with the potential implementation of the BRT program. NYCDDC, the entity responsible for the actual

construction efforts, would coordinate with the MTA to minimize disruptions to the BRT program potentially planned for the First and Second Avenue corridors.

Existing bus stops that are currently located at the northeast corners of E. 55th and E. 57th Streets would be maintained during Segment 1 construction (closure of east curb lanes between E. 56th and E. 57th and between E. 58th and E. 59th Streets). However, during Segment 3 construction (closure of east curb lanes between E. 55th and E. 56th and between E. 57th and E. 58th Streets), these bus stops would need to be temporarily relocated one block upstream or downstream. Temporary bus stop relocation is typical in New York City during water main construction, utility work, roadway repairs, and other construction efforts. The temporary relocation would be coordinated with the MTA.

Other Construction Options (Scenarios A, B, and C)

The water main connections under Scenarios A and B would have similar effects on transit conditions in the Study Area as the Base Scenario. Under Scenario C, the anticipated effects on Study Area transit conditions would be similar to the Base Scenario for the First Avenue leg of the connections. The potential impacts associated with the Sutton Place leg of this construction option would be similar to those depicted for the Sutton Place route.

Pedestrian Operations Analysis

Similar to transit use, the construction of the water main connections would not result in a perceptible number of pedestrian trips. Hence, the Build analysis addresses the potential disturbance construction may have on pedestrian flow adjacent to the water main connection work zone.

Base Scenario

Construction along First Avenue under the Base Scenario would not encroach onto sidewalks and thus not have an effect on pedestrian flow adjacent to the construction work zone. However, along E. 55th and E. 56th Streets between First and Third Avenues, two feet of the north sidewalk at 200 feet segments at a time would be temporarily removed to maintain adequate traffic lanes during construction. Since the two feet of sidewalk would be along the curb, which is typically occupied by trees, plantings, and sidewalk furniture, the nominal sidewalk width narrowing would not reduce the effective available pedestrian space on these sidewalks. During construction along E. 55th Street between First and Second Avenues, the bicycle lane striped outside of the existing south curb lane would be temporarily displaced for the duration of this segment's construction.

Other Construction Options (Scenarios A, B, and C)

Under Scenario A, the First Avenue work zone would extend onto the adjacent east sidewalks. Approximately five feet of sidewalk space would be required during both Segments 1 and 3 of the water main connections. Based on field observations of sidewalk conditions along First Avenue between E. 55th and E. 59th Streets, it is expected that the partial sidewalk closures would primarily displace existing trees, plantings, and sidewalk furniture, including bus shelters and

pay phones. For three of the four blocks, the narrowed sidewalks would not result in a reduction in the effective available pedestrian space. Only the sidewalk between E. 56th and E. 57th Streets would experience a reduction in effective width from 9.5 feet to 8.5 feet. Although an impact analysis is required only for this block, operating conditions are presented below for all four of the potentially affected blocks along First Avenue to provide a comprehensive illustration of the projected pedestrian conditions. As shown in Table 5.10-3, adequate operating conditions would be maintained with the temporary partial closure of the First Avenue east sidewalks between E. 55th and E. 59th Streets.

Table 5.10-3
2008 First Avenue Route Scenario A Build Conditions: Sidewalk LOS Analysis

Location	Sidewalk	Effective Width (feet)	15-Minute Two-Way Volume	Average		Platoon	
				PFM	LOS	PFM	LOS
AM Peak Period							
First Avenue between E. 58th and E. 59th Streets	East	5	114	2	A	6	B
First Avenue between E. 57th and E. 58th Streets	East	4.5	177	3	A	7-	B
First Avenue between E. 56th and E. 57th Streets	East	8.5	141	1	A	5+	B
First Avenue between E. 55th and E. 56th Streets	East	7	202	2	A	6	B
Midday Peak Period							
First Avenue between E. 58th and E. 59th Streets	East	5	120	2	A	6	B
First Avenue between E. 57th and E. 58th Streets	East	4.5	194	3	A	7-	B
First Avenue between E. 56th and E. 57th Streets	East	8.5	173	1	A	5+	B
First Avenue between E. 55th and E. 56th Streets	East	7	148	1	A	5+	B
PM Peak Period							
First Avenue between E. 58th and E. 59th Streets	East	5	163	2	A	6	B
First Avenue between E. 57th and E. 58th Streets	East	4.5	193	3	A	7-	B
First Avenue between E. 56th and E. 57th Streets	East	8.5	198	2	A	6	B
First Avenue between E. 55th and E. 56th Streets	East	7	166	2	A	6	B

Note: PFM = pedestrians per foot per minute

Under Scenarios B and C, construction along First Avenue would not encroach onto sidewalks and thus not have an effect on pedestrian flow adjacent to the construction work zone. The potential impacts associated with the Sutton Place leg of Scenario C would be similar to those depicted for the Sutton Place route. With regard to construction along E. 55th and E. 56th Streets, pedestrian conditions would be similar to those described for the Based Scenario.

Impact Assessment Summary

The temporary disruption of the bus-only lane and relocation of existing bus stops along First Avenue are typical of construction activities in New York City and would not be considered to result in potential significant adverse impacts to transit service in the Study Area. Similarly, the reduction of pedestrian space on Study Area sidewalks and displacement of bicycle lane to create space for construction or provide additional roadway width for vehicular traffic would be temporary, and since the operational analysis of the disrupted sidewalks shows that adequate

pedestrian flow would be maintained, no potential significant adverse impacts to pedestrians would result from the First Avenue route water main connections.

Sutton Place Route

Transit Analysis

The Sutton Place route would take approximately 51 months to complete and involve extending two mains across E. 59th Street from the preferred Shaft Site to York Avenue/Sutton Place, constructing along the west side of Sutton Place, and following the cross-town routing of the First Avenue route via E. 55th and E. 56th Streets. During construction, bus service would be maintained along Sutton Place; however, three bus stops, located on the west side of Sutton Place between E. 55th and E. 56th Streets, between E. 57th and E. 58th Streets, and between E. 58th and E. 59th Streets would be temporarily relocated during construction of the respective segments. As stated for the First Avenue route, temporary bus stop relocation is typical in New York City during water main construction, utility work, roadway repairs, and other construction efforts and would be coordinated with the MTA. While NYCDDC is also expected to coordinate with the MTA on the potential implementation of the BRT program, the Sutton Place route is unlikely to affect any components of the BRT program potentially planned for the First and Second Avenue corridors.

Pedestrian Operations Analysis

As detailed in Section 5.9, "Traffic and Parking," extending the water main connections across E. 59th Street to Sutton Place would require taking two feet from the north sidewalk to maintain adequate roadway width for vehicular traffic, while construction takes place on the south side of the street. Based on field observations, this sidewalk width narrowing would primarily displace existing street furniture and plantings and not result in a reduction in the effective available pedestrian space on the this sidewalk. Similarly, between Sutton Place and First Avenue, two feet of the north sidewalks along E. 55th and E. 56th Streets would need to be removed for construction. As with the conditions described for the First Avenue route along the same two streets between First and Third Avenues, this nominal two-foot narrowing of sidewalk width would not effectively reduce the effective available pedestrian space on these sidewalks. Along E. 55th Street between Sutton Place and First Avenue, the bicycle lane striped outside of the existing south curb lane would be temporarily displaced for the duration of this segment's construction.

Impact Assessment Summary

The temporary relocation of existing bus stops along Sutton Place is typical of construction activities in New York City and would not be considered to result in potential significant adverse impacts to transit service in the Study Area. Similarly, the reduction of pedestrian space on Study Area sidewalks and displacement of bicycle lane to create space for construction or provide additional roadway width for vehicular traffic would be temporary and not result in potential significant adverse impacts to pedestrians.

E. 59th Street/E. 61st Street Route

Transit Analysis

The E. 59th Street/E. 61st Street route would take approximately 31 months to complete and involve extending a single main across E. 59th Street from the preferred Shaft Site to Third Avenue and the other main north along the west side of First Avenue, then west to Third Avenue. During construction, bus service would be maintained throughout; however, the Q32 bus stop on E. 59th Street approaching Second Avenue and the Queensboro Bridge would be temporarily relocated within the same block during the staged (approximately 200-foot sections at a time) construction of the E. 59th Street segment between Second and Third Avenues. As stated for the First Avenue and Sutton Place routes, temporary bus stop relocation is typical in New York City during water main construction, utility work, roadway repairs, and other construction efforts and would be coordinated with the MTA. While NYCDDC is also expected to coordinate with the MTA on the potential implementation of the BRT program, the E. 59th Street/E. 61st Street route is unlikely to affect any components of the BRT program potentially planned for the First and Second Avenue corridors.

Pedestrian Operations Analysis

As detailed in Section 5.9, "Traffic and Parking," extending the water main connections across E. 59th Street from the preferred Shaft Site to Second Avenue would require taking six feet from the south sidewalk for approximately the initial 370 feet of this segment's construction to maintain adequate roadway width for vehicular traffic. An impact analysis of this sidewalk width reduction shows that adequate service levels could be maintained during construction, as presented in Table 5.10-4.

Table 5.10-4
2008 E. 59th Street/E. 61st Street Route Build Conditions: Sidewalk LOS Analysis

Location	Sidewalk	Effective Width (feet)	15-Minute Two-Way Volume	Average		Platoon	
				PFM	LOS	PFM	LOS
AM Peak Period							
E. 59th Street between First and Second Avenues	South	3	112	2	A	6	B
Midday Peak Period							
E. 59th Street between First and Second Avenues	South	3	91	2	A	6	B
PM Peak Period							
E. 59th Street between First and Second Avenues	South	3	107	2	A	6	B

Note: PFM = pedestrians per foot per minute

Impact Assessment Summary

The temporary relocation of the existing bus stop on E. 59th Street is typical of construction activities in New York City and would not be considered to result in potential significant adverse impacts to transit service in the Study Area. Similarly, the required narrowing of the E. 59th

Street south sidewalk would be temporary, and since the operational analysis of the disrupted sidewalk shows that adequate pedestrian flow would be maintained, no potential significant adverse impacts to pedestrians would result from the E. 59th Street/E. 61st Street route water main connections.

5.10.5 Conclusions

As demonstrated in the assessments discussed above, some disruptions to the Study Area's transit service and pedestrian space are anticipated during the construction of water main connections under the First Avenue, Sutton Place, and E. 59th Street/E. 61st Street routes. However, these disruptions are temporary and do not constitute adverse impacts that may require mitigation. As discussed in Section 4.10, there are no predicted significant adverse impacts on transit service or pedestrian operations for construction of Shaft 33B at the preferred Shaft Site. However, in recognition of the traffic conditions in the area, if the preferred Shaft Site is selected, NYCDEP would commit to providing the funding for additional TEAs, as appropriate, at the Shaft Site during its construction to facilitate vehicular and pedestrian flow nearby. In sum, construction of Shaft 33B and its water main connections at the preferred Shaft Site is not expected to result in potential significant adverse impacts to transit and pedestrians.

◆