

## 7.9 TRAFFIC AND PARKING

### 7.9.1 Introduction

As described in Section 7.1, “Project Description,” the E. 61<sup>st</sup> Street Shaft Site is located on the north side of E. 61<sup>st</sup> Street between First Avenue and Marginal Street within an area adjacent to the elevated Queensboro Bridge upper level Manhattan-bound off-ramp to E. 62<sup>nd</sup> Street. The construction of Shaft 33B at this site would require the acquisition of private property that could delay the initiation of Shaft 33B construction by approximately ten months. Similar to the preferred Shaft Site, water main connections from this alternative Shaft Site could follow many possible routes to the Third Avenue trunk main, including the First Avenue, Sutton Place, and E. 59<sup>th</sup> Street/E. 61<sup>st</sup> Street routes, as evaluated in Section 5.9, “Traffic and Parking” for water main connections. As demonstrated in Section 3.9, “Traffic and Parking” of Chapter 3, “Impact Methodologies,” and Section 4.9, “Traffic and Parking” for the preferred Shaft Site, the activation and operation of Shaft 33B and its water main connections would not generate vehicular trips exceeding the CEQR requirements for a detailed analysis, and therefore, would not be expected to have a potential for significant adverse traffic impacts. Since this conclusion would also be applicable for the E. 61<sup>st</sup> Street Shaft Site, the following discussions address conditions related to the construction of the shaft and water main connections.

### 7.9.2 Shaft Site Construction Traffic Conditions

Construction of Shaft 33B at the E. 61<sup>st</sup> Street Shaft Site would take 52 (using the raise bore construction method) to 65 (using the surface excavation method) months to complete, as described in Section 7.1. Similar to the construction at the preferred Shaft Site, the peak trucking activity would involve a maximum of 30 truck trips on a typical day or up to 5 truck trips during any peak hour. These truck estimates developed for a conservative impact assessment would be applicable for either the raise bore or surface excavation construction method. The arrival and departure routes of these truck trips would follow NYCDOT designated truck routes. Vehicle trips generated by construction employees would also be negligible and are typically made outside of the Study Area peak hours. While the construction of the regulator/valve chambers, which would be approximately three months long, could extend beyond the boundaries of the Shaft Site onto the adjacent sidewalk, it is expected that a temporary sidewalk would be maintained either through steel-plating over the construction area or via the use of the north curb lane. The latter would result in a temporary loss of a few curbside delivery spaces that would be restored after the construction of the regulator/valve chambers is complete. Since construction at the E. 61<sup>st</sup> Street Shaft Site would not result in the loss of traffic lanes or operational changes along E. 61<sup>st</sup> Street and the total number of construction-related trips would not exceed the CEQR requirements for a detailed analysis, there would not be a potential for significant adverse traffic impacts at nearby intersections.

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At the construction site, truck entering and exiting movements are expected to cause momentary disruptions to the use of the adjacent E. 61<sup>st</sup> Street roadway. Trucks would likely access the site via First Avenue and depart via Second Avenue. The entering and exiting maneuvers would be similar to those described for the preferred Shaft Site under the base configuration, which include some backing up of trucks either into or out of the site. While a flag person would be present to guide the safe execution of these maneuvers, similar traffic stoppages as those characterized for the preferred Shaft Site would be expected. In addition to typically directing these maneuvers with a flag person, NYCDEP would commit to providing the funding for a traffic enforcement agent(s) (TEA) at the E. 61<sup>st</sup> Street Shaft Site as needed during its construction to facilitate vehicular and pedestrian flow.

Although only a nominal amount of truck traffic is projected to enter and exit the site, some disruption along E. 61<sup>st</sup> Street could be expected. On arrival, trucks would likely pull into the site head-first. Upon departure, the construction trucks would exit by backing out of the site onto eastbound E. 61<sup>st</sup> Street. This maneuver would require a flag-person to halt traffic flow on E. 61<sup>st</sup> Street in front of the project site for approximately 30 seconds on each occasion. Based on the projected truck traffic described above, this maneuver would occur no more than 5 times in any hour during the peak construction months. Furthermore, as shown in the construction truck estimates presented in Chapter 2, “Purpose and Need and Project Overview,” typical truck activity at the Shaft Site is projected to be approximately 1 to 3 trucks a day. It is anticipated that such temporary and occasional disruption from daily deliveries to the E. 61<sup>st</sup> Street Shaft Site would not result in sustained traffic back-ups on neighboring streets or First Avenue. When larger trucks (55-footers) need to access the site for deliveries, which would generally occur two to three times a month on average or up to once a day during peak construction activities, the likely duration of disruption to traffic flow may be more evident. It is expected that these trucks would approach the site from First Avenue and back into the site, with the help of a flag person. This maneuver, which would involve a flag person controlling traffic entering on E. 61<sup>st</sup> Street, could take approximately 2 minutes to complete, and would be necessary to ensure that these large trucks could readily exit the site head-out onto the westbound roadway. This disruption in traffic would cause traffic congestion and increase the queue lengths which already exist on E. 61<sup>st</sup> Street. Based on the existing peak hour traffic volumes, approximately 650 vehicles during peak hours (or about 11 vehicles per minute) travel onto the E. 61<sup>st</sup> Street roadway adjacent to the E. 61<sup>st</sup> Street Shaft Site. Therefore, the two minute traffic stoppage would result in up to a 22-vehicle build-up in queues for this movement. Delaying the processing of 22 vehicles through the intersection of First Avenue and E. 61<sup>st</sup> Street during the peak hour could potentially create an increase in queue by about 440 feet assuming a car spacing of 20 feet during congested flow. This increase in queues could back-up traffic on First Avenue as well as E. 61<sup>st</sup> Street east of First Avenue. The above characterization is a reasonably conservative estimate of the type of disruptions that could occur during larger trucks’ maneuvers in the peak hour time periods at the E. 61<sup>st</sup> Street Shaft Site. However, as described, these maneuvers generally occur two to three times a month on average or up to once a day during peak construction.

As detailed in Section 7.1, construction at the E. 61<sup>st</sup> Street Shaft Site could be conducted using either the raise bore method or the surface excavation method, both of which would require

blasting to a depth of approximately 300 feet. For up to approximately the first 100 feet near the surface, temporary halting of vehicular and pedestrian traffic near the blast site would likely be required by FDNY. For the raise bore method, which involves excavating the shaft from the bottom and removing excavated materials via City Tunnel No. 3, this depth is expected to be achieved within approximately the first four months of the total eight-month blasting period. For the surface excavation method, since soil and rock removal would be transported by trucks, the blasting period would be longer, requiring a total of approximately twenty-four months, of which the first twelve months would encompass blasting within 100 feet from the surface. During the first four months of blasting under the raise bore method or the first twelve months under the surface excavation method, therefore, it is anticipated that flag persons would halt vehicular and pedestrian traffic at designated locations prior to blasting. As determined necessary by FDNY, warning whistles would be used to alert the area that blasting was about to begin. Blasting would be conducted only once the area near the site is clear of vehicular and pedestrian traffic.

Typically, a few minutes prior to blasting, warning whistles would alert the area that blasting was about to begin. The typical warning whistle communication protocol could result in the halting of vehicular and pedestrian traffic near the blast site as follows:

- 1 long whistle – vehicular and pedestrian traffic stopped
- 2 short whistles – blast will commence
- 3 long whistles – all clear: blast is completed and traffic flow can resume

This warning whistle communication protocol could take up to five minutes to implement. Because traffic levels in the area surrounding the E. 61<sup>st</sup> Street Shaft Site are substantial throughout the day, traffic stoppage for a 5-minute period could result in sustained traffic back-ups, particularly for E. 61<sup>st</sup> Street and the Queensboro Bridge upper level roadway exit. The FDNY has indicated that they could issue a waiver to the protocol and reduce the whistle warning time to one minute. The contractor intends to seek this waiver. The waiver would permit a blasting sequence that is safe and functional, and would minimize the need for traffic and pedestrian stoppages during such events. This blasting sequence would be as follows:

- The contractor would notify flag persons who are on standby at locations designated for traffic and pedestrian stoppages that everything is properly set up for the blast. Personnel from FDNY and the New York City Police Department (NYPD) would likely be on site during the initial blasts and may also participate in the traffic halting process, if warranted.
- At this time, the contractor would blow one long whistle, as noted above for standard blasting procedures, at which time flag persons would halt vehicular and pedestrian flow at the designated locations. Once traffic is stopped and the area near the site (generally approximately 100 to 150 feet away) is cleared, the flag persons would radio back to the site to confirm that stoppage is complete.
- The contractor would then blow two short whistles to signify that the blast is about to begin and set off the explosives with a trigger.

- Upon the instantaneous completion of the blast, the contractor would blow three short whistles and communicate to the flag persons via radio to indicate the end of the blasting sequence for vehicular and pedestrian traffic movements to proceed.

The duration of the above sequence (including the preliminary notification to the flag persons to get ready) is estimated to be approximately 2 to 4 minutes, with the temporary stoppage of traffic lasting about 1 minute. This duration would only be slightly longer than the typical signal stoppage (usually 40 to 50 seconds) at nearby intersections, and while increasing delays, would not result in sustained back-ups on the key travel corridors indicated above. Following the all clear signal, nearby traffic is expected to recover to pre-blasting conditions within a few minutes after the one-minute stoppage. For blasting at the E. 61<sup>st</sup> Street Shaft Site, the cordon for short-term stoppage of vehicular and pedestrian traffic is expected to include:

- E. 61<sup>st</sup> Street westbound between the blast site and First Avenue;
- Marginal Street at E. 60<sup>th</sup> Street; and,
- Queensboro Bridge exit ramp from the Manhattan-bound upper-level roadway.

Construction specifications would require adherence to all applicable rules and regulations, including the rules and regulations of FDNY, and would require the use of modern blasting techniques including triggered multiple charges, blast mats, etc. Based on discussions with FDNY, at times when the passage of emergency vehicles coincides with blasting events, the execution of the above sequence would be halted until the passage of the emergency vehicles is completed.

As stated above, intermittent blast events conducted at the Shaft Site would halt vehicular and pedestrian traffic flows adjacent to the site. However, during the four-month period under the raise bore method or twelve-month period under the surface excavation method, blast events would likely occur only once or twice a day, with traffic stoppages enduring for approximately one minute for each blast in accordance with the whistle waiver NYCDEP would seek from FDNY. While three blasts a day could possibly occur, due to the length of the typical preparation needed to execute the blasting sequence described above, three blast events in one day is considered unlikely and would not occur on a regular basis, if at all. In addition, blasts may not occur every day during this period and would likely occur outside of the peak traffic hours based on typical blasting procedures employed. During the construction of Shaft 25B (another shaft site in Manhattan), traffic stoppages due to blasting activities have generally been 3 to 4 minutes long and those anticipated for Shaft 33B at the E. 61<sup>st</sup> Street Shaft Site are expected to be shorter with the acquisition of a whistle waiver from FDNY. If the stoppage of traffic was undertaken for a longer period of time at the E. 61<sup>st</sup> Street Shaft Site (i.e., 5 minutes), temporary additional queuing could occur along the affected corridors. For example, even outside of peak hour traffic conditions, if the traffic would be stopped on E. 61<sup>st</sup> Street for 5 minutes, the temporary backups accumulating on E. 61<sup>st</sup> Street could potentially extend to York Avenue, possibly blocking exiting traffic from the northbound FDR Drive. Along Marginal Street, since traffic levels are moderate, the traffic requiring to diverting east towards First Avenue is not expected to exacerbate traffic conditions in the area. On the Queensboro Bridge upper level exit ramp, traffic

queues would extend onto the Bridge span. Once the traffic starts flowing again, diversions to other routes would discontinue and traffic queues would dissipate. No major long-term diversions would be expected from these temporary stoppages due to blasting at the E. 61<sup>st</sup> Street Shaft Site. The period during blasting, when traffic stoppages would be necessary is short-term and temporary and traffic halting events would be intermittent during the blasting period. Thus, consistent with the impact assessment guidance provided in the *CEQR Technical Manual*, such intermittent and temporary conditions would not have the potential to result in significant adverse impacts.

During the construction of Shaft 33B at the E. 61<sup>st</sup> Street Shaft Site, including the construction of the regulator/valve chambers when a temporary sidewalk may need to be maintained along the north curb, curbside spaces along both sides of the street directly in front of the site would need to be prohibited from parking and deliveries. This measure would displace up to four curbside spaces on each side, for a total of eight spaces, for the duration of construction at the site. Clearing the south curb from parked vehicles is necessary to provide adequate space for construction trucks making wide turns into and out of the site. This temporary displacement of curbside spaces is typical of construction activities in New York City and is not expected to have the potential to result in significant adverse parking impacts to area parking conditions.

### **7.9.3 Water Main Construction Traffic Conditions**

Similar to the preferred Shaft Site, water main connections from the E. 61<sup>st</sup> Street Shaft Site to the Third Avenue trunk main could follow many possible routes. For purposes of this EIS, it was assumed that the same potential routes would be followed as for the preferred Shaft Site, including the reasonable worst-case First Avenue route and the two additional representative routes, the Sutton Place route and the E. 59<sup>th</sup> Street/E. 61<sup>st</sup> Street route, as detailed in Section 5.9, “Traffic and Parking” for water main connections. As described in Section 6.1, the construction durations required for these connection routes to the E. 61<sup>st</sup> Street Shaft Site have been estimated at 46 months for the First Avenue route, 56 months for the Sutton Place route, and 31 months for the E. 59<sup>th</sup> Street/E. 61<sup>st</sup> Street route.

For the First Avenue and Sutton Place routes, to extend the water mains from the E. 61<sup>st</sup> Street Shaft Site to First Avenue, similar maintenance and protection of traffic measures to those described for Segment 3 (E. 61<sup>st</sup> Street between First and Second Avenues) of the E. 59<sup>th</sup> Street/E. 61<sup>st</sup> Street route would be required, which include constructing along the center of E. 61<sup>st</sup> Street and using the south curb as the truck staging lane. However, since the connections would require a wider trench to accommodate two water mains, it is expected that the north sidewalk would need to be narrowed by two feet to provide additional roadway space for maintaining an 11-foot traffic lane. Once the connections reach First Avenue, instead of continuing along the west side of the avenue, the construction is likely to proceed with crossing First Avenue and turning south along the east side of the avenue. At E. 59<sup>th</sup> Street, it would follow the respective routings described for the First Avenue and Sutton Place routes. For the E. 59<sup>th</sup> Street/E. 61<sup>st</sup> Street route, water main connections would be the same as those described for the preferred Shaft Site along this route.

Potential temporary adverse traffic and parking impacts for the water main connections from the E. 61<sup>st</sup> Street Shaft Site to the Third Avenue trunk main would be similar in severity and duration to those identified for the preferred Shaft Site water main connections. If either the First Avenue or Sutton Place route is selected, similar temporary adverse traffic impacts as those described for locations south of E. 59<sup>th</sup> Street could be anticipated for the E. 60<sup>th</sup> and E. 61<sup>st</sup> Street intersections with First Avenue. It is expected that NYCDDC and NYCDOT would endeavor to address potential traffic disruptions that would result from this construction project similar to the manner discussed in Section 5.9.

#### 7.9.4 Conclusions

The construction, activation, and operation of Shaft 33B at the E. 61<sup>st</sup> Street Shaft Site would not result in any potential significant adverse impacts to Study Area traffic and parking conditions. However, in recognition of existing traffic congestion in the area of the Queensboro Bridge, NYCDEP would commit to providing the funding for TEA(s) at the Shaft Site as needed during its construction to facilitate vehicular and pedestrian flow nearby. Where potential temporary construction-related adverse impacts could occur for the different water main routes, conceptual mitigation measures and traffic management strategies explored in Section 5.16, “Mitigation Measures” for water main connections in the context of the preferred Shaft Site would also be applicable to the water main connections from the E. 61<sup>st</sup> Street Shaft Site. Extensive queuing and potential traffic diversions anticipated to occur during the water main construction would be temporary adverse impacts and not persist beyond the completion of the construction efforts. The construction of Shaft 33B and its water main connections at the E. 61<sup>st</sup> Street Shaft Site would not result in potential significant adverse traffic impacts.

