

5.8 INFRASTRUCTURE AND ENERGY

5.8.1 Introduction

This Section assesses the potential for construction and operation of the water main connection along either the First Avenue, Sutton Place, or E. 59th Street/E.61st Street routes to result in impacts to infrastructure and energy resources. The methodology used to prepare this Section is described in Section 3.8, “Infrastructure and Energy” of Chapter 3, “Impact Methodologies.”

5.8.2 Existing Conditions

Utility lines, which are buried below New York City roadways along the potential water main routes provide water, sewer, electricity, natural gas, steam, telephone, and cable services to local residential, institutional, commercial, and industrial properties. As indicated below, each street of the First Avenue, Sutton Place, or E. 59th Street/E.61st Street routes contain numerous utilities:

- First Avenue contains oil-o-static electrical, electrical, natural gas, water, sewer, and steam lines.
- Second Avenue contains electrical, natural gas, water, and sewer lines.
- Third Avenue contains oil-o-static electrical, electrical, natural gas, water, sewer, and steam lines.
- Along E. 61st Street from First Avenue to Third Avenue are electrical, natural gas, water, and sewer lines.
- Along E. 59th Street from Sutton to Third Avenue are oil-o-static electrical, electrical, natural gas, water, sewer, and steam (on one block) lines.
- Along E. 55th Street from Sutton Place to Third Avenue are electrical, natural gas, water, and sewer lines.
- Along E. 56th Street from Sutton Place to Third Avenue are electrical, natural gas, water, sewer and steam (on several of these blocks) lines.

5.8.3 Future Conditions Without the Project

None of the projects identified for development between 2006 and 2012 would be expected to result in a substantial change in infrastructure conditions or energy demand in the vicinity of the potential water main routes. Therefore, infrastructure service conditions and energy demand would be expected to be comparable to those currently existing in the area.

5.8.4 Future Conditions With the Project

New York City Department of Design and Construction (NYCDDC) is responsible for designing and constructing the water main connection. NYCDDC will prepare a detailed water main construction design that will determine the exact location of water main construction in each block of the selected route. A more detailed utility mapping would be undertaken during this design phase.

Based on an extensive review regarding the location of existing utility lines, the following is the general location where the water main connection may be located under the three potential routes analyzed in this EIS (see also Figures 5.1-1, 5.1-2, and 5.1-3):

- First Avenue Route: Two water mains would travel along the eastern section of First Avenue from E. 59th Street to E. 55th/E. 56th Streets, then a single water main would travel along northern section of E. 55th Street from First to Third Avenues and the second water main would travel along northern section of E. 56th Street from First to Third Avenues.
- Sutton Place Route: Two water mains would travel along the southern section of E. 59th Street from First Avenue to Sutton Place. The two water mains would then travel along the western section of Sutton Place to E. 55th/E. 56th Streets, then a single water main would travel along the northern section of E. 55th Street and the second water main would travel along the northern section of E. 56th Street from Sutton Place to Third Avenue.
- E. 59th Street/E. 61st Street Route: One water main would travel along the southern section of E. 59th Street from First Avenue to Third Avenue. The second water main would travel along the western section of First Avenue from E. 59th Street to E. 61st Street and then in the middle section of E. 61st Street from First Avenue to Third Avenue.

The potential water main routes analyzed in this EIS were developed after review of information on existing utilities beneath the streets, with the intention of avoiding the need for major utility relocation. When selecting the final route for the water main connections, NYCDDC would similarly take into account the presence of buried infrastructure so as to avoid the need for major relocation of utilities.

Construction

The following sections discuss the potential impacts of construction of the water main connection, including the potential need for utility relocation, demands on water and sewer infrastructure, soil and erosion control measures to be utilized, and energy demands.

NYCDDC coordinates water main construction activities with the affected communities through its Community Outreach and Notification process. On projects that are of a long duration and include multiple and/or complex activities, including water main replacement, utility relocation, sidewalk replacement, and other construction work, NYCDDC provides a Community Construction Liaison (CCL) to serve as a liaison between the resident engineer of the construction project and the community board and/or other community organizations. CCLs attend meetings with the affected Community Boards to inform them of upcoming work and

participate in the District Service Cabinet to coordinate response with other city agencies, including the New York City Department of Sanitation (DSNY), New York City Department of Transportation (NYCDOT), New York City Department of Parks and Recreation (NYCDPR) and others.

Access to homes and businesses is maintained employing a variety of methods, including the use of steel plates over open trenches or temporary decks/bridges to allow access over sidewalks under construction. Emergency access to streets, residences, and commercial facilities is fully maintained during construction. If access to a driveway is restricted to allow work to proceed, access is restored as quickly as possible and notification to the affected residences or businesses is provided prior to restricting access.

Utility Relocation

NYCDDC would conduct the final utility mapping during final design for the water main route. In determining a final route, NYCDDC would take into account the presence of buried infrastructure so as to avoid the need for major relocation of utilities. NYCDDC has existing procedures which require representatives of each utility to participate in utility coordination meetings to develop a scope of work and schedule for the relocation of utilities so there would be a clear path for the construction of the new water mains and a coordinated schedule of relocations if necessary. Prior to construction, NYCDDC would hold coordination or alignment meetings with NYCDEP, Con Edison, and telephone and cable companies. During these meetings, the final alignment of all affected infrastructure would be determined, and the scheduling of any necessary utility movements would be coordinated.

It is possible that some of the utilities that currently exist in the streets along the water main connections route would have to be relocated within the street to allow construction of the water mains. However, it is expected that the route would be developed to avoid major utility relocation. During utility relocation within the street, it is possible that service provided by the utilities would potentially be interrupted for short periods of time while the utility turns off the service for a segment of the utility line during relocation of that segment. To minimize such disruptions, during the utility coordination meetings, the utility representatives would determine where temporary service would be needed to continue service to their customers. During or prior to construction of the water mains, the utility companies would provide temporary service as necessary.

In general, the water mains would not run along the route of the oil-o-static electric lines, but may cross beneath them. These lines would be supported during construction of the water mains and no interruption in service would be anticipated.

Water and Sewer Infrastructure

Water usage and wastewater discharges required during construction would be limited to that needed for the construction workers and activities such as dust suppression that require limited water usage. These uses would generate only limited demands and would not adversely affect

water supply or wastewater capacity in the area or at the Newtown Creek Water Pollution Control Plant that serves the area.

Runoff, Soil Erosion, and Sediment Control

Stormwater runoff from the streets would be generated during certain water main construction activities. NYCDDC would implement appropriate soil erosion and sediment control measures to control stormwater runoff from the areas of construction. Stormwater runoff generated along the route is currently directed to the storm drains that are connected to the combined sewer lines located in this area. The water from these sewer lines would be discharged to and treated at the Newtown Creek Water Pollution Control Plant. No additional paved surfaces would be created along the water main connections route since the street and sidewalk areas are currently paved.

Energy

Based on historical NYCDDC water main construction, it is expected that “cut and cover” construction practices would potentially be utilized to construct the water main connections. Mobile construction equipment powered by diesel fuel would be utilized for this method of construction. No substantive increase in energy consumption would be expected to occur.

Conclusions

Although utility relocation is not anticipated at this time, there is a possibility that it would be necessary. If utility relocation is required, NYCDDC would coordinate with all affected utility providers to minimize any potential service disruptions. Any potential disruptions would be short term and temporary. NYCDDC has a community outreach program in place and measures will be taken to notify affected residents and businesses. Construction activities would place limited demand on water and sewer utilities. NYCDDC would implement appropriate soil erosion and sediment control and other measures to control runoff from the site. Additional energy demand would be minimal. Because NYCDDC has established procedures in place to coordinate all potentially affected utility services and minimize potential infrastructure and other impacts during construction in City streets, construction of the water main connection would not be anticipated to result in potential significant adverse impacts to infrastructure or energy. As concluded in Section 4.8, shaft construction at the preferred Shaft Site would not result in significant adverse impacts to infrastructure and energy. Therefore, no significant adverse impacts to infrastructure and energy would occur from construction of Shaft 33B at the preferred Shaft Site and its water main connections.

Operation

Shaft 33B and the associated water main connection are being proposed with the goal of improving water supply infrastructure by providing additional redundancy in significant portions of Manhattan’s east side, as described in Chapter 2, “Purpose and Need and Project Overview.” Activation of the water mains would not involve additional water usage beyond what was discussed in Section 4.8 of Chapter 4, “Preferred Shaft Site,” for the preferred Shaft Site. Operation of the water mains would not have the potential to result in adverse infrastructure and

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energy impacts, as they are subsurface enclosed pipes and do not require the use of energy or other infrastructure. Therefore, no potential significant adverse infrastructure or energy impacts would occur as a result of activation and operation of the water main connection.

