C. CONDITIONS AND NEEDS

This section describes the existing and projected future No Build conditions of the Kosciuszko Bridge and explains the need for improvements.

C.1. Transportation Conditions, Deficiencies and Engineering Considerations

The following sections will describe the setting and physical characteristics of the bridge, existing and projected future No Build traffic volumes, analysis of accident patterns, and physical features of the structure, including existing non-standard features.

C.1.a. Functional Classification and National Highway System (NHS)

The Kosciuszko Bridge, as part of the BQE is functionally classified as an Urban Interstate Highway and is on both the Federal-Aid Interstate System and the National Highway System (NHS). The project roadway is not a Qualifying or Access Highway on the National Network of Designated Truck Access Highways. Nor is the project within 1.6 km (1 mile) of a Qualifying Highway.

Neither the Kosciuszko Bridge nor the BQE are part of the 4.9 m (16 ft) vertical clearance network designated by the Department of Defense for the emergency movement of military equipment.

C.1.b. Ownership and Maintenance Jurisdiction

NYSDOT owns and is responsible for maintenance of the Kosciuszko Bridge and its ramps, while the New York City Department of Transportation (NYCDOT) has responsibility for maintenance of the local streets surrounding the Kosciuszko Bridge.

C.1.c. Culture, Terrain and Climatic Conditions

The Kosciuszko Bridge is located within a dense urban area, with a mix of industrial, manufacturing, and residential land uses, as shown in Figure II-4, “General Land Use.” In Brooklyn, the area south of the Kosciuszko Bridge is predominantly industrial and manufacturing from Kingsland Avenue to Newtown Creek, with a few clusters of row houses south of Lombardy Street. There is also a public park, Sergeant William Dougherty Playground, located at the corner of Vandervoort Avenue and Cherry Street. North of the Kosciuszko Bridge, between Kingsland Avenue and Van Dam Street, residential uses dominate with some ground floor retail uses in the properties fronting on Meeker Avenue. East of Van Dam Street, uses are entirely industrial and manufacturing. In Queens, land uses are predominantly manufacturing and industrial with a handful of residential properties scattered throughout the area and Old Calvary Cemetery located to the west of the Kosciuszko Bridge.

In Brooklyn, the project area is generally level terrain, with only minimal changes in topography as the ground tends to slope down from its peak near Porter Avenue (16 m [52'-0"] above Mean High Water [MHW]) toward the bulkhead at Newtown Creek (6 m [20'-0"] above MHW). In Queens, the topography is slightly more undulating, but still slopes down toward the creek (4 m [13'-0"] above MHW) from a peak at 54th Avenue (18 m [59'-0"] above MHW).
There are no unusual weather conditions in this area. The Kosciuszko Bridge is located in the northeastern United States where snowstorms frequently occur in the winter months, requiring snow removal and occasionally causing icy conditions.

C.1.d.  Control of Access

As part of an interstate highway, access to the Kosciuszko Bridge is limited to vehicles traveling on the BQE or utilizing one of the ramps connecting to the bridge. As shown in Figure II-5, “Access to the BQE within the Project Limits,” in Brooklyn, the Vandervoort Avenue entrance ramp, beginning from Cherry Street just east of Vandervoort Avenue, connects to the eastbound BQE. Also in Brooklyn, the Meeker Avenue/Morgan Avenue exit ramp connects from the westbound BQE to Meeker Avenue near Van Dam Street. In Queens, ramps are provided for connection to and from the eastbound and westbound LIE as well as an entrance ramp to the westbound BQE from 43rd Street.

C.1.e.  Existing Highway Section

The existing roadway section on the Kosciuszko Bridge consists of a divided travelway with a total of six through lanes (three eastbound and three westbound). The travelway widens at ramp areas to accommodate acceleration/deceleration lanes. A concrete median barrier separates eastbound and westbound traffic. At the Main Span, lane widths and shoulder widths are narrow and approaching grades are steep. The bridge is constructed of several different structure types along the length of the project, consisting of the Brooklyn Connector, Brooklyn Approach, Main Span and Queens Approach (see Figure II-3, “Project Segments and Descriptions Used in the FEIS,” for segment locations). The structure type and limits of each section are described in Section II.C.1.o. Details of these highway sections are presented in Table II-1. A plan of the existing roadway is shown on Figures II-6 through II-8, “Existing Highway Plan and Profile.” Engineering drawings of the existing conditions are included in Appendix D.

C.1.f.  Abutting Highway Segments and Future Plans for Abutting Highway Segments

The bridge abuts the Meeker Avenue viaduct section of the BQE in Brooklyn and the BQE/LIE interchange in Queens. Details of the abutting highway sections of the BQE and adjacent sections of the LIE are provided in Table II-2 and illustrated on Figure II-9, “Abutting Highway Plan and Sections.”

To assure that the work being proposed in this FEIS is consistent with future plans for abutting highway segments, including long range system plans, a list of future projects being planned to take place in both Brooklyn and Queens was provided by the NYSDOT Regional Planning and Program Manager in a Planning Statement dated April 6, 2006. The following are highlights of studies and capital projects that are underway or are to begin shortly in Kings and Queens Counties close to or near the Kosciuszko Bridge Project study area:

KINGS COUNTY

- Cadman Plaza Connector to the Brooklyn Bridge (NYCDOT) – If implemented this project would include a pedestrian/bicycle path over the Brooklyn-bound roadway of the Brooklyn Bridge to link the existing promenade to the bridge with Cadman Plaza Park.

- Brooklyn Bridge (NYCDOT) – Project will involve rehabilitation of the bridge.