



COUNTY OF UNION

Local Concept Development Study for South Front Street Bridge over the Elizabeth River, City of Elizabeth, Union County, NJ

PROJECT INFORMATION

Union County is conducting a study for major rehabilitation or replacement of the existing South Front Street Bridge over the Elizabeth River to improve its structural deficiencies and to restore a transportation connection between Bayway Avenue and Elizabeth Avenue, which are both identified as City of Elizabeth evacuation routes. The bridge has been closed to through traffic since March 4, 2011 due to severe deterioration of the superstructure stringers and floor beams. Because to its age, the bridge has deteriorated over time and routine maintenance can no longer address the deficiencies.

The Project Background

The existing bridge is in serious overall condition. Several factors contribute to this assessment:

- Condition:* The bridge superstructure is in serious physical condition with numerous steel supporting members exhibiting extensive section loss. The bridge deck is in poor condition due to several fractured and missing secondary members within the open grid. The substructure is in poor condition with several areas of cracking and/or shallow spalls. The channel and channel protection are in poor condition with severe erosion at the downstream embankments.
- Load Capacity:* The bridge was closed to through traffic in March 2011 due to inadequate structural capacity steel member sections. Prior to the bridge closure, it was load posted for 4 Tons. The existing bridge design (truss superstructure) is fracture critical.
- Highway Safety:* The bridge has inadequate (17'-8") roadway width and the approach alignment is substandard. The bridge railings do not meet current crash standards. The approach guide rails and bridge end treatments do not meet current design standards.
- Public Safety:* There is no existing safety interlocking system that prevents bridge operations from proceeding out of sequence.
- Seismic:* The bridge is susceptible to seismic forces and does not meet current seismic design standards.

The Proposed Study:

The current phase of this project is Local Concept Development (LCD). During this phase a well-defined and well-justified Purpose and Need Statement will be developed focusing on the need to improve safety and restore the current crossing over the Elizabeth River. LCD Phase elements also include data collection; coordination with the New Jersey Department of Transportation, Federal Highway Administration, community stakeholders, and permitting agencies; the development of a reasonable number of sensible and practical conceptual alternatives; the determination of a Preliminary Preferred Alternative; and to investigate



all aspects of the project. These aspects will include environmental, right of way, access, utilities, design, community involvement, constructability, and cost (see NJTPA LCD flowcharts).

The primary tasks of stakeholders are to assist in the development of the Project Purpose and Need Statement, assist in the development of conceptual alternatives, identify possible fatal flaws, and to assist in the recommendation of the Preliminary Preferred Alternative (PPA) based on the Project Purpose and Need.

Local Concept Development Project Schedule (Major Milestones)

Develop Project Purpose and Need Statement	July 2014
Development of Conceptual Alternatives	October 2014
Selection of Preliminary Preferred Alternative	March 2015
Submission of Draft Concept Development Report	May 2015
Obtain Resolutions of Support for Preliminary Preferred Alternative	June 2015
Completion of Local Concept Development Phase	September 2015

Anticipated Community Involvement Schedule

Community Stakeholders Meeting for Purpose & Need Statement Development	March 2014
Public Information Center for Purpose and Need Statement Development	April 2014
Obtain Community Stakeholder Input for Developed Alternatives	November/December 2014
Public Officials Meeting No. 2 for Preliminary Preferred Alternative Selection	February 2015
Public Information Center No. 2 for Preliminary Preferred Alternative Selection	March 2015
Public Officials Meeting No. 3 for Obtaining Resolutions of Support	May 2015

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