

Executive Summary

This study was conducted for the Tri-County Regional Planning Commission through the Harrisburg Area Transportation Study (HATS), in cooperation with PennDOT. The scope involved evaluating four bridges connecting the City of Harrisburg to the municipalities on the West Shore of the Susquehanna River—the M. Harvey Taylor Bridge, Walnut Street Bridge, Market Street Bridge, and the former Cumberland Valley Railroad Bridge (hereafter referred to as the CAT Bridge). The purpose of the study was to evaluate and enhance existing connections between the City of Harrisburg and West Shore communities while improving safety and mobility for all modes of transportation, both currently and in the future.

Existing Conditions Analysis

In order to improve safety and mobility for all modes of transportation, an existing conditions analysis was performed for the study area. As part of the existing conditions analysis, the following data collection activities were conducted to assist in the development of near-, mid-, and long-term improvements and/or alternatives for each bridge:

- Origin/destination survey of users on the Market Street Bridge
- Roadway safety audit of bridges and approaches
- Vehicle/pedestrian counts to analyze operations
- Bridge structural characteristics evaluation
- Environmental conditions analysis

Alternatives Evaluation

Alternatives were developed to enhance safety and multimodal connectivity between the City of Harrisburg and West Shore communities. Existing and future needs were considered when developing alternatives, which were further shaped by agency and public input. Alternatives were developed for the near, mid, and long term to address concerns documented in the existing conditions analysis. A phased approach was considered where possible to manage implementation costs. Near- and mid-term improvements are summarized together; long-term improvements are discussed separately below. The timeframes are defined as near-term being less than 7 years, mid-term 7-14 years, and long-term greater than 14 years.

Near- and Mid-Term Improvements

The following table and maps summarize near- and mid-term improvements/alternatives for each bridge along with the anticipated implementation costs. The location number in the improvement table correlates with the location number of the improvements map.

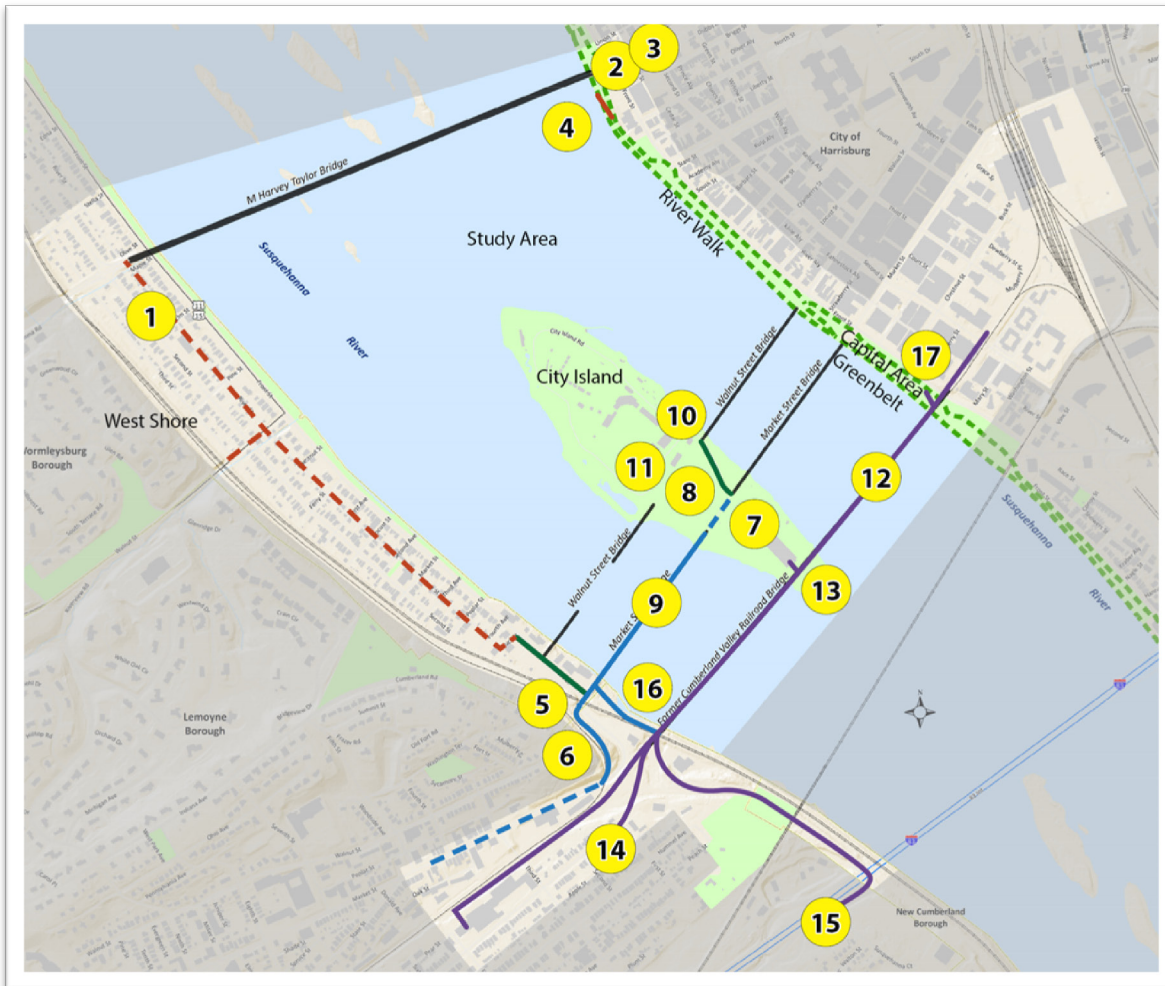
Summary of Near- and Mid-Term Preferred Improvements and Costs

Identifier (Sponsor)	Bridge	Improvement	Timeframe	2014 Cost
1 (TBD)	Harvey Taylor	West Shore Ped/Bike Routing	Near-Term	\$2,000
2 (PennDOT)	Harvey Taylor	Harrisburg Front & Forster Sign/Marking Upgrades	Near-Term	\$2,500
3 (PennDOT)	Harvey Taylor	Harrisburg Front & Forster Pedestrian Improvements	Mid-Term	\$170,000
4 (TBD)	Harvey Taylor	Harrisburg Riverfront Walk and Greenbelt Connection	Mid-Term	\$1.8 M
5 (TBD)	Market Street	Wormleysburg Front Street Restriping/Ped Improvements	Near-Term	\$3,500
6 (PennDOT)	Market Street	Wormleysburg-Lemoyne Bottleneck Sidewalk Repair	Near-Term	\$10,000-\$20,000
7 (PennDOT)	Market Street	City Island Left-Turn Restrictions	Near-Term	\$5,000
8 (TBD)	Market Street	City Island Ped/Bike Paths through Parking Area	Near-Term	\$20,000
9 (PennDOT)	Market Street	Widen Sidewalk on North Side as part of Necessary Rehab	Mid-Term	\$200,000
10 (TBD)	Walnut Street	Ped/Bike Signing for Travel between WSB and MSB	Near-Term	\$2,000
11 (TBD)	Walnut Street	City Island Bike Share System	Near-Term	Self Sufficient
12 (CAT)	CAT	Demolish CAT Bridge (Not a preferred option – provided as information only)	-	\$10 M
12 (CAT)	CAT	Maintenance of Bridge (Concrete repairs necessary at approximately 5-year intervals whether or not the bridge is put to use)	Mid-Term	\$1.5 M
12 (CAT)	CAT	Convert Bridge to Ped/Bike Pathway*	Mid-Term	\$3.2 M
13 (CAT)	CAT	Construct Connection to City Island	Mid-Term	\$150,000
14 (TBD)	CAT	West Shore Construct At-Grade Bosler Connection to Lemoyne**	Mid-Term	\$450,000
15 (TBD)	CAT	West Shore Construct Lowther Connection to New Cumberland**	Mid-Term	\$430,000
16 (TBD)	CAT	West Shore Construct Elevated Connection MSB and CAT**	Mid-Term	\$1.8 M
17 (TBD)	CAT	East Shore Construct Connection Ramp Greenbelt to CAT**	Mid-Term	\$1.7 M

*Previous CAT Bridge inspection performed during 2004. Prior to any detailed design another in-depth inspection should be considered.

**Agreements with Norfolk Southern and/or Amtrak would be necessary.

Map of Recommended Near- and Mid-Term Improvements



Long-Term Considerations

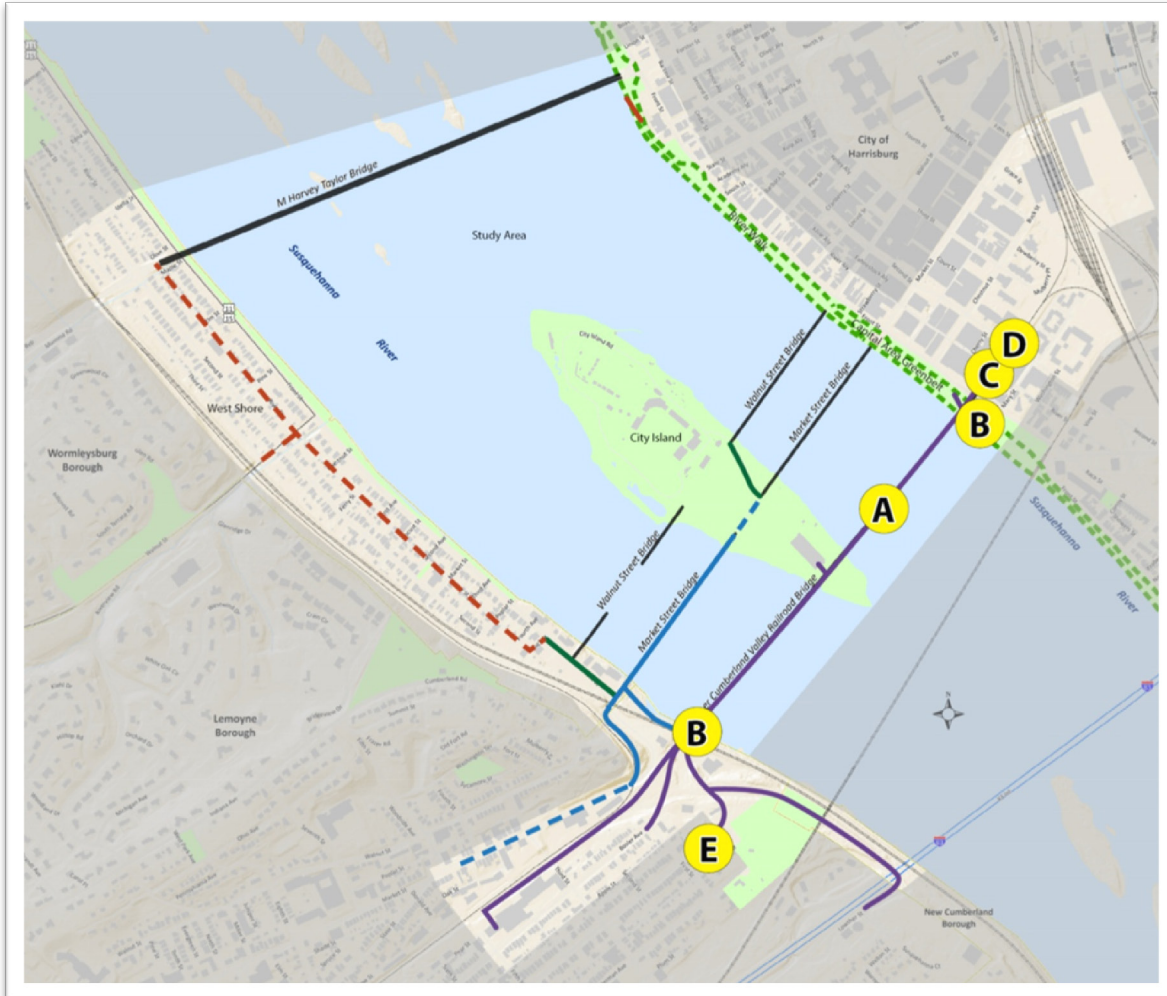
Additional analyses and further discussions with railroad stakeholders will be required for continued consideration of more detailed improvement options and any administration agreements necessary to advance major improvement projects for the CAT Bridge. For this reason and due to the complexity of the numerous alternatives developed for that bridge and its approaches, the improvements were deemed “long term.” The majority of the improvements under consideration will require cooperation from the railroads (Norfolk Southern and Amtrak) that own the right-of-way at the bridge termini. It should be noted that the bridge will require a structural rehabilitation in the long term to prolong its life and to prevent significant deterioration of its superstructure.

The long-term considerations are detailed within this report. An improvement table summarizing potential improvements/alternatives on the CAT Bridge is presented below along with associated costs where appropriate. The location identifiers in the improvement table correlate with the letters on the long-term improvements map.

Potential Long-Term Improvements and Costs

Identifier (Primary Owner)	Location	Improvement	Timeframe	2014 Cost
A (CAT)	CAT Bridge	Bridge rehabilitation (Necessary even if the bridge remains unused. Includes waterproof membrane, concrete repairs, and repair of scour holes with grout bags.)	Long-Term	\$12-\$15 M
A (CAT)	CAT Bridge	Pavement or rail to accommodate potential transit use. Since the limits of any potential transit corridor are uncertain, cost only on bridge itself and not approaches. Does not include gates, signaling, lighting, and other appurtenances.	Long-Term	\$300,000 (Pavement) \$700,000 (Rail/Track)
B (CAT)	CAT Bridge Approaches	The limits of any potential transit corridor are uncertain; however bus or railway infrastructure would be necessary as well as pavement, track, gates, signaling, lighting, etc.	Long-Term	Unknown
C (Amtrak)	Harrisburg Amtrak Line	Track relocation/modification of Amtrak line would be required to accommodate any potential transit use.	Long-Term	Unknown
D (Amtrak)	2nd Street Overpass	Transit use may require rehabilitation of the Second Street overpass.	Long-Term	Unknown
E (TBD)	Proposed Norfolk Southern Lemoyne Connector	If the Norfolk Southern proposed connector of the Lurgan Branch and Shippensburg Secondary is built, the Bosler pedestrian/bicycle connection would be abandoned and a grade-separated pedestrian/bicycle connection to Lemoyne would be required via Hummel Ave.	Long-Term	\$1.6 M

Map of Potential Long-Term Improvements



Next Steps

The improvements presented in this report were developed with a phased approach to include near-, mid-, and long-term projects. Project implementation will require the establishment of a project sponsor and following the regional project development process through the Harrisburg Area Transportation Study (HATS) MPO in cooperation with PennDOT. All projects utilizing federal funding are required to be placed on the Regional Transportation Plan and included on the Transportation Improvement Program (TIP) in order to receive funding. The HATS Project Development Process, including the RTP and TIP requirements, can be accessed on the HATS website at <http://www.tcrpc-pa.org/HATS/Pages/Project-Development.aspx>. Some mid-term and long-term projects may require additional detailed study and analysis in order to better define all aspects of the improvements including specific project engineering design, environmental constraints, refined cost estimates, project sponsors, project funding, agency agreements, etc.