

**Pennsylvania Department of Transportation
Engineering District 8-0
State Route 3012, Section 026 & 029, Dauphin and Cumberland Counties
(MPMS# 93176 & 93177)
City of Harrisburg and Wormleysburg and Lemoyne Borough
Market Street Bridge Rehabilitation Project**

Project Information

In Dauphin County, the Market Street Bridge, part of State Route 3012, connects the communities of Lemoyne and Wormleysburg on the west shore of the Susquehanna River with City Island and the City of Harrisburg on the east shore. As one of the four main river crossings in the Harrisburg area, the Market Street Bridge provides a key connection that must be maintained. To maintain the crossing for years to come, work must be completed on both the western and eastern bridges.

Existing Bridges – The western bridge is a 16-span adjacent concrete box beam bridge that connects Lemoyne and Wormleysburg to City Island over the west channel of the Susquehanna River. The eastern bridge is a 16-span closed spandrel arch bridge that connects City Island to the City of Harrisburg over the eastern channel of the Susquehanna River.

Both bridges currently carry state Bike Route J. Though bicyclists have access to the roadway, there is no dedicated bike lane or shared lane signs on the roadway notifying motorists to share the road. Bicyclists also use the existing sidewalks.

Sidewalks have deteriorated on the eastern bridge. In addition, metal plates for the hatches used to access the interior of the bridge are located within the existing sidewalks. Many of these hatches are not accessible for interior bridge inspection, and damaged hatches cause tripping hazards on the sidewalks. On the western bridge, sidewalk panels exhibit cracking and spalls.

Project Purpose and Scope – The purpose of the project is to maintain safe and efficient multimodal connectivity across the Susquehanna River between Harrisburg and the West Shore communities, as well as access to City Island and its amenities. The eastern bridge is listed on the National Register of Historic Places; therefore, it is a goal of the project to maintain the historic integrity of the bridge.

The scope of work for the bridge improvements includes rehabilitation of the historic arch and replacement of the deck and sidewalks on the 16-span eastern bridge as well as the construction of a new superstructure (deck and beams) on the 16-span western bridge. Currently, the eastern bridge provides four 10-foot lanes and two 5-foot 9-inch sidewalks with no shoulders on either side, while the western bridge provides four 10-foot lanes and two 4-foot 7-inch sidewalks with no shoulders on either side.

Preferred Alternative – As a result of comments received during the November 2021 to January 2022 public comment period, PennDOT has selected to proceed further with the design and environmental clearance based on a modified Option 1 with the addition of a separate utility bridge to relocate all utilities to reduce the overall construction time by four to five years.

Option 1 - maintains four 10-foot lanes for both bridges, similar to current conditions. Smoother sidewalk surfaces will be provided on both bridges. While the eastern bridge maintains existing sidewalk widths, metal hatches will be removed from the sidewalk areas and the sidewalks will be replaced with smoother surfaces. For the western bridge, two 7-foot sidewalks along with 2-foot shoulders will be constructed, which will provide additional space for bicyclists and a buffer area between vehicles and pedestrians on the sidewalks. Additional bicycle signage (Share the Road and Bicycles May Use Full

Lane) and pavement markings, shared lane use markings in the right lane in each direction, will also be added from the west shore to the east shore. Pavement Markings and Signage will be included at both of the adjacent signalized intersections on the west shore and east shore. The Lemoyne Bottleneck Project is ongoing to improve bicycle and pedestrian safety on Market Street on the western shore. Coordination will occur between projects to ensure improvements connect seamlessly.

Option 1 allows the roadway lane configuration to be restriped in the future for three vehicular lanes instead of four. With the removal of a vehicular lane, bike lanes could be created in each direction between the travel lane and the sidewalks. Additional traffic studies would be required to confirm that traffic operations and emergency response times would not be hampered by a reduction in vehicular lanes.

Utility Bridge – will be a separate downstream bridge that carries all the utilities that are currently under the sidewalks on the Market Street bridges. Utilities include gas transmission lines, multiple fiber optic telecommunications lines, and a sewer line. The utility bridge presents several benefits to the project including:

- Can be constructed without long term traffic control, i.e. lane reductions or detours.
- Reduces overall construction duration by 5 to 6 years because no temporary utility relocations are required.
- Limits temporary outages for all utilities because there will only be one outage for connecting new lines to existing lines.
- Eliminates future traffic disruptions by utility companies working on their facilities on Market St.

Environmental

The eastern Market Street Bridge, constructed in 1928, is an excellent example of a long-span monumental urban bridge. The crossing where the current bridge stands has historically been the western gateway to the City of Harrisburg. The eastern bridge was listed on the National Register of Historic Places in 1988. The bridge is 16-spans and 1,415 feet in length from Front Street in the City of Harrisburg to City Island. The bridge is a concrete arch bridge with a stone facing. The stone was cut to create the arch shape. The eastern entrance to the Market Street Bridge is notable due to the red sandstone Doric columns on either side that were taken from the site of the original State Capital. The State Capital burned in 1897. The columns were reused for the entrance to the bridge and have commemorative plaques on all four sides at the base.

Section 4(f) properties are publicly owned parks, recreational areas, and wildlife/waterfowl refuges; parts of public multi-use properties which provide park/recreational and wildlife/waterfowl refuge; and historic properties (U.S. DOT Act 1966). Within the Market Street Bridge project vicinity there are several properties that qualify as Section 4(f) resources, such as:

- Harrisburg Historic District (Historic)
- Harrisburg City Parks 7 Parkway Plan (Historic)
- Market Street Bridge East (Historic)
- Pennsylvania RR Enola Low Grade freight/Cumberland Valley RR (Historic)
- River Front Park (Recreation)
- City Island (Recreation)
- Capital Area Greenbelt (Recreation)
- Susquehanna River PA Water Trail/National Recreation Water Trail (Recreation)

These resources will be temporarily used (de minimis use) during construction due to limited access points to the bridges. None will be adversely affected and will be restored once construction is completed. Should you have comments or concerns regarding the Section 4(f) use, contact Heidi Mertz, PennDOT Project Manager.

Land and Water Conservation Funds (LWCF) were used in the development of recreational amenities on City Island. Resources receiving funds through LWCF are afforded protection under the Land and Water Conservation Fund Act and are Section 6(f) resources. Coordination with the Pennsylvania Department of Conservation and Natural Resources and the City of Harrisburg is occurring to determine appropriate mitigation for the temporary use of the island for temporary construction staging areas and access to causeways. Final approval will be provided by the National Park Service.

Part of this process consists of evaluating the project for compliance with the National Environmental Policy Act (NEPA), which includes coordination with agencies, public involvement, and other outreach activities.

Utilities

Multiple utilities are attached to the existing bridges and are located under both sidewalks. Utilities include telecommunications, gas, sewer, and electric. Permanent relocation of all utilities to a separate utility bridge is planned to reduce construction time and remove access constraints currently present via metal hatches on the existing bridges.

Right of Way

Temporary and permanent right-of-way acquisitions may be needed on the approaches to the bridges on the west and east shores as well as on City Island to allow construction of the proposed bridge rehabilitation. Portions of the parking lots on City Island will be needed for the contractor to stage materials and equipment as well as gain access to river causeways.

Maintenance and Protection of Traffic

During construction, vehicular traffic is proposed to be maintained by detouring westbound traffic on both bridges while maintaining one eastbound lane between the west and east shores. This approach allows for only three main phases of construction, otherwise, if two-way access across either bridge was required, an additional phase of construction would be required, which could extend the overall construction duration by 1 year. The overall phases are:

- **Phase 1** – Construct the utility bridge and relocate all utilities from Market Street Bridge to the new utility bridge. Existing travel lanes will be maintained except for short-term lane closures with flagging to accommodate utility reconnections.
- **Phase 2** – Construct the westbound (upstream) side of the bridges. One eastbound lane will be maintained with all westbound traffic being detoured via Harvey Taylor Bridge. Access to City Island will be from the eastbound ramp.
- **Phase 3** – Construct the eastbound (downstream) side of the bridge. One eastbound lane will be maintained on the upstream newly constructed side with all westbound traffic being detoured via the Harvey Taylor Bridge. Access to City Island will be from the westbound ramp.

Pedestrian and Bicycle Access – Throughout the entire duration of construction, pedestrian access across the river or to/from City Island will be provided via a sidewalk. Eastbound bicyclists will share the road or sidewalk as they do today. Westbound bicyclists may utilize a Walnut Street Bridge detour or ride on the sidewalk to cross from the east shore to City Island and then ride in the available sidewalk to cross from City Island to the west shore.

Boater Access Under the Bridge – Construction of the bridges will require half-width causeways in each channel for contractor access (half of the eastern and western channels will always be open). An *Aids to Navigation Plan* will be developed in coordination with the PA Fish and Boat Commission. Boater access will be maintained in areas not occupied by causeways. Access will be maintained in each channel of the river for the duration of construction.

Regional Project Coordination

Several projects, including the Lemoyne Bottleneck Project to improve bicycle and pedestrian safety on Market Street on the western shore, and the I-83 South Bridge over the Susquehanna River Replacement Project are also in the design phase. The Market Street design team will be coordinating with the other design teams during the duration of the Market Street Bridge Project. The timing of construction for each project will continue to be coordinated to determine the most appropriate schedule of construction overall. Project details for other projects will be disseminated by those design teams through the PennDOT District 8 website.

Schedule and Cost

The project is currently in the preliminary design phase, and construction is anticipated to begin as early as 2024 but may be postponed until substantial completion of the I-83 South Bridge Replacement and subject to all approvals, environmental clearances, and funding availability. Currently, \$63.8 Million is estimated for construction.

Contact

If there are any questions or concerns related to the project, please contact Heidi Mertz, Project Manager by phone at 717-787-3324 or email at hmertz@pa.gov.