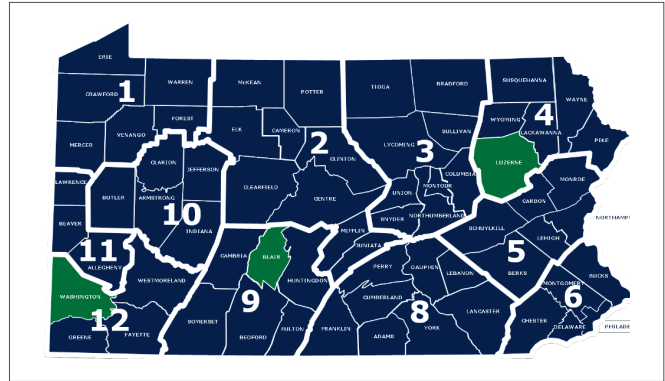


PENNDOT LOCAL BRIDGE BUNDLING PROGRAM

This project started as a pilot in 2012. Bundled bridge projects are confined to one district, preference to one county, within a 15-mile radius. All bridges must be in poor condition and locally owned, with preference given to structures that are posted or closed. PennDOT targeted single-span bridges between 20 feet and 60 feet in length with skews less than 15 degrees. To maximize efficiency in design and construction, only bridges with very similar details are chosen. The goal is to have one design for all structures in the bundle and to replace multiple bridges of varying length with one bridge of a standard length. Lengthening a structure in this case is appropriate, as well as eliminating skew. If there are more than three designs per bundle, the bundle may not generate the level of savings desired to make the program viable (refer to the flow chart on side 2, which shows the selection process). Bridge bundles can be as large as desired, but individual contracts should be developed in groups of 7–10 structures to optimize construction crews.

PennDOT has documented significant savings in design and construction from using this method. They have saved up to 50% on design cost and up to 15% on construction cost when compared with traditional one-bridge projects. Due to the savings, the normal 5% local public agency (LPA) contribution to the project



Pilot Project Locations.

is waived. Participation in the program is voluntary, but it is a popular program due to the fact that the LPAs have no contribution. Because these bridges are locally owned, the LPA signs an agreement that transfers ownership of the bridge to PennDOT for the design and construction of the bridge. Once the project is completed, the bridge ownership is transferred back to the LPA.

Due to its success, the local bridge bundling program has continued to be funded beyond the pilot phase. It is currently funded at \$3 million per year.

Name of Agency: Pennsylvania Department of Transportation (PennDOT)

Location: Statewide

Project Delivery Method: Design–Bid–Build (D-B-B)

Procurement Method: Low Bid

Total Project Cost:

2012 Pilot Project

\$12.9 million (District 4: 7 bridge replacements, 3 bridge removals)

\$4.0 million (District 9: 12 superstructure replacements)

\$3.2 million (District 12: 18 rehabilitations)

Year 1: District 6

\$6.0 million (10 structures)

Year 2: District 11

\$6.8 million (17 structures)

Current funding is \$3 million per year

Funding Source: 100% State-Funded

Construction Schedule: Design and construction less than 18 months total.

Project Website: None

SUMMARY

Program Goals	To save time and money by increasing efficiency by re-using similar design details on bridges in the bundle.
Bridge Selection Criteria	<ul style="list-style-type: none"> • Locally owned. • Poor condition. • 20'–60' single span. • <15 degree skew. • All in one district, preferentially the same county, within a 15-mile radius. • No delays (e.g., avoid historic structures, structures near railroads, structures with robust utility attachments, and significant/commercial RW takes)
Delivery and Procurement Method	D-B-B, Low Bid
Funding Sources, Financing Strategy	100% State-Funded. No local match.
Environmental, Right-of-Way, and Utility Considerations	Sites with limited third party coordination to streamline efficiency.
Risks	Similar risk to traditional project.
Owner Management/Quality Assurance	D-B-B, so QA/QC is the same as a traditional project.
Stakeholder Communication	Coordinate with local public agencies during the bridge selection process. Communication with stakeholders during design is similar to a traditional project.

Flowchart to Prepare Local Bridge Bundling of Non-Complex (Minor) Projects

