



Borton
Lawson



Design-Build

for transportation



www.borton-lawson.com

The increasing need for improved and expanded transportation systems has placed a huge burden on the public to meet these growing needs. **Design-build has the potential to produce a more cost-effective project in less time.** Our philosophy is to collaborate with the contractor to help develop the most cost-competitive approach for both the project and the contractor's means and methods. This approach ultimately makes the team as competitive as possible and saves the owner money. **Our goal is to develop long-standing relationships with our teaming partners and assist them in strengthening their relationship with the owner by providing economical, expedient, and quality solutions on every project.**

Transportation Services

- Bridge & Structural Design
- Constructability Reviews
- Environmental/Permitting/Erosion & Sediment Control
- Highway Design
- Public Involvement
- Signal/Signage Design
- Surveying/GIS/Right-of-Way Plan Development
- Traffic Engineering
- Utility Design, Relocation & Coordination
- Value Engineering
- Water Resources/H&H

"We can provide bridge geometry layout at 10' intervals"

Since 1998, Borton-Lawson has been involved on the conceptual end of the design working for the owner as well as on the final design end working for the contractor. Several members of our staff have earned their **Design-Build Professional designation (DBIA)** setting us apart from the competition and giving us what it takes to meet deadlines and deliver a superior finished product.



Final Design

Completed for contractor



I-476 Lehigh & Pohopoco Bridge Replacements

Pennsylvania Turnpike Commission – Carbon County, PA

Contractor: *Walsh Construction*

Construction Cost: *\$101.5M*

- Alternate prestressed concrete bridge design
- Preliminary design & final detailing of dual NB/SB structures over the Lehigh River & Pohopoco Creek, including:
 - 7-span structure – 2 total
 - 10-span structure
 - 11-span structure
 - Approximately one mile of bridge deck
- Coordinated with Army Corps, PA DEP, Carbon County Conservation District, & PA Fish & Boat to modify approved NPDES Permit, including E&S Plan and H&H Report
- Cleared additional ROW for placement of new piers
- All design services complete within eight months of Contractor NTP
- Construction savings of approximately \$8M



State Route 0006, Section 673 – Church Street Project

Pennsylvania Department of Transportation – Wayne County, PA

Contractor: *Leeward Construction*

Construction Cost: *\$10.5M*

- Final design/detailing of two bridges over Lackawaxen River
 - New 2-span structure
 - Existing 3-span structure widening with superstructure replacement
- Parallel streets with two-directional traffic converted into two separate one-way, two-lane facilities in order to solve traffic congestion throughout the Borough
- Additional design services included:
 - Roadway design, including intersection grading & drainage design
 - Permanent traffic signal design at five intersections
 - Traffic control, including temporary signal design at three intersections
 - Bridge lighting
 - Erosion & Sediment Control Plans
 - Signing and pavement marking plans
 - Landscaping plan developed for a park in the Historic District of Honesdale



State Route 1021 Section 4013 Emergency Culvert Replacement

Pennsylvania Department of Transportation – Luzerne County, PA

Contractor: *Slusser Brothers*

Construction Cost: \$2.5M

- June 2006 flooding – Federal State of Emergency
- Final design services included:
 - Culvert design
 - Complete set of construction plans
 - Traffic Control Plans
 - Right-of-Way acquisition
 - Water quality monitoring of adjacent private water wells



State Route 0176 Section PM1

Pennsylvania Department of Transportation – Berks County, PA

Contractor: *JD Eckman, Inc.*

Construction Cost: \$19.6M

- Alternate traffic control concept eliminated use of cross-overs and the need for 5+ miles of concrete barrier
- Traffic Control Plans (164 sheets) developed and approved within two months of Contractor NTP, resulting in construction savings of over \$1M
- Additional design services included:
 - Final Design, Bridge Rehabilitation over SR 10, including Type 2 and Type 3 deck repairs, latex overlay, new neoprene compression seals at abutments, and substructure repairs
 - Final Design, Superstructure Replacement over SR 568, including barrier replacement, new neoprene compression seals at abutments, and substructure repairs
 - Signing and pavement marking plans, including interstate sign design

a design team that is deadline driven and responsive



Conceptual Design

Completed for owner



State Route 11 Great Bend-Hallstead Bridge over the Susquehanna River

Owner: Pennsylvania Department of Transportation – District 4-0

Construction Cost: \$7.2M

- 550' four-span prestressed spread box concrete bridge replacement
- Preliminary design tasks included; TS&L alternates, H&H studies, E&S, traffic control, survey, public meetings, and 4(f) investigation



State Route 118 Emergency Bridge Replacement over Huntington Creek

Owner: Pennsylvania Department of Transportation – District 4-0

Construction Cost: \$1.5M

- June 2006 flooding – Federal State of Emergency
- 60' single-span prestressed spread box beam with integral pile caps
- Conceptual TS&L approved within three weeks from NTP



State Route 3001, Section A01 Bridge Replacement over Chest Creek

Owner: Pennsylvania Department of Transportation – District 2-0

Estimated Construction Cost: \$2.5M - \$5.0M

- 160-foot bridge replacement; responsible for preliminary design, permitting, constructability review, TS&L, and final design reviews



Chase Road & Hillside Road Emergency Culvert Replacements over Huntsville Creek

Owner: Luzerne County, PA

Estimated Construction Cost: \$1.5M

- June 2006 flooding – Federal State of Emergency
- Preliminary design tasks for both culverts included preparation of the GP 11's, E&S Plans, TS&L, H&H Report, Roadway Plans, detailed field survey, and preliminary geotechnical investigations



State Route 1002 Tatamy Bridge Replacement over Bushkill Creek

Owner: Pennsylvania Department of Transportation – District 5-0

Estimated Construction Cost: \$2.5 – 5.0M

- Replacement of existing three-span bridge; design tasks included survey, DFV, three TS&L alternates (including two-span arrangement), and H&H analysis

services

Architecture

Automation

Bridge Design

Electrical Design

Environmental

Facilities Engineering

Highway Design

Land Development

Landscape Architecture

Land Surveying

Mechanical Design

Municipal Services

Structural Design

Traffic & Signal Design

Water Resources

Water & Wastewater



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