

Accelerated Bridge Construction

Building Bridges Stronger and Faster

PennDOT uses Accelerated Bridge Construction (ABC) to build bridges faster and stronger, reducing onsite construction time and improving safety without sacrificing quality. ABC is a Federal Highway Administration (FHWA) Every Day Counts Round 2 (EDC-2) innovation that Pennsylvania championed.

What are the benefits?

- **Simplifies** and **accelerates** construction
- Produces **safer** and **more durable** bridges
- **Increases** the **service lives** compared to conventional bridge techniques

How does it work?

Geosynthetic Reinforced Soil-Integrated Bridge Systems (GRS-IBS) use alternating layers of geotextile and compacted stone to create bridge substructure units and strengthen the approach roadways. The integrated bridge system is created when the units are combined with beams and deck.

Prefabricated Bridge Elements and Systems (PBES) are structural components of a bridge that are built offsite, or adjacent to the alignment. The components are then transported and fitted together at the bridge site.

Ultra-High Performance Concrete (UHPC) is a steel fiber-reinforced cementitious composite material that has exceptionally high mechanical strength and durability properties.



GRS-IBS



PBES



UHPC

How do I learn more?

To learn more about this innovation, visit www.penndot.gov/stic or email penndotstic@pa.gov.