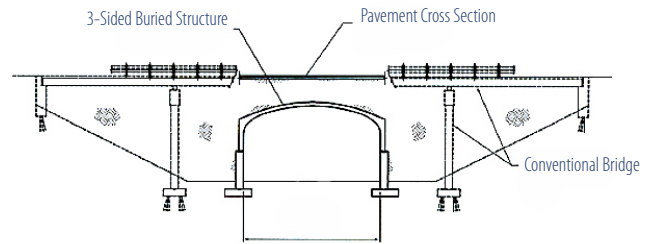




# Why Buried Bridges?

CONVENTIONAL BRIDGES



## CONVENTIONAL BRIDGES CONVERT TO BURIED BRIDGES:

- Shorter construction time/phasing means lower initial cost
- Minimal/no long term maintenance lowers overall life cycle cost
- Shorter construction time minimizes traffic disruption
- Bury utilities in backfill over structure
- Increased safety with limited/no freeze concerns & deck maintenance

BURIED BRIDGES

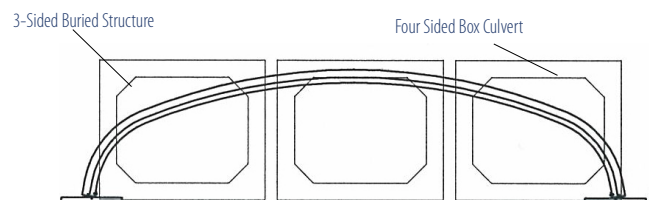


CULVERTS



## CULVERTS CONVERT TO BURIED BRIDGES

- Complete system with headwalls, wingwalls and foundations
- Bottomless structure promotes natural aquatic habitat and fish/wildlife passage
- Maintenance-free structure lowers overall life cycle cost
- Project specific design to handle all loading requirements
- Long clear spans promote improved hydraulics while minimizing pier blockage





# Buried Structures Value and Benefit Defined

## Interstate 64 Overpass Huntington, WV



Before



During



After

### Bridge Type Comparison Chart

	CONVENTIONAL	BURIED
Traffic Disruption*	2 YEARS	5 MONTHS
Construction Time*	2 YEARS	1 YEAR
Initial Cost*	\$8 M	\$5.5 M
Typical Maintenance*	Deck Overlay every 15-18 years. Total Deck Replacement every 30-35 years.	Periodic Asphalt replacement.

\*Estimated

## Featured Project: I-64 Overpass

The West Virginia Department of Highways bid a three span steel girder bridge for the replacement of an I-64 overpass over a local road. The contractor Ahern & Associates presented to the WVDOH a value engineering proposal to redesign the bridge at grade to be a buried bridge using a high profile shaped BEBO® concrete arch. The value engineering proposal provided an initial savings of approximately 30% when compared to the three span steel girder bridge bid. Future benefits include significantly reduced maintenance costs.

### BENEFITS:

- » 158 LF BEBO C-series (54' span x 24' 4"), 20' of cover, set arches at night to minimize traffic disruption, precast arches set in place in ONE week
- » **Significant cost savings.** Construction of the BEBO arch instead of conventional bridge under I-64, while it was still in service, accelerated bridge construction and saved \$2,500,000.
- » This construction method allowed four lanes of traffic to remain open. Traffic disturbance was reduced to one construction season providing a **huge safety bonus** to traveling public and the contractor.
- » **No future bridge deck or approach slab maintenance costs.**

### Maintenance Costs Add Up

