

Culvert & Bridge Rehabilitation by Reline Method

(From small pipe to large bridges)



CÖNTECH ENGINEERED SOLUTIONS

Rehabilitation vs. Replacement

- Limited traffic disruptions and detours
- Minimal permitting
- Significantly shorter project time
- Historic preservation
- Reduced costs of 30%-50% in most cases
- No special equipment required



www.ContechES.com



Segmental Sliplining Process for Plastic Pipe

These include DuroMax and A2 Liner Products. Consult your local Contech representative for more detail.

Gasket bell and spigot or fusion weld joints.	Optional skids shown.
Pull or push pipe "train" from trailing and.	
When longer pushes are required, repeat and join "trains",	SSSSSSS REERERE LEFERIES MARAA
Install bacing or use other anti-flotation methods as required prior to grouting.	

Segmental Sliplining Process for CMP

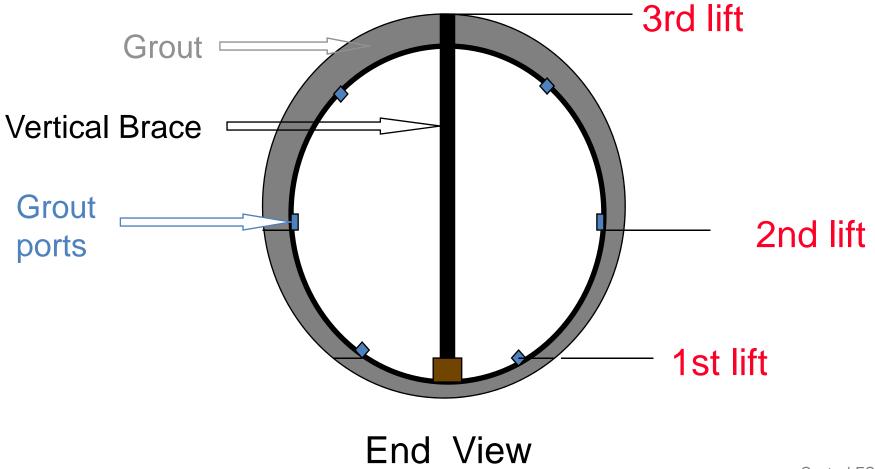
Consult your local Contech representative for more detail.

Insert first section.	Existing structure
Block the first section and place the next section.	
Block the tail end and place internal expanding band and gasket.	
Repeat until all sections are installed. Place bacing to prevent flotation and displacement during growting.	- Vertical bracing

Rehabilitating Aging Structures



Grout in Stages



PVC Liner Pipes



12" - 60"



Solid Wall HDPE Pipe







10" - 63"

Corrugated Metal Pipe



EEPED SOLUTIONS



- Galvanized
- Aluminized (ALT2)
- Aluminum
- Polymeric Coated
- Double Wall Poly
- Ultra Flo



Aluminized Spiral Rib



Polymeric Double Wall

18" – 132" Round & Pipe Arch

NEEPED SOLUTIONS













Steel Reinforced PE Pipe

30" – 120"

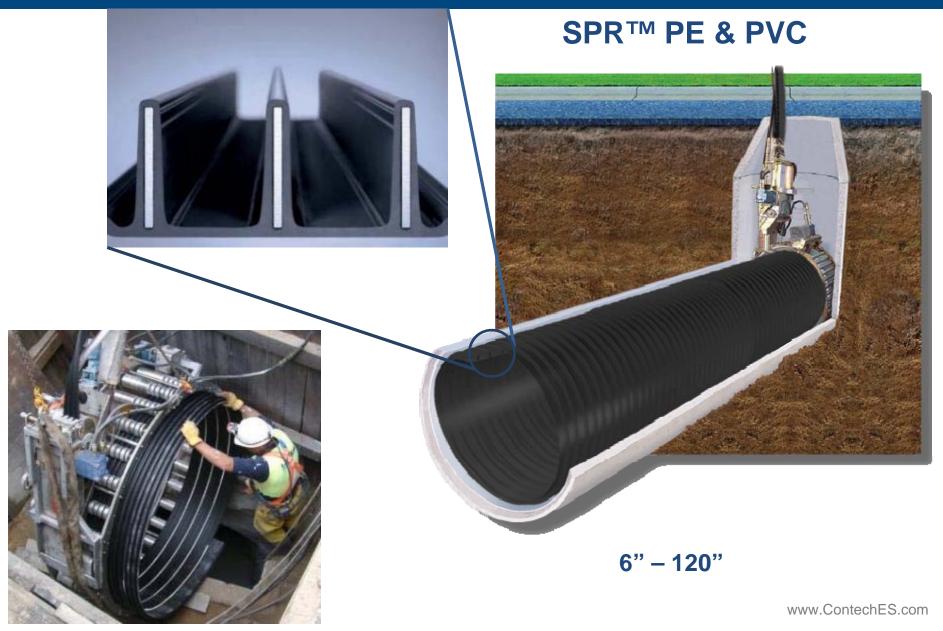








SPR™ PE









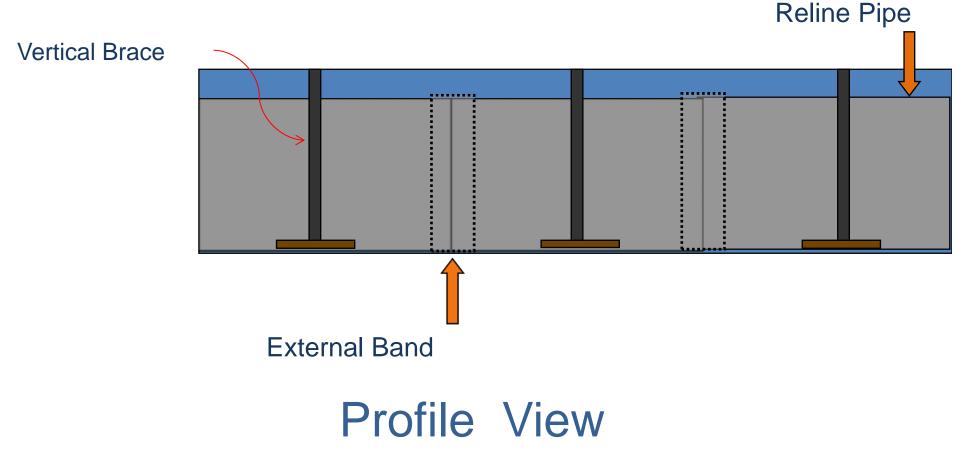
Flotation Prevention filling bottom of pipe with water







Large Pipes Bracing to Prevent Floatation



CONTECH Flotation bracing

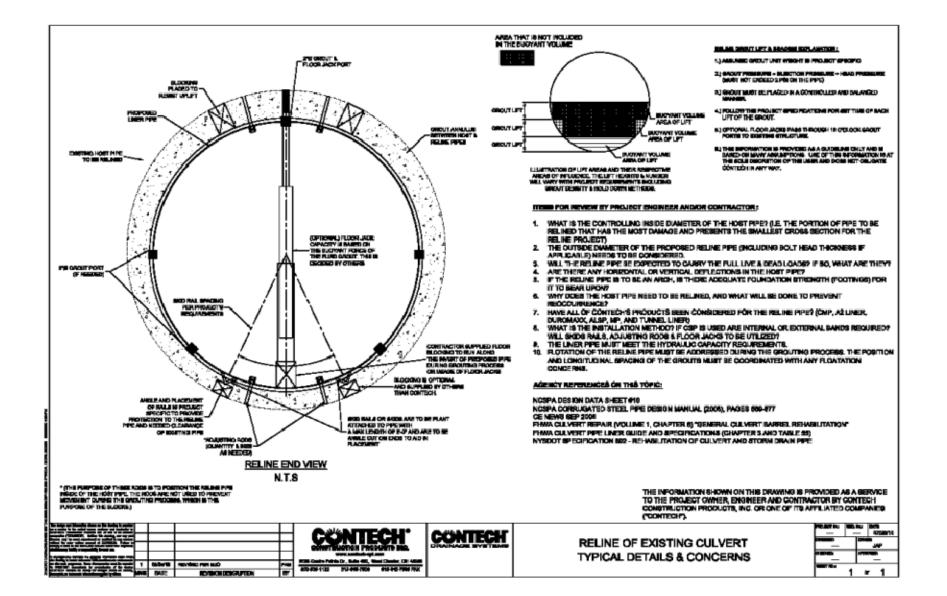




Bracing through grout port









Grout





Grout Ports











Bridge Reline Overview Plate, Precast & Truss



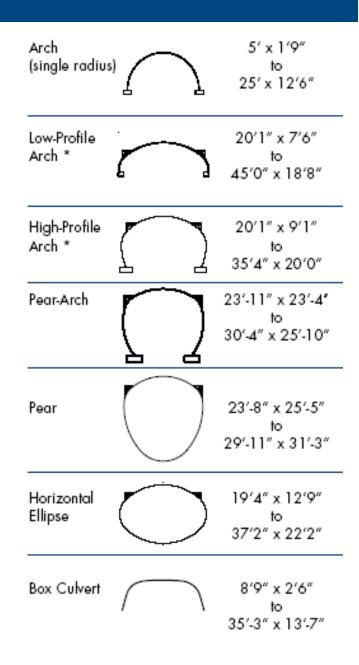
Structural Plate





Structural Plate Shapes

Shapes Round	Sizes — Span x Rise 5' to 26'
Vertical Ellipse	4′8″ x 5′2″ to 25′ x 27′7″
Underpass	12′2″ x 11′0″ to 20′4″ to 17′9 ′
Pipe-Arch	6′1″ x 4′7″ to 20′7″ x 13′2″
Horizontal Ellipse	7′4″ x 5′6″ to 14′11″ x 11′2″



CÖNTECH ENGINEERED SOLUTIONS

Aluminum Box Culvert







Eliminate Road Closure/Reduce Costs 33' span Horizontal Ellipse



No Bridge Deck

No deck freezing in winter, no deck maintenance, & wider shoulder for safe traffic flow





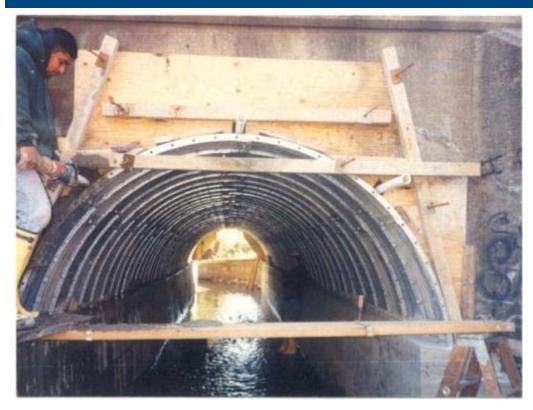
Aluminized, Galv. Steel & Aluminum

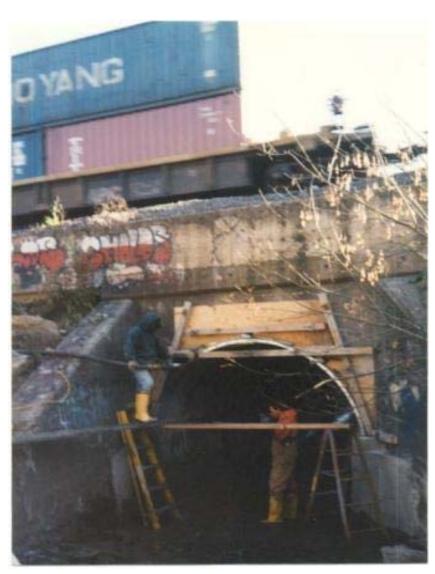








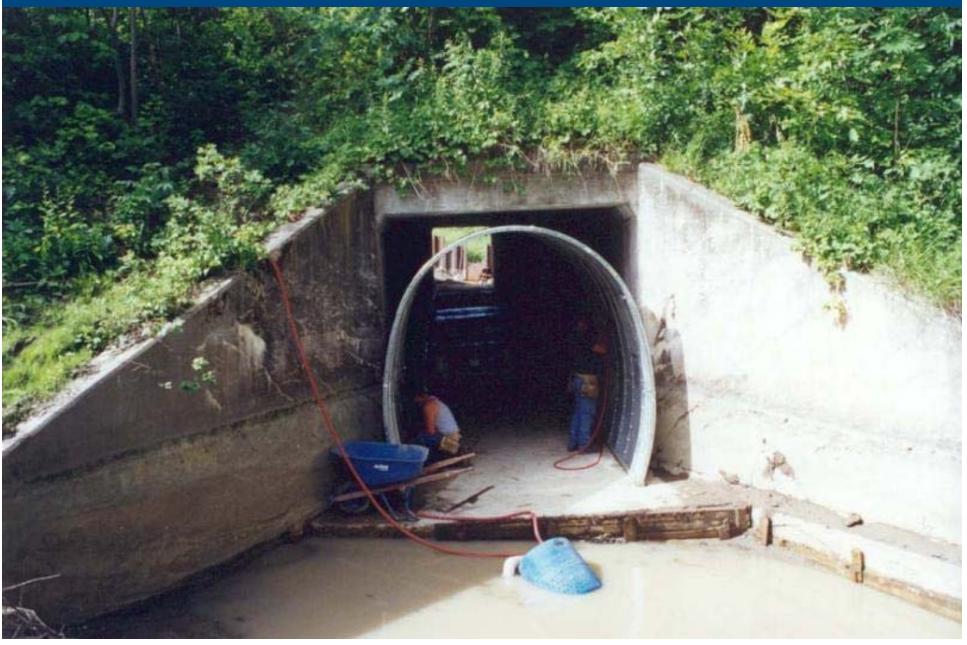








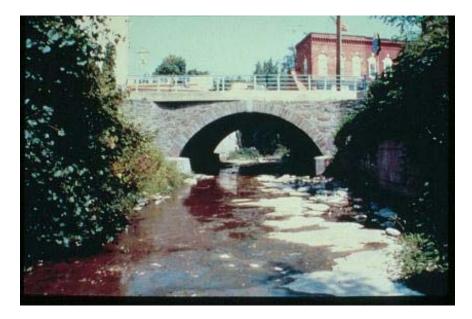


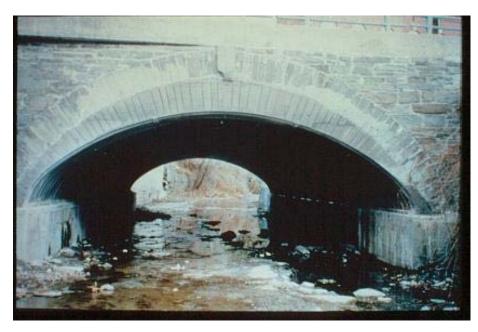




Structural Plate

Existing Historic Stone Arch









Assemble and Slip line









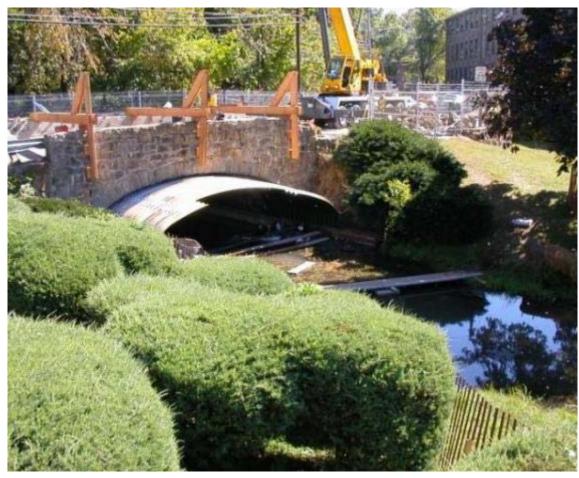
Structural Check HS-25 Live Load

Saved \$ 1.74 million !!





Reline Stone Arch Bridge



- Maintain one lane
- Cost Effective
- Constructible

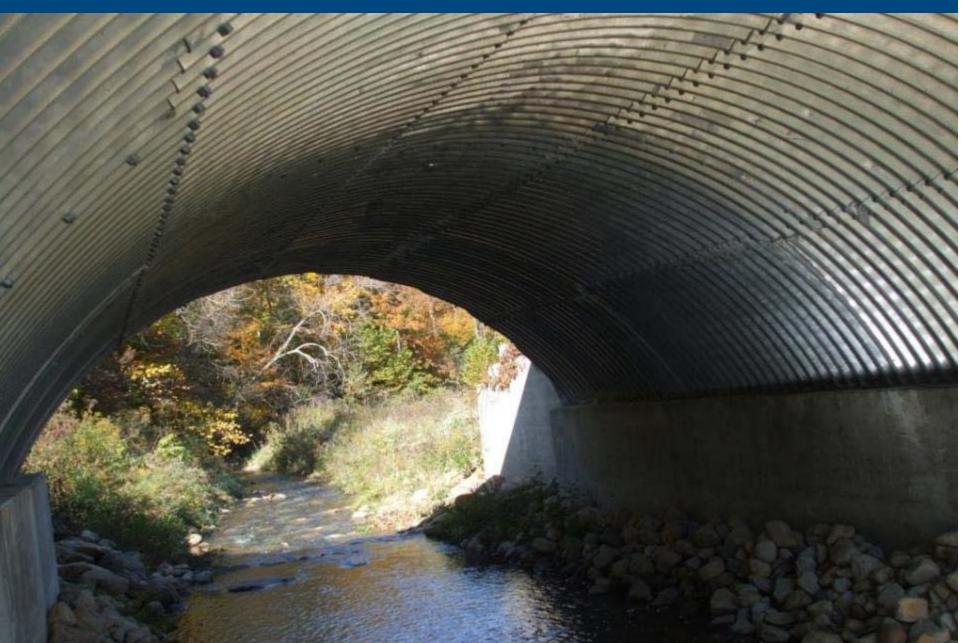








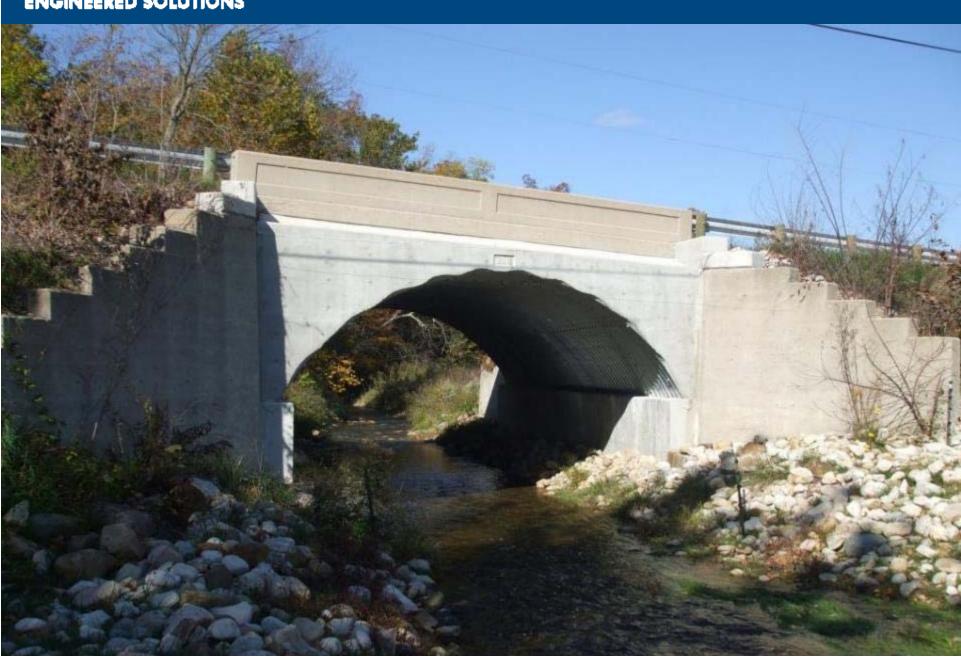




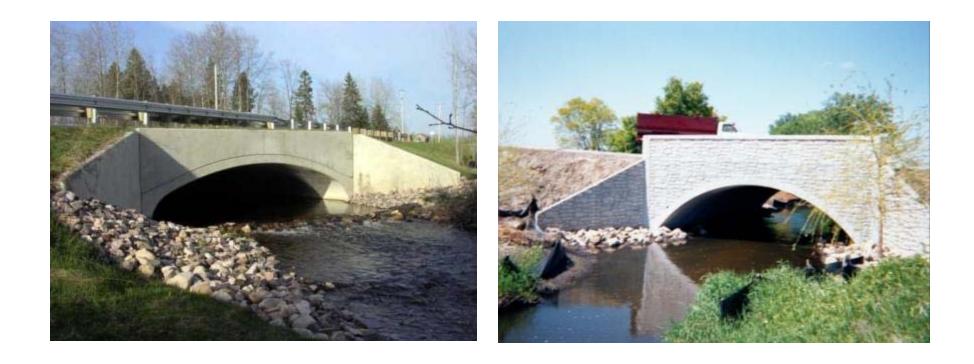




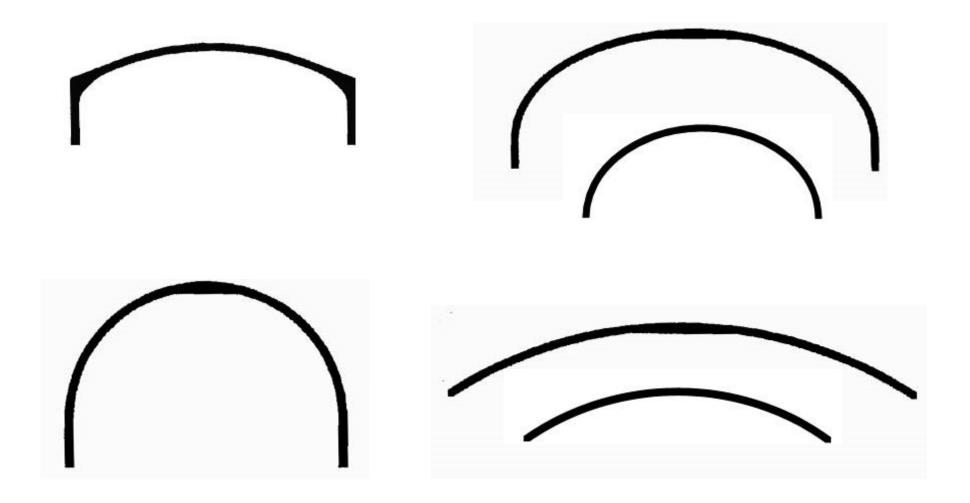










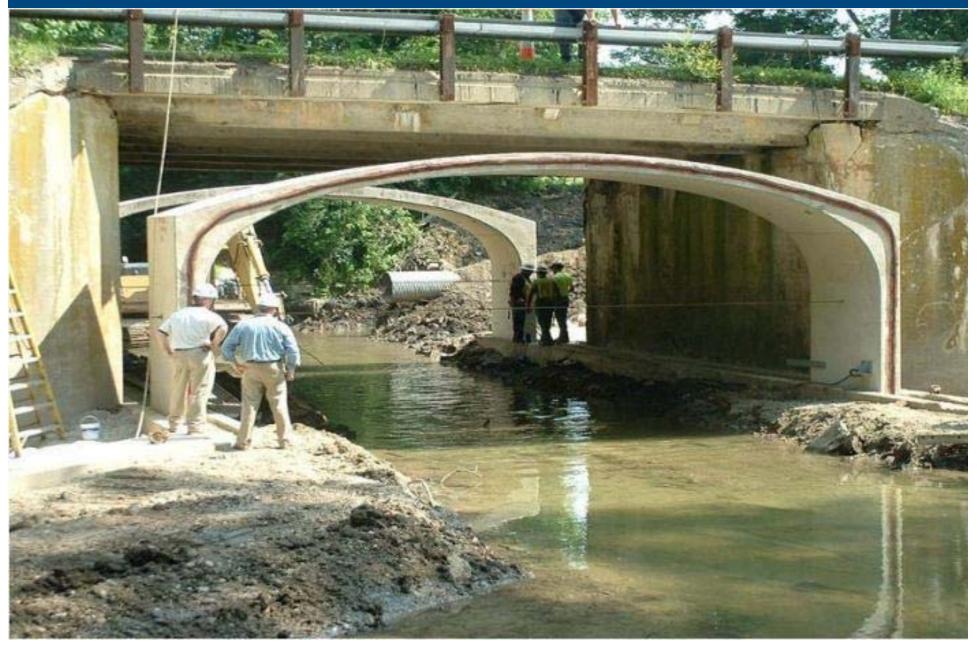






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Precast Concrete Arches













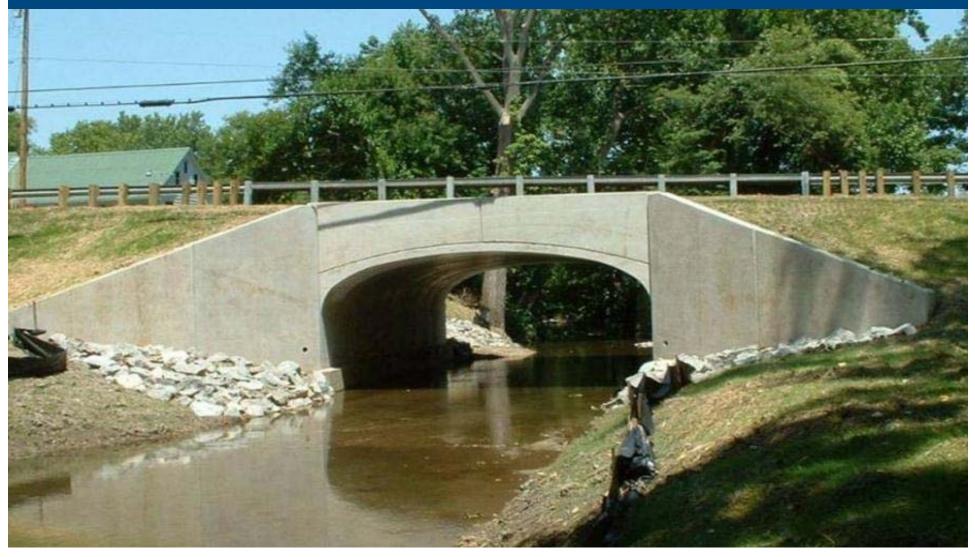
CÖNTECH ENGINEERED SOLUTIONS Precast Concrete Arches







CÖNTECH Precast Concrete Arches



WV DOT I-64

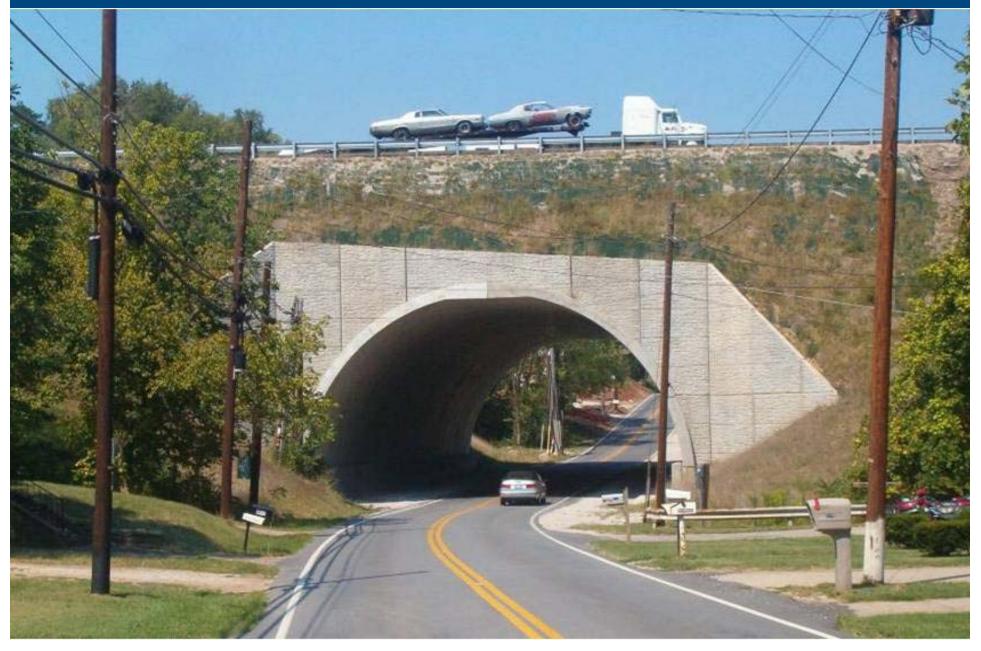






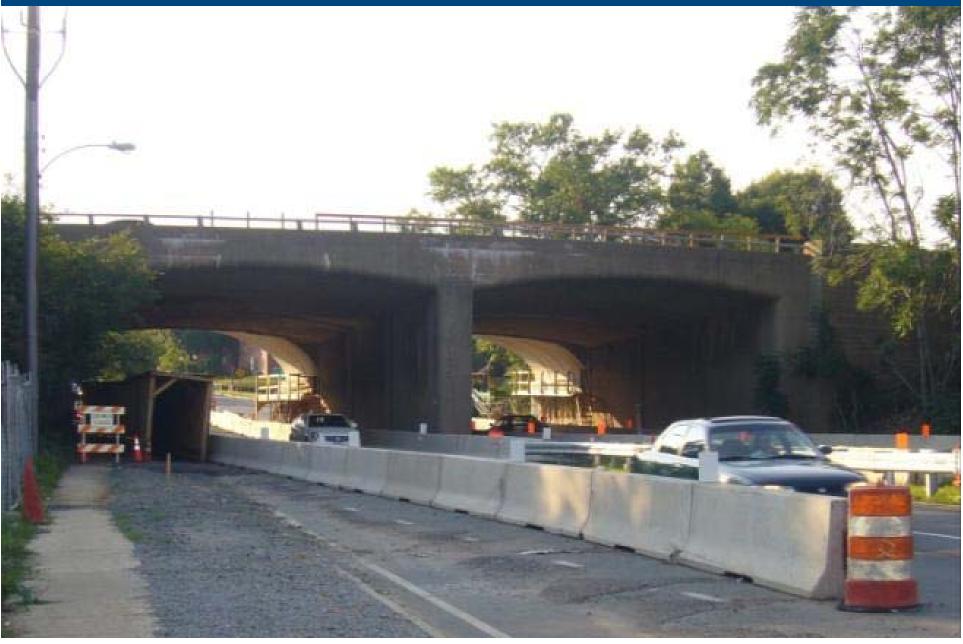


CÖNTECH ENGINEERED SOLUTIONS Precast Concrete Arches



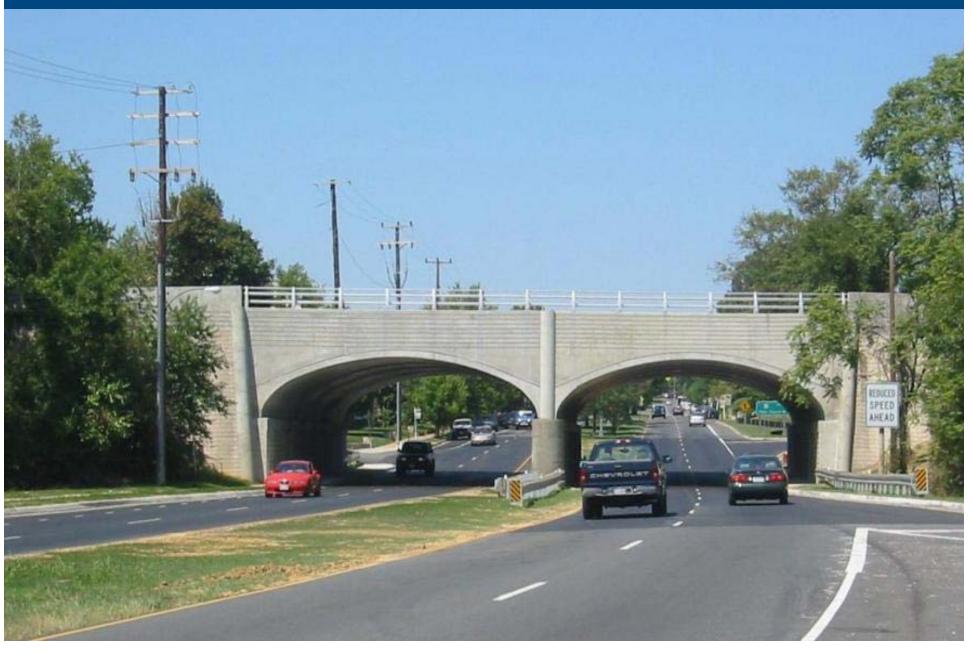
Route 50 Over 27 – Arlington, VA





CÖNTECH ENGINEERED SOLUTIONS

Precast Concrete Arches





Specification Goals

Recommendations:

Leave the sliplining & grout techniques up to the Contractor.

