Culvert & Bridge Rehabilitation by Reline Method
(From small pipe to large bridges)
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
Segmental Sliplining Process for Plastic Pipe

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

1. Pull or push pipe “teem” from testing end.
2. When longer pushes are required, repeat and join “teems”.
3. Install bearing or use other anti-rotation methods as required prior to grouting.

Segmental Sliplining Process for CMP

Consult your local Contech representative for more detail.

1. Insert first section
2. Block the last section and place the next section.
3. Block the tail end and place internal expanding bond and gasket.
4. Repeat until all sections are inserted. Place braces to prevent flotation and displacement during grouting.
Grout in Stages

End View

1st lift
2nd lift
3rd lift

Grout
Vertical Brace
Grout ports
PVC Liner Pipes

12” – 60”
Solid Wall HDPE Pipe

10” – 63”
Corrugated Metal Pipe

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

18” – 132” Round & Pipe Arch
103” x 71” Pipe Arch
Steel Reinforced PE Pipe

30” – 120”
Flotation Prevention
filling bottom of pipe with water
Large Pipes
Bracing to Prevent Floatation

Vertical Brace

External Band

Profile View

Reline Pipe
Bracing through grout port
Bridge Reline Overview
Plate, Precast & Truss
Structural Plate
# Structural Plate Shapes

<table>
<thead>
<tr>
<th>Shapes</th>
<th>Sizes — Span x Rise</th>
<th>Arch (single radius)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round</td>
<td>5’ to 26’</td>
<td>5’ x 1’9” to 25’ x 12’6”</td>
</tr>
<tr>
<td>Vertical Ellipse</td>
<td>4’8” x 5’2” to 25’ x 27’7”</td>
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<tr>
<td>Underpass</td>
<td>12’2” x 11’0” to 20’4” to 17’9”</td>
<td></td>
</tr>
<tr>
<td>Pipe-Arch</td>
<td>6’1” x 4’7” to 20’7” x 13’2”</td>
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<tr>
<td>Horizontal Ellipse</td>
<td>7’4” x 5’6” to 14’11” x 11’2”</td>
<td></td>
</tr>
<tr>
<td>Low-Profile Arch</td>
<td>*</td>
<td>20’1” x 7’6” to 45’0” x 18’8”</td>
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<tr>
<td>High-Profile Arch</td>
<td>*</td>
<td>20’1” x 9’1” to 35’4” x 20’0”</td>
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<tr>
<td>Pear-Arch</td>
<td></td>
<td>23’-11” x 23’-4” to 30’-4” x 25’-10”</td>
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<tr>
<td>Pear</td>
<td></td>
<td>23’-8” x 25’-5” to 29’-11” x 31’-3”</td>
</tr>
<tr>
<td>Horizontal Ellipse</td>
<td></td>
<td>19’4” x 12’9” to 37’2” x 22’2”</td>
</tr>
<tr>
<td>Box Culvert</td>
<td></td>
<td>8’9” x 2’6” to 35’-3” x 13’-7”</td>
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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
Tunnel Liner Plate

Aluminized, Galv. Steel & Aluminum
Tunnel Liner Plate
Existing Historic Stone Arch
1. Assemble and Slip line

2.

3.
Structural Check
HS-25 Live Load

Saved
$1.74 million!!
Reline Stone Arch Bridge

- Maintain one lane
- Cost Effective
- Constructible
Precast Concrete Arches
Precast Concrete Arches
Precast Concrete Arches
Precast Concrete Arches
Precast Concrete Arches
Route 50 Over 27 – Arlington, VA
Precast Concrete Arches
Recommendations:
Leave the sliplining & grout techniques up to the Contractor.