

Utah Lateral Bridge Slide Experience



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*An Overview of
Methods and
Projects*

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What is a Lateral Bridge Slide?

- **Allows Simultaneous Construction of Substructure and Superstructure**
- **Superstructure is constructed adjacent to existing structure on temporary abutments while existing remains in service**
- **Allows for Short Closures for Replacement**
- **Innovative Phasing Minimizes the Traffic Impact**

Lateral Slide ABC Benefits

Owner Benefits

- Minimize Traffic Impacts
- Improve Safety of Public
- Could be more cost effective when considering detour and phasing costs

Contractor Benefits

- Safer Work Zone
- Schedule
- Operational Efficiencies

I-80 Over Echo Dam Road, Utah (2009)



I-80 Over Echo Dam Road, Utah (2009)

- Replacement of EB & WB I-80 over Echo Rd.
- Bridges replaced using horizontal skidding of the new bridge superstructures onto new abutments constructed under existing bridges
- Substructure constructed under existing bridge while it remained in service
- Final bridge placement in 7 hours
- Overnight detour on the ramps during slide
- Continuous Abutment with Pile Groups



I-80 Over Echo Dam Road, Utah (2009)



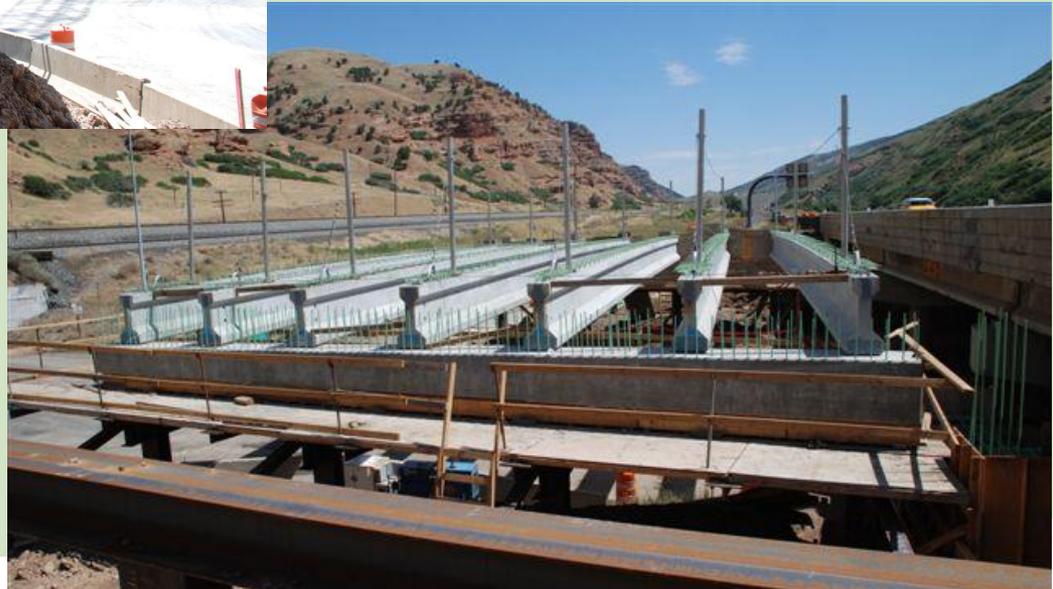
- Abutments and approach slabs on temporary supports
- Bridge slid on to new abutments and sleeper slabs

I-80 Over Echo Dam Road, Utah (2009)



- Daytime closures allowed on cross street
- Approach slabs construction with bridge

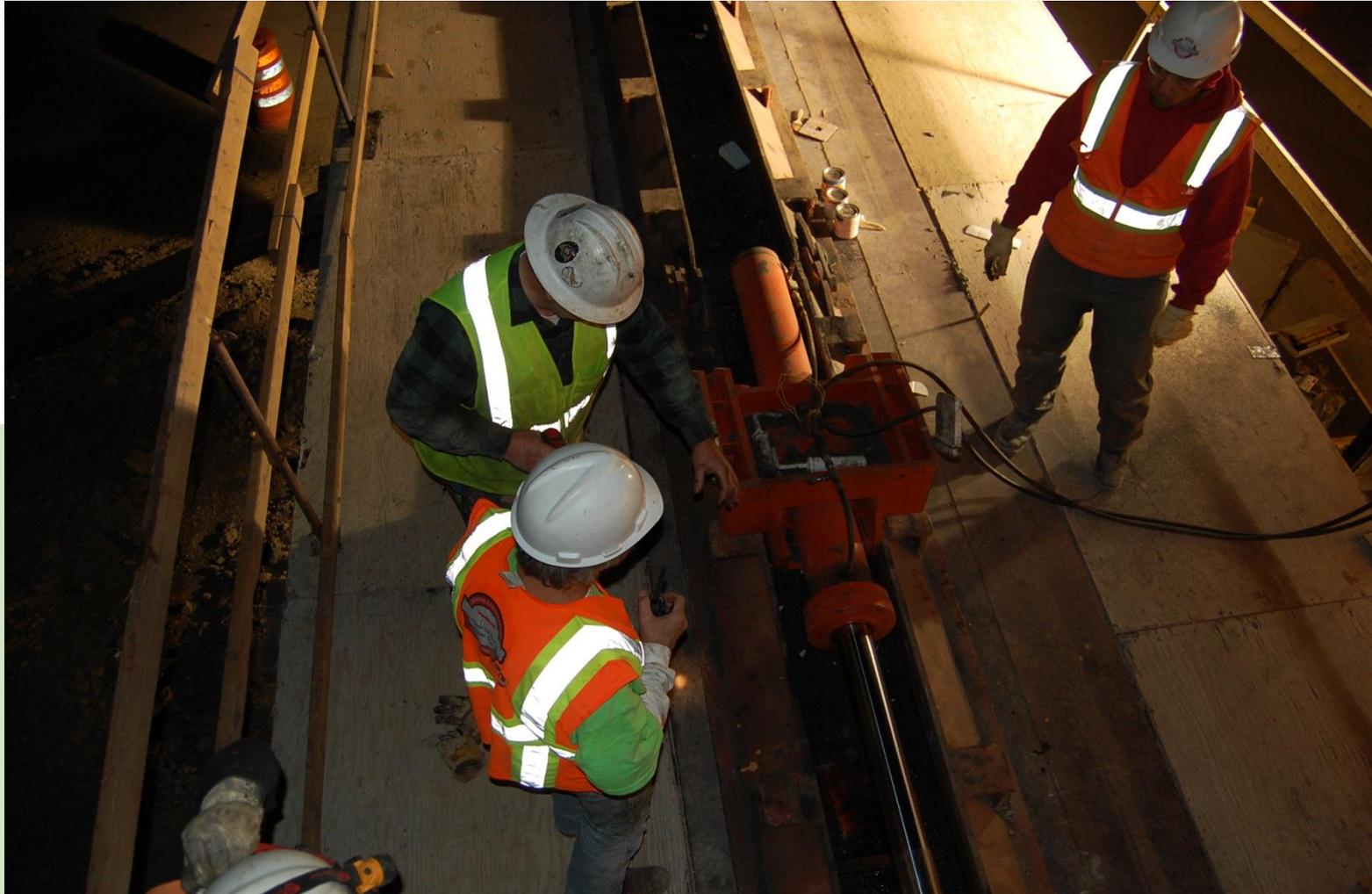
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I-80 Bridges at 2300 E Salt Lake City, UT (2009)



I-80 Bridges at 2300 E Salt Lake City, UT (2009)

- Replacement of EB & WB I-80 over 2300
- Substructure constructed under existing bridge while it remained in service
- WB Bridge Raised for Vertical Clearance on On-Ramp
- Post Tensioned Abutments
- 6% Super Elevation Challenge



- Final bridge placement in 7 hours

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I-80 at Summit Park, Utah (2011)



I-80 at Summit Park, Utah (2011)

- Replacement of EB & WB I-80 at Summit Park
- Steel Girders
- WB Bridge Raised for Vertical Clearance on On-Ramp – New Method
- Micro Piles and Spread Footings
- Full Retaining Abutment in Center
- More Time Allowed for Roadway Reconstruct



I-80 at Summit Park, Utah (2011)



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I-80 at Wanship, Utah (2012)



I-80 at Wanship, Utah (2012)

- Replacement of EB & WB I-80 at Wanship
- All Thread Jacking/Sliding System
- Ramps used as Detour again
- Spread Footings
- Full Retaining Abutment in Center with Full Ht. Wingwalls



I-80 at Wanship, Utah (2012)



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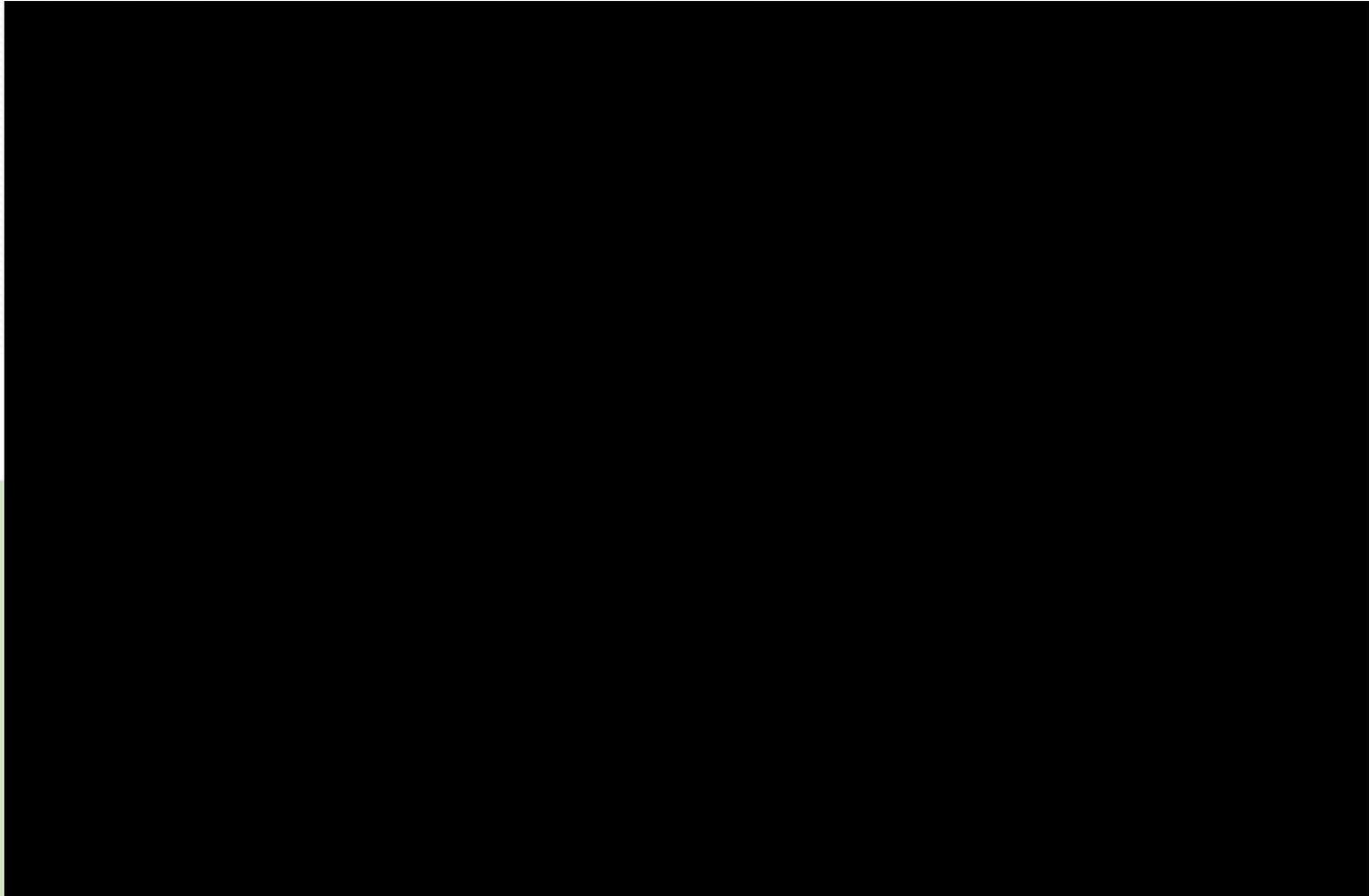
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Lessons Learned

- **Very Detailed and Tight Schedules**
- **Engineers and Contractors closely teamed with same project goals. Working through the smallest details**
- **Focus on Roadway Approaches as much as Structure move-in. Fill-in under moved in Approach Slabs**
- **Proactive detour planning with the DOT**
- **Phased first move if overnight full closure**
- **Be ready to be on TV!**



Questions?