

# Self Propelled Modular Transporters

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Presented by  
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# SPMTs

- Self Propelled Modular Transporters

# Projects

- 17 structures
- 2007 - 2010
- Highways for Life moneys to start
- TRB, TIG, Scans before project























# Operation Staging Areas Bridge Farm @ 1300 East

- 7 Superstructures Constructed in a Single Location



# I-80 State to 1300 East Sequence





# I-80 State to 1300 East Sequence



# Highland Structure & 1300 East w/ Original Carrier Beams

- Lead carrier beam developed structural distress





# Carrier Beam Failure

- Failure Analysis
  - Load doubled - 4 SPMTs to 2 Skid Jacks
  - Discontinuous additional bottom plate
  - Stress concentration
  - Web crippling
  - Twist of double beam



# Risk Identification – Owner, Contractor and Engineer

- Identified 5 Categories w/ 135 Items:
  - Carrier Beam
    - Perform 2 independent QCs
  - Utilities
    - Shutting down large H<sub>2</sub>O line
  - Travel Path
    - Verify/confirm travel over new bridges
  - Geotech
    - Re-evaluate projected utility/wall stresses
  - Launch
    - Re-evaluate all assumptions





# Utilities

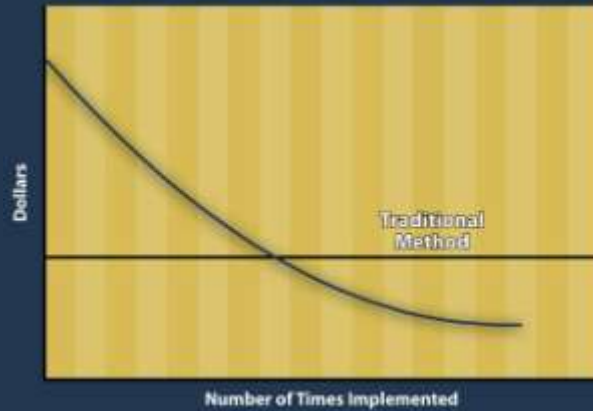
- Waterlines 6" to 30" Diameter
  - Protection
  - Plated, new valves installed, lines shut down
  - Companies on site
- Gas Lines High & Low Pressure
  - Injunction
  - Protection
  - Steel Plate, new valves



# Geotechnical

- Slope Stability 1:1.5 distance back
- Park 50' back from abutment
- Backfill toe of MSE wall
- Instrumentation
- Schedule
- Complacency





# Innovative Technology

- First implementations cost more
- Potential for new methods to cost less
- Promise of time savings
- Positive cost-benefit ratios



# Operation – Time Req. to Set Bridges





# I80 – Parleys Canyon









  
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# Best applications

- Costs
- Program of projects
- Lots of traffic
- Need for speed

# Reasons to Invest

