

Outline

- BOBS Organization Structure
- Bridge Type and Composition/Terminology
- Asset Management
- Bridge Maintenance
- Bridge Design Process
- Bridge Plans
- Road and Bridge Coordination
- Request for Action (RFA) Projects
- Design in Construction
- **Accelerated Bridge Construction (ABC)**
- Wrap up



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ACCELERATED BRIDGE CONSTRUCTION (ABC)

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What is ABC?



Bridge Construction that uses innovative planning, design, materials and construction methods to reduce bridge replacement construction time.

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ABC Improves



- Total Project Delivery Time
- Site Constructability
- Work-zone Safety

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ABC Reduces



- Traffic Impacts
- Onsite Construction Time
- Weather-Related Time Delays

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Types of ABC



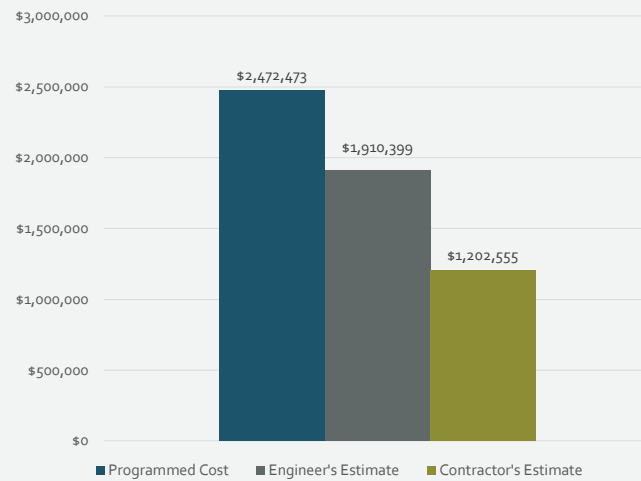
- Geosynthetic Reinforced Soil-Integrated Bridge System (GRS-IBS)
- Prefabricated Bridge Elements and Systems (PBES)
- Slide-In Bridge Construction

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Geosynthetic Reinforced Soil-Integrated Bridge System (GRS-IBS)

- Fast Construction
- Cost Effective
- Easy to Maintain
- Durable

Cost Estimates



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Geosynthetic Reinforced Soil-Integrated Bridge System (GRS-IBS)



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Prefabricated Bridge Elements and Systems (PBES)



- Minimizes Traffic Disruption Duration
- Improved Constructability
- Increased Quality

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Precast Decked Beams



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Precast Decked Beams



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Slide-In Bridge Construction

- Minimized Traffic Disruption
- Reduced MOT Cost
- Increased Quality



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M-50 over I-96 Bridge Slide



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Slide-In Bridge Construction (SPMT)



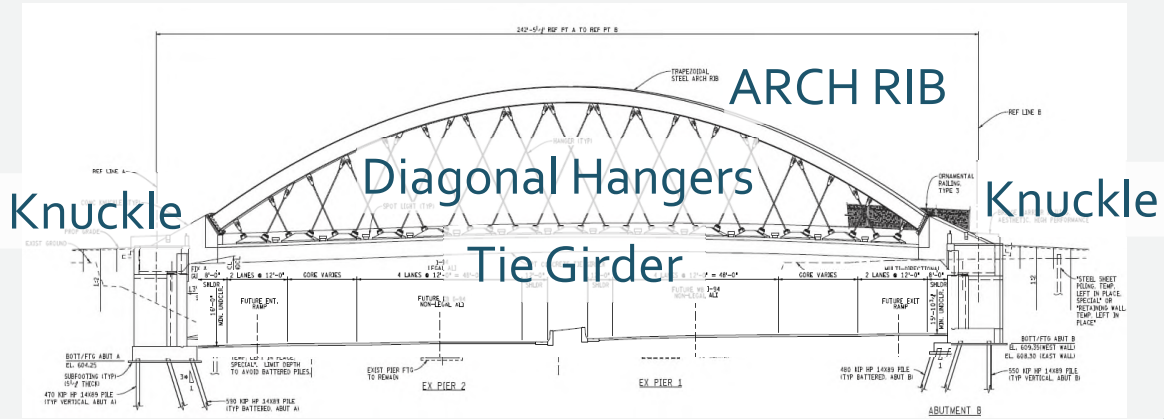
2nd Ave over I-94

- 245-ft Network Tied Arch
- Spans Future I-94 Alignment
- Challenge of Conventional Construction



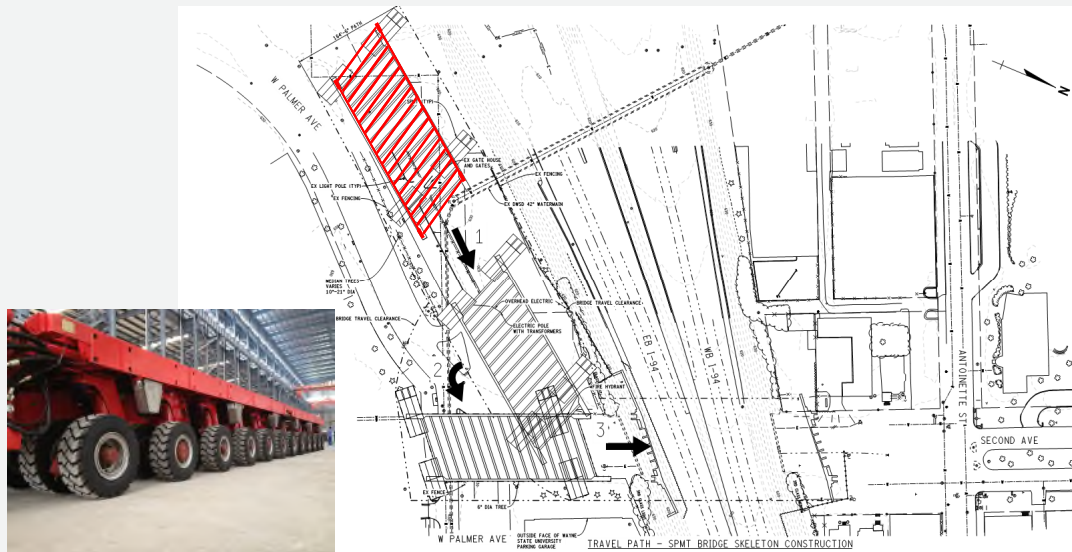
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Structure – Network Tied Arch



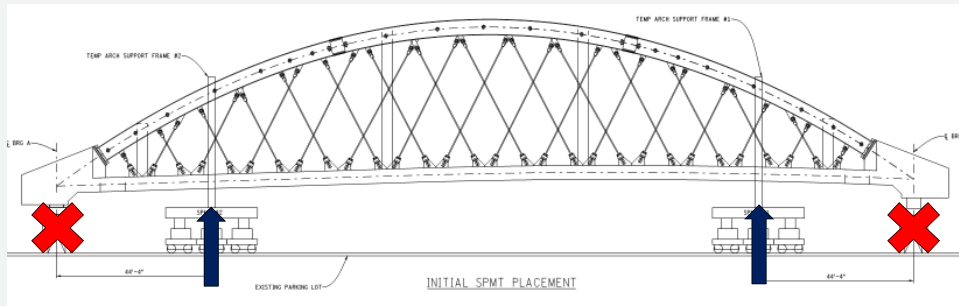
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Arch Span Move – Handoff Method



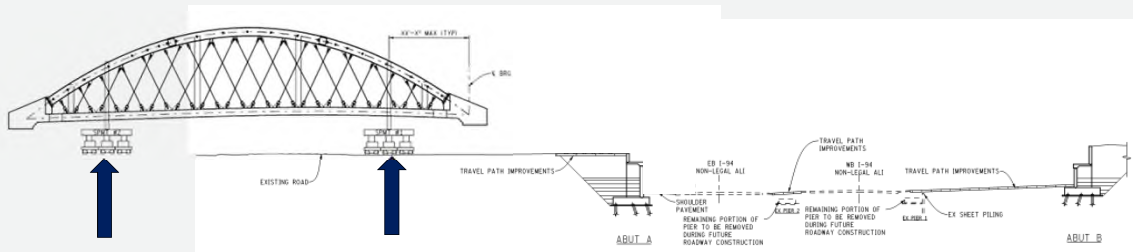
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Arch Span Move Sequence – Initial SPMT Placement



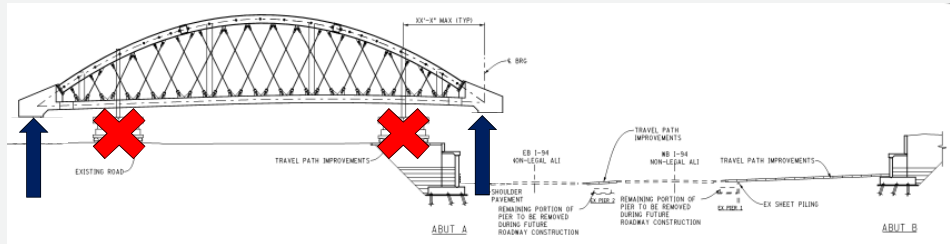
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Arch Span Move Sequence – Prep for Handoff #1



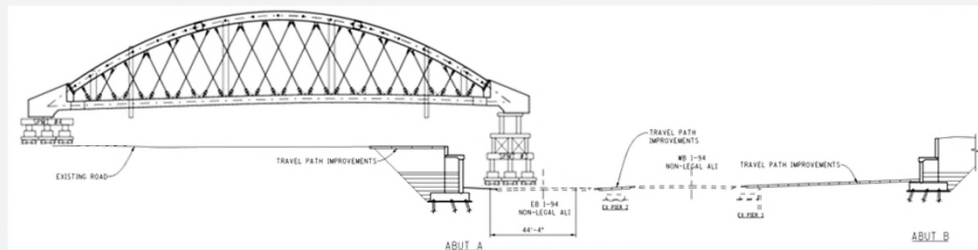
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Arch Span Move Sequence – Handoff #1



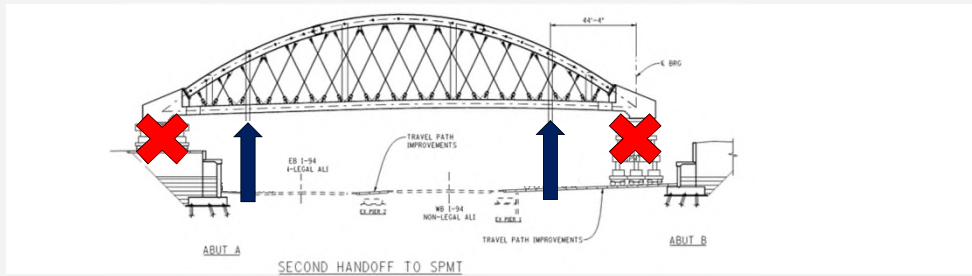
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Arch Span Move Sequence – Moving to Handoff #2



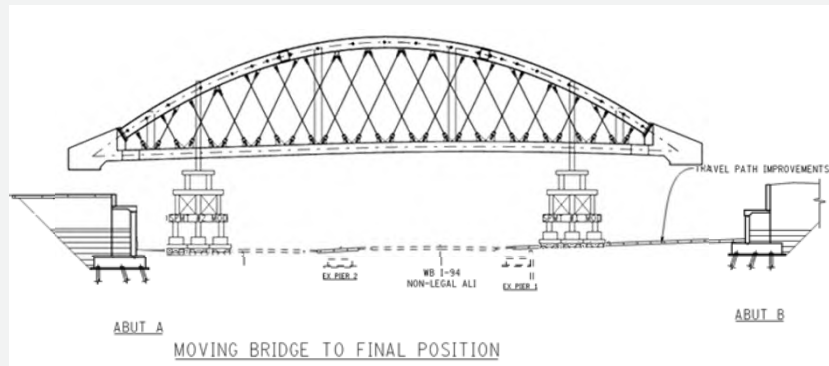
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Arch Span Move Sequence – Handoff #2



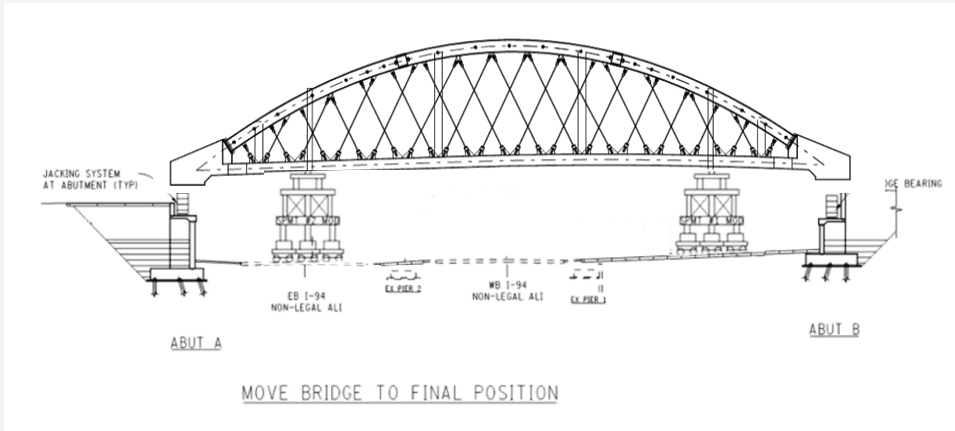
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Arch Span Move Sequence – Move to Final Position



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Arch Span Move Sequence – Jacking Down



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Slide-In Bridge Construction



Considerations:

- Design Cost
- Initial Construction Cost
- ROW

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Wrap-Up



ABC can improve...

- Mobility
- Quality
- Cost

There is a time and place where ABC is best used

- Limitations
- Design Complexity
- Site Constraints