

Accelerated Bridge Construction Projects

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ABC Introduction

- ABC improves:
 - Constructability
 - Total project delivery time
 - Work-zone safety for the traveling public & contractor
- ABC reduces:
 - Traffic Impacts
 - Onsite construction time
 - Weather-related time delay
- FHWA ABC Tiers:
 - Tier 1: 1 to 24 hours
 - Tier 2: Within 3 days
 - Tier 3: Within 2 weeks
 - Tier 4: Within 3 months
 - Tier 5: Project schedule significantly reduced by months or years

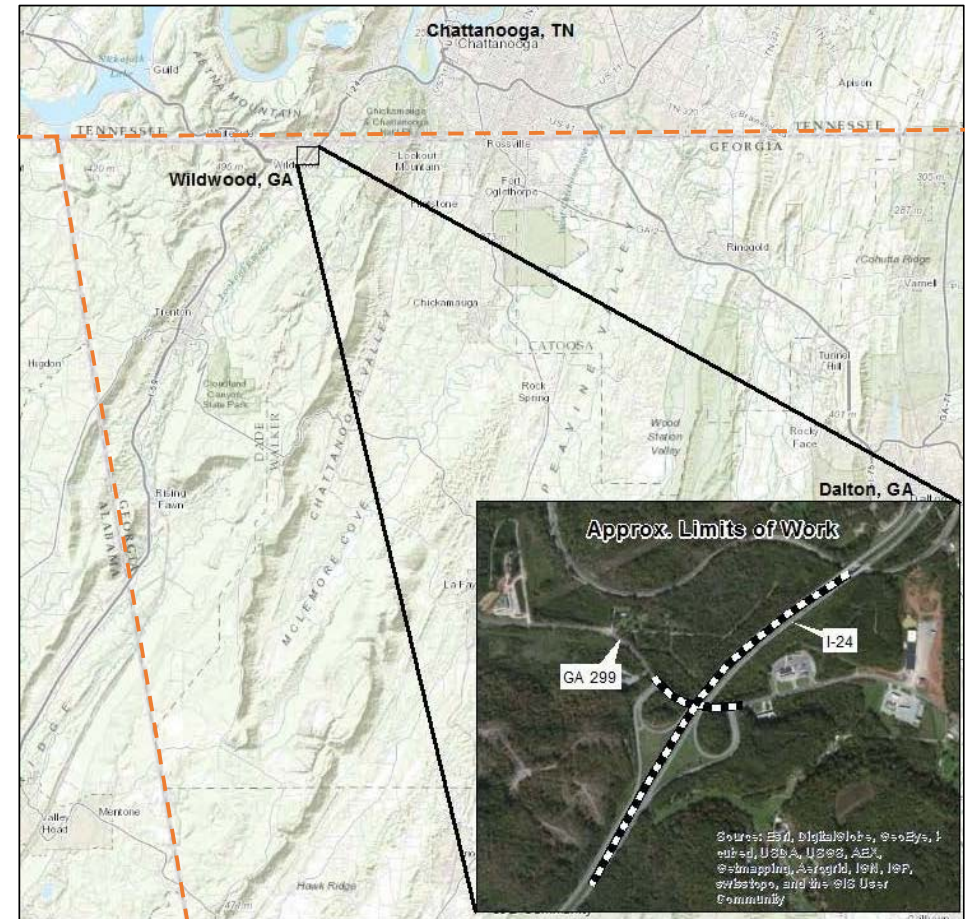
I-24 Project Specifics

• Project Scope

- Move Two Bridge Spans into place over live interstate traffic in one weekend
- Design-Build Procurement
- Use either SPMT or Slide-in
- ABC Period of 56-hours measured as closure of the SR 299 bridge; I-24 alignment moved in advance

• Reasons for using ABC

- Difficult Vertical & Horizontal Geometry would mean increased environmental and right-of-way challenges
- Complicated Detour Route into Tennessee
- Pilot project; increased FHWA funding
- Garner industry experience by using Design-Build
- Interstate traffic volumes



I-24 ABC Period

- Actual ABC period of 81 hours instead of 56
- Three Main Challenges
 - Existing bridge demolition





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 - Existing bridge demolition
 - Concrete pedestals placement
 - Communication link between move equipment
- Significant Lessons Learned
 - Increased existing bridge information (3D modeling)
 - Benefits of ABC were still realized
 - Plan for backup and contingency on ALL equipment
 - Complex bridge geometry made ABC difficult
 - Engineer of Record (EOR) on site all weekend



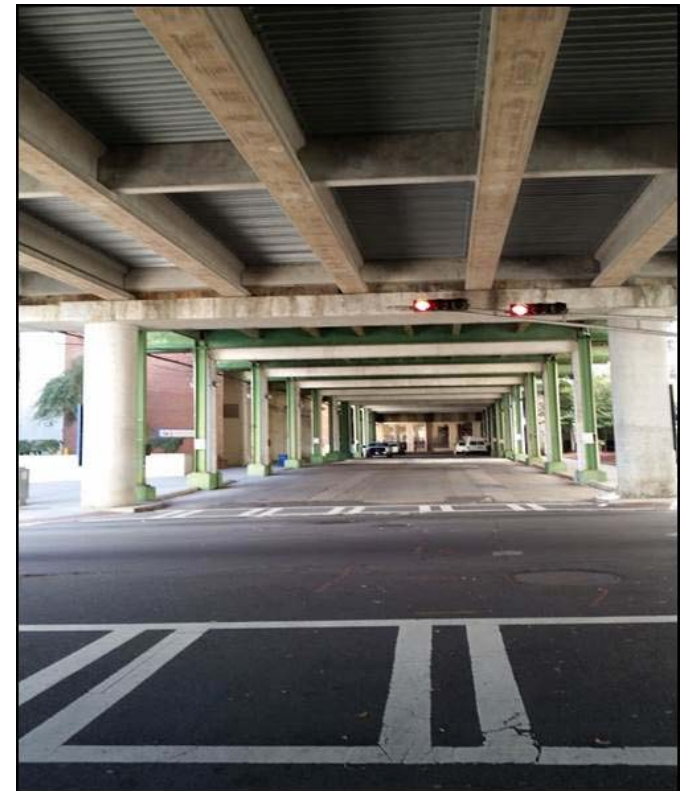
Courtland Street Bridge Replacement

- Project Scope
 - Bridge Replacement with same typical
 - 1200-ft length bridge, constructed in segments
 - GSU, GA Legislature, GBA & Freight Depot
- How to Accomplish
 - ABC not required by DB Contract
 - Construction & Demo sequencing
 - Micropiles
 - Beam launching & Pre-cast elements
 - Design-Build allowed for increased Technical Weight



Courtland Street Procurement

- 50/50 Technical Weight worked well for this project
- 6-month closure time or as determined by DB Team
- Construction methods presented by Shortlisted teams
 - All teams used Micropiles
 - No beam launching
 - Difference in precast elements
- Technical Weight increased focus on:
 - Outreach & Stakeholder Involvement
 - Pedestrian Management



Courtland Project Update

- Utility relocations ongoing
- Foundation work began January 8, 2018
- Demo begins May 7, 2018
- **ON SCHEDULE**
- Segmented Bridge Office reviews (project by project only)



Future of ABC at GDOT

- Concept Report to Identify ABC candidates
- Good ABC Candidates Include:
 - Bridge Replacement on Construction Critical Path
 - AADT greater than 30,000
 - High Road User Cost
 - Other Closure Restrictions (Env or ROW)
- Potential to Clear Ahead of Major Interstate Projects
- Coordination Between Bridge Office & OID
 - Tier 1 & Tier 2 projects likely to be Design-Build
 - Precast elements & ABC techniques more frequent

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