DESIGN-BUILD PROGRAM UPDATE
2018 VTCA Spring Transportation Conference

Shailendra Patel, P.E., DBIA – State Engineer APD Division
I-64 Capacity Improvements - Segment I
# Summary of Design-Build Program Thru March 2018

<table>
<thead>
<tr>
<th></th>
<th>Number of Contracts</th>
<th>Total Value (in Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMPLETED CONTRACTS</td>
<td>65</td>
<td>$1,598</td>
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<tr>
<td>ACTIVE CONTRACTS</td>
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<td>ACTIVE PROPOSALS</td>
<td>3</td>
<td>$248</td>
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<tr>
<td>UPCOMING D-B PROJECTS</td>
<td>3</td>
<td>$184</td>
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</tbody>
</table>
Summary of D-B Contracts Advertised
D-B vs. DBB Contracts Advertised

Total Estimated Contract Value

Year


Total Estimated DBB

Total Estimated DB
Summary of Contract Work Underway – Construction Only

Contract Value (Millions)

Month - Year

Design-Build

Design-Bid-Build
Odd Fellows Road Improvements
2018 Design-Build Update

Awarded D-B Projects

- I-95 SB Rappahannock River Crossing, Fredericksburg District, UPC 105510 - $101.6M
- Warrenton Southern Interchange US 15/17/29, Culpeper District, UPC 77384 - $19.6M

2018 D-B Award Total - $121M
Active Design-Build Procurements

- I-81 Exit 114, Salem District, UPC 93074 - $23M
- Route 7 Corridor Improvements, NoVA District, UPC 52328 - $183M
- Route 7/Battlefield Parkway Interchange, NoVA District, UPC 106573 - $42M

Approximate Contract Value - $248M
Upcoming D-B Projects

- Albemarle County Intersection Improvements Bundling, Culpeper District - $40M
- I-95 NB Rappahannock River Crossing, Fredericksburg District - $130M
- I-81 Bridge over Route 11 and Holston River, MM 52.9, Bristol District - $14M

Approximate Contract Value - $184M
I-95 at Temple Avenue
Industry Discussion

• Alternative Technical Concepts (ATCs)
• CADD Submittal of Technical Proposal Plans
• Key Project Personnel Substitution
• As-Built Plan Requirements
• Short-Listing
• Stipends
• QA/QC Manual
• Progressive Design-Build
• D-B Performance Evaluation
Route 29 Solutions – Berkmar Drive Extension
PROGRESSIVE DESIGN-BUILD OVERVIEW

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Objectives

• Introduce design-builder to project early in design process

• Work in collaboration with owner to develop design solutions

• Overall project price negotiated after design is adequately developed and risk sorted out

• Best value procurement with minimal price-based factors
Key Advantages

- Promotes the greatest amount of collaboration between the three key players in a construction contract – the owner, the designer and the contractor
- Ability to design risk out of the project
- Use of early work packages and phasing will help ROW and U/R
- Avoids Spearin liability as there is no design “handoff”
- Substantial Cost & Schedule savings for PE as there is no duplication of effort for bridging documents
- Substantially reduced cost and time for procurement helps everyone, including small design firms
PROCUREMENT PROCESS

Issue RFQ (Same as Current DB Process)

Qualifications based Shortlist

RFP/Presentations

Final Selection & Award

NTP

Phase 1 - Preliminary Services Phase

Negotiate GMP

Yes

Final Design and Construction Phase

No

Off Ramp

VDOT
2018 D-B QA/QC GUIDE UPDATE
2018 VTCA Spring Transportation Conference

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April 11-13, 2018
Overview

• VDOT currently updating Minimum Requirements for Quality Assurance and Quality Control on D-B and PPTA Projects
• Last Update to Guide – January 2012
• Expected Release of Current Update – End of April 2018
Purpose of Update

- Consistency with Department’s Current Contract Documents
- Improve Inspection Practices on D-B Projects
- Further Define the Owner’s Role and Responsibility
- Further Define Role of Geotechnical Engineer of Record
- Revise Minimum QA/QC Plan Submittal Requirements
- Clarify D-B’s Responsibilities at Preparatory Inspection Meetings
Testing and Inspection Roles and Responsibilities

Minimum Requirements for Materials Testing
• Old Table A-3: Part 1 – Now Table A-2, Part 1
  • Updated Frequencies
  • Added High Strength Bolts, CIP, FDR, and CCPRM

Minimum Requirements for Inspection, Compliance Monitoring, and Verification of Contractor Product Installation, Practices and Procedures
• Old Table A-3: Part 2 – Now Table A-2, Part 2
  • Updated Frequencies
  • Added Excavation and Embankment, Select Material, Subbase and Aggregate Base Course, Hydraulic Cement Concrete Pavement and Placement

Owner’s Roles and Responsibilities for Project Inspection
• Old Table A-4 – Now Table A-3
  • Updated Frequencies
Role of Geotechnical Engineer of Record (GEOR)

- GEOR to Perform QC Inspection for Following:
  - Slopes and Embankment
  - Foundation and Pavement Subgrade
  - Installation and Testing of Deep Foundations
  - Assessment and Treatment of Unsuitable Soils
  - Rock Excavation/Slopes
  - Retaining Structures that Include Tie-Backs, Soil Nails or Anchors

- Develop an Inspection and Testing Plan Prior to Initiating Work Activity
- GEOR Certification in D-B’s Monthly Summary Report
Minimum QA/QC Plan Submittal Requirements

- Design QA/QC Plan due at Kickoff Meeting
- Initial Construction QA/QC Plan due at Kickoff Meeting
  - QA/QC Staffing Plan
  - Outline of Work Packages that Require Preparatory Inspection Meeting
- Construction QA/QC Plan Updated for Each Approved for Construction (AFC) Work Package
  - Specific Testing, Inspection and Staffing Requirements
  - Estimated Quantities
  - Provided at time of AFC Work Package Submittal
Preparatory Inspection Meetings

• QAM to Identify QA Inspectors and Testing Technicians
  • Include Detailed Matrix of Qualifications/Certifications and Tests to be Performed
• QAM to Identify Department’s Testing and Inspection Requirements
• CM to Identify QC Inspectors and Testing Technicians
  • Include Detailed Matrix of Qualifications/Certifications and Tests to be Performed
• Matrix to Identify Inspection and Testing Requirements for Design Personnel (GEOR)
• Representative from the Department will Attend the Meeting – 7 Days Advanced Notice Required
Thank You!!

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