

## **I-5507 / R-0211EC / U-4714AB Project Synopsis**

### **Stipend**

- A stipulated fee of **\$150,000** will be awarded to each short-listed Design-Build Team that provides a responsive, but unsuccessful, Design-Build Proposal in response to the Final Request for Proposals and all associated Addenda. If a contract award is not made, all short-listed Design-Build Teams that provide a responsive Design-Build Proposal shall receive the stipulated fee. In the event that the Department suspends or discontinues the procurement process prior to the Design-Build Proposal submittal date current at the time of the suspension, no stipulated fee will be paid.

### **Project Description and Purpose**

- The Design-Build Project I-5507 / R-0211EC / U-4714AB will provide an eastbound and westbound Express Lane within the I-485 median from I-77 to US 74 (Independence Boulevard), a distance of approximately 16.6 miles. The project will also provide an I-485 / Weddington Road interchange, and modify the I-485 / East Johns Street - Old Monroe Road interchange.
- The primary purpose of this project is to improve trip time reliability along I-485.

### **Planning**

- The I-5507 Categorical Exclusion (CE) is anticipated to be approved in Fall / Winter 2016.
- The R-0211EC Environmental Assessment (EA) was approved in May 2007 and the R-0211EC Finding of No Significant Impact (FONSI) was approved in February 2009.
- The U-4714 Environmental Assessment (EA) was approved in July 2016 and the U-4714 Finding of No Significant Impact (FONSI) is anticipated to be approved in Spring 2017.
- The Design-Build Team shall adhere to all environmental document commitments. A copy of the I-5507 CE, the R-0211EC EA and FONSI, and the U-4714 EA and FONSI will be made available to the short-listed Design-Build Teams.

### **Public Information**

- During the project's construction, the Design-Build Team shall coordinate with NCTA, NCDOT, the Division 10 Office, the Construction Unit, the City of Charlotte, and other local municipalities to inform the public of lane closures, construction progress, etc.

## **Roadway**

- In both directions of I-485, the Design-Build Team shall design and construct the following:
  - An Express Lane within the median from I-77 to US 74 (Independence Boulevard)
  - An outside General Purpose Lane from Rea Road to Providence Road
  - An auxiliary lane between the new Weddington Road interchange and the modified East Johns Street - Old Monroe Road interchange
- The Design-Build Team shall design and construct Direct Connectors at Westinghouse Boulevard and Johnston Road.
- The Design-Build Team shall design and construct a new I-485 / Weddington Road interchange.
- The Design-Build Team shall design and construct modifications to the I-485 / East Johns Street - Old Monroe Road interchange.
- The I-485 improvements shall be designed and constructed to meet a 75 mph design speed for a rolling freeway designed to interstate standards.

## **Structures**

- The Design-Build Team shall design and construct all structures necessary to complete the project, including but not limited to structures at the following anticipated locations:
  - Bridge on the direct connector from I-485 westbound to Westinghouse Boulevard
  - Bridge on the direct connector from I-485 eastbound to Johnston Road
  - Bridge on the direct connector from Johnston Road northbound to I-485 westbound
- The Design-Build Team shall design and construct bridge widening at the following locations:
  - Dual bridges on I-485 over Westinghouse Boulevard
  - Dual bridges on I-485 over McMullen Creek
  - Dual bridges on I-485 over McAlpine Creek
  - Dual bridges on I-485 over Tilley Morris Road
  - Dual bridges on I-485 over East John Street / Old Monroe Road
  - Dual bridges on I-485 over CSX Railroad

- The Design-Build Team shall replace the following structures:
  - Bridge on Elm Road over I-485
  - Bridge on Ballantyne Commons Parkway over I-485
- The Design-Build Team shall extend all reinforced concrete box culverts impacted by the project's design and / or construction. It is anticipated that three reinforced concrete box culverts will require extensions.
- The Design-Build Team shall design and construct all required retaining walls and sound barrier walls, as identified in the Request for Proposal. The Department will provide the Final Design Noise Report.

## **Pavement**

- Final asphalt pavement designs will be provided in the Request for Proposals.
- The Design-Build Team shall design all temporary pavements and evaluate existing shoulders and roadways regarding their suitability for carrying traffic during construction, if necessary.

## **Hydraulics**

- The Design-Build Team shall design and construct all storm drainage.
- The Design-Build Team shall obtain FEMA compliance for the regulated stream crossings.
- The Design-Build Team shall be responsible for all Bridge Survey Reports and Culvert Survey Reports.
- The Design-Build Team shall develop a State Stormwater Management Plan.

## **Geotechnical**

- Roadway and structure subsurface investigations will be provided to the short-listed Design-Build Teams. The Design-Build Team shall be responsible for all recommendations, as well as supplemental roadway and structural investigations.
- The Design-Build Team shall design and construct all foundations, embankments, slopes, retaining walls and temporary structures.

## **Geoenvironmental**

- The specific Design-Build Team and NCDOT geoenvironmental remediation responsibilities, if any, will be outlined in the Request for Proposals.

## **Transportation Management**

- The Design-Build Team shall develop and implement the Transportation Management Plans. A list of parameters, such as lane closures, time restrictions and general guidelines will be provided in the Request for Proposals.

## **Signing**

- The Design-Build Team shall design, fabricate and install all toll and standard signs required to appropriately sign the mainline and all -Y- Lines.
- The Department will provide a signing strip map to all short-listed Design-Build Teams.

## **Pavement Markings**

- The Design-Build Team shall develop the Pavement Marking Plans and install all required temporary and permanent pavement markings and markers.

## **Traffic Signals**

- The Design-Build Team shall design and install all temporary and permanent traffic signals.
- The Design-Build Team shall install two new traffic signals and upgrade an existing traffic signal.

## **All-Electronic Tolling (AET) Toll Zone Facilities Infrastructure**

- The Design-Build Team shall design and construct the infrastructure (toll equipment gantries, toll equipment cabinet pads, conduit, etc.) for all AET toll zone facilities.
- The North Carolina Turnpike Authority will procure and install all roadside toll technology components (antennas, cameras, cables, etc.).

## **ITS**

- The Design-Build Team shall design and install all Intelligent Traffic Systems (ITS) infrastructure and devices, including, but not limited to, fiber-optic communications cable and conduit, CCTV cameras, travel information Dynamic Message Signs (DMS), gate control systems, and related hardware.
- The North Carolina Turnpike Authority will procure and install all ITS devices that directly support the toll revenue collection system, including, but not limited to the vehicle detection devices and toll rate DMS sign inserts.

## **Environmental**

- The Design-Build Team shall prepare all documents necessary for the Department to obtain the environmental permits for this project. The anticipated required permits include a US Army Corps of Engineers (USACE) Individual Section 404 Permit and a NC Department of Environment and Natural Resources (DENR) Division of Water Resources (DWR) Individual Section 401 Water Quality Certification.
- Project I-5507 / R-0211EC / U-4714AB is not in the Merger Process used by the environmental agencies and the Department to obtain environmental permits. The Design-Build Team shall participate and present information for an interagency hydraulic design review meeting and an interagency permit impacts meeting. These meetings shall adhere to the Concurrence Point 4B and Concurrence Point 4C requirements of the Merger Process.

## **Erosion Control**

- The Design-Build Team shall be responsible for all erosion control designs and implementation.

## **Railroad Coordination**

- The Design-Build Team shall coordinate all railroad design and construction details on Norfolk Southern Railroad and CSX Railroad right of way, and obtain an executed agreement(s) with the Railroads.

## **Utility Construction**

- The Design-Build Team shall design and construct the relocation of all water and sewer facilities in conflict with the project.

## **R/W Utilities, Conflicts and / or Construction**

- The Design-Build Team shall be responsible for all utility conflicts / relocations and utility construction plans. Coordination shall include, but not be limited to, preparations and / or obtaining all necessary utility agreements.
- The Design-Build Team shall coordinate the construction / relocation of private utilities with the appropriate owners.

## **Location and Surveys**

- Electronic surveys will be provided to the short-listed teams. The Design-Build Team shall be responsible for all supplemental surveys.

- Known existing utilities have been located and will be included with the survey data provided to the short-listed teams. The Design-Build Team shall be responsible for all supplemental SUE work.
- The Design-Build Team shall be responsible for all structure surveys.

### **Right of Way**

- The Design-Build Team shall acquire all right of way, easement, and / or control of access required by the proposed design and / or construction.

### **Lighting**

- The Department will provide signed and sealed Lighting Plans.
- The Design-Build Team shall install all lighting.

### **Construction Engineering Inspection (CEI)**

- The Department will be responsible for CEI work.