



STATE OF NORTH CAROLINA  
TURNPIKE AUTHORITY

MICHAEL F. EASLEY  
GOVERNOR

1578 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1578

DAVID W. JOYNER  
EXECUTIVE DIRECTOR

June 3, 2008

**Addendum No. 2**

RE: Contract ID: C201994  
TIP Number: U-4763B  
Federal Aid No.: NHS-54(7)  
Durham and Wake Counties  
Project Description: Triangle Parkway – A portion of the Triangle Expressway from NC 540 in Wake County to I-40 in Durham County

**August 5, 2008 Letting**

To Whom It May Concern:

Reference is made to the Request for Proposal Including Addendum No. 1 recently furnished to you on the above project. We have since incorporated changes, and have attached a copy of Addendum No. 2 for your information. Please note that all revisions have been highlighted in gray and are as follows:

On the ITP Cover Sheet, Volume I and the RFP Cover Sheet Volume II, the Date of the Technical and Price Proposal Submission has been revised. The Date of the Price Proposal Opening has also been revised on both. Please void both Cover Sheets of Volume I and II in your proposal and staple the revised Cover Sheets thereto.

Pages 4, 5, 7 and 8 of the ITP Volume I have been revised. Please void Page Nos. 4, 5, 7 and 8 in your ITP and staple the revised Page Nos. 4, 5, 7 and 8 thereto.

All three pages of the Table of Contents Volume II have been revised. Please void these three pages in your RFP and staple the revised three pages of the Table of Contents thereto.

On pages 2 and 3, *Proposal Validity Period* has been revised. Please void Page Nos. 2 and 3 in your proposal and staple the revised Page Nos. 2 and 3 thereto.

On pages 27 and 31, *Three-Year Guarantee* has been revised. Please void Page Nos. 27 and 31 in your proposal and staple the revised Page Nos. 27 and 31 thereto.

On page 50, *Permit Modifications* has been revised. Please void Page No. 50 in your proposal and staple the revised Page No. 50 thereto.

On page 72, *Review of Design Submittals* has been revised. Please void Page No. 72 in your proposal and staple the revised Page No. 72 thereto.

On page 75, *Project Safety Plan* has been added. Please void Page No. 75 in your proposal and staple the revised Page No. 75 thereto.

On page 76, the *ROADWAY SCOPE OF WORK* has been revised. Please void Page No. 76 in your proposal and staple the revised Page No. 76 thereto.

On page 85, the *STRUCTURE SCOPE OF WORK* has been revised. Please void Page No. 85 in your proposal and staple the revised Page No. 85 thereto.

On page 90, the *HYDRAULICS SCOPE OF WORK* has been revised. Please void Page No. 90 in your proposal and staple the revised Page No. 90 thereto.

On page 98, the *GEOTECHNICAL ENGINEERING SCOPE OF WORK* has been revised. Please void Page No. 98 in your proposal and staple the revised Page No. 98 thereto.

On page 104, the *TRAFFIC CONTROL SCOPE OF WORK* has been revised. Please void Page No. 104 in your proposal and staple the revised Page No. 104 thereto.

On pages 117, 119, 120, 121 and 122, the *SIGNING SCOPE OF WORK* has been revised. Please void Page Nos. 117, 119, 120, 121 and 122 in your proposal and staple the revised Page Nos. 117, 119, 120, 121 and 122 thereto.

On page 130, the *EROSION AND SEDIMENTATION CONTROL SCOPE OF WORK* has been revised. Please void Page No. 130 in your proposal and staple the revised Page No. 130 thereto.

On page 132, the *OPEN ROAD TOLLING (ORT) INFRASTRUCTURE SCOPE OF WORK* has been revised. Please void Page No. 132 in your proposal and staple the revised Page No. 132 thereto.

On pages 203, 204 and 205, the *RIGHT-OF-WAY SCOPE OF WORK* has been revised. Please void Page Nos. 203, 204 and 205 in your proposal and staple the revised Page Nos. 203, 204 and 205 thereto.

On pages 213, 214, 215 and 221, the *UTILITY CONSTRUCTION SCOPE OF WORK* has been revised. Please void Page Nos. 213, 214, 215 and 221 in your proposal and staple the revised Page Nos. 213, 214, 215 and 221 thereto.

On pages 226 and 227, the *AESTHETIC DESIGN SCOPE OF WORK* has been revised. Please void Page Nos. 226 and 227 in your proposal and staple the revised Page Nos. 226 and 227 thereto.

On page 229, the *Permits* page has been revised. Please void Page No. 229 in your proposal and staple the revised Page No. 229 thereto.

Page 392, of *Division One* has been revised. Please void page No. 392 in your proposal and staple the revised Page No. 392 thereto.

The NCTA would like to thank each Design-Build Submitter for their interest in this project and their continued interest in future Design-Build Projects. If you have any questions or need additional information, I can be reached by telephone at (919) 571-3000.

Sincerely,

Steve DeWitt, P.E.  
NCTA Chief Engineer

SD/NMH

cc: Mr. David Joyner (w/)  
Mr. George Hoops, PE (w/3)  
Mr. Rodger Rochelle, PE (w/)



**TRIANGLE PARKWAY (TIP U-4763B)**  
**FINAL REQUEST FOR PROPOSALS:**  
**VOLUME I – INSTRUCTIONS TO PROPOSERS**

**June 3, 2008**

*VOID FOR BIDDING*

DATE AND TIME OF TECHNICAL AND PRICE PROPOSAL SUBMISSION: **July 11, 2008 at 4:00 PM**

DATE AND TIME OF PRICE PROPOSAL OPENING: **August 5, 2008 at 10:00 AM**

CONTRACT ID: C201994

WBS ELEMENT NO. 39942.1.TA1

COUNTY: Wake / Durham

ROUTE: Triangle Parkway – A Portion of the Triangle Expressway

MILES: 4.2

LOCATION: From NC 540 in Wake County to I-40 in Durham County

TYPE OF WORK: DESIGN-BUILD SERVICE AS SPECIFIED IN THE SCOPE OF WORK  
CONTAINED IN THE REQUEST FOR PROPOSAL (Volume II)

which may arise due to errors or omissions of the NCTA and/or NCDOT in the Provided Materials, and of the Design-Build Team in performing the work.

## **G. The Procurement Process.**

### Method of Procurement.

The Contract will be for design-build services to be paid on a lump sum basis. Subject to Section 14.C., below, the Authority will award the Contract to the Proposer that submits a responsive Proposal that is determined by the Authority to offer the lowest Adjusted Price considering the evaluation factors set forth in this ITP.

The procurement process includes two steps:

**Step One**     **RFQ** (determination of Reduced Candidate List); and,

**Step Two**     **RFP** (selection of Design-Build Team from Proposers on the Reduced Candidate List that submitted responsive Proposals).

Evaluation of Proposals will be based on information submitted in the Proposals or otherwise available to the Authority, and will involve both pass/fail factors and a combined evaluation of technical factors and price, as further detailed below.

### Addenda.

The Authority may at any time modify conditions or requirements of these RFP Documents by issuance of an addendum (referred to herein individually as an “Addendum” and collectively as “Addenda”). The Authority will provide the Addenda only to the Proposers on the Reduced Candidate List. Persons or firms that obtain the RFP Documents from sources other than the Authority or the NCDOT State Contract Officer bear the sole responsibility for obtaining any Addenda issued by the Authority. The last Addendum is expected to be issued no later than **June 28, 2008**. Each Proposer, upon receipt of each Addendum, shall submit written acknowledgement of receipt by email to [designbuild@ncturnpike.org](mailto:designbuild@ncturnpike.org). The Authority will not be bound by, and the Proposer shall not rely on, any oral or written communication or representation regarding the RFP Documents, except to the extent that it is contained in an Addendum to these RFP Documents and is not superseded by a later Addendum to these RFP Documents.

### Clarifications.

NCTA may request written clarifications to Proposals. This process will be initiated by delivery of a written request from NCTA to the Proposer identifying the information needed and a date and time by which the information must be provided. Proposer shall provide the requested information in writing by the date and time indicated. If the requested information is not timely received, Proposer’s ratings may be adversely affected and/or the Proposal may be declared non-responsive and not eligible for award.

### One-on-One Meetings.

Prior to or after submission of Proposals, the Authority may conduct one-on-one meetings with Proposers so that the Authority may gain information or a better understanding regarding their Proposal or an Alternative Technical Concept (“ATC”). Prior to the submission of Proposals, the Authority will conduct at least one meeting with each Proposer to allow the Proposer to discuss issues and clarifications regarding the RFP Documents and the Project. With the exception of ATCs, if one-on-one meetings are held, they will be held with each Proposer. Nothing stated at any one-on-one meeting will modify the ITP or any other part of the RFP unless it is incorporated in an Addendum issued pursuant to this ITP.

### Limited Contact.

To ensure that information is distributed equitably to all Proposers on the Reduced Candidate List, all questions and requests for information shall be directed to the NCTA Chief Engineer through the Design-Build e-mail address (designbuild@ncturnpike.org). This precludes all Proposer members, or any representative, from contacting other representatives of the Authority, NCDOT, other North Carolina State agencies or federal agencies, either by phone, e-mail or in person, concerning the Project.

All questions and requests must be received at the e-mail address specified above no later than **June 13, 2008**. No requests will be considered unless delivered as specified above.

After issuance of the Industry Review Draft of the RFP Documents, neither a Proposer nor any of its team members may communicate with another Proposer or members of another Proposer's team with regard to the Project or the Proposals. However, a Proposer may communicate with a Subcontractor that is on both its team and another Proposer's team, provided that the Subcontractor does not act as a conduit of information between the teams.

### Oral Explanations.

The Authority will not be bound by oral explanations or instructions given by anyone at any time during the proposal process or after award. Only information that is received in response to the RFP Documents or is otherwise available to the NCTA will be evaluated; reference to information previously submitted will not suffice as a response to this solicitation.

### Aesthetics Details Submittal.

The Proposer shall submit aesthetics details (**five copies**) for the entire project that covers, as a minimum, the Mandatory Aesthetic Treatments identified in the Aesthetic Design Scope of Work contained in the RFP, Volume II. The details shall be submitted to the NCTA Chief Engineer no later than the date shown later in this section of the ITP.

It is not the intent of the NCTA for the Proposer to submit design plans. The details submitted shall be of sufficient detail to illustrate color, texture, pattern, emblems, proportion, corridor consistency, complementing details, or other such visual effects. For those details used in

Examination of Work Site.

The Proposer is expected to examine carefully the site of the proposed Work and the complete RFP Documents, including any Referenced Documents, before submitting a Proposal. The Proposer's attention is called to Article 102-6 of the Standard Special Provision entitled "Division One" contained in the RFP (Volume II).

Any Authority-furnished or NCDOT-furnished Provided Materials does not abrogate the Proposer's responsibility for further verifications and inquiries as are necessary to utilize such information in the development of the Technical Proposal, Price Proposal, or plans, or during construction.

The submission of a Proposal shall be considered conclusive evidence that the Proposer has made such examination and is satisfied as to the conditions to be encountered, the character, quality and scope of the Work to be performed, the quantities of materials to be furnished, and the conditions and requirements of the Contract Documents.

The Procurement Schedule.

The Authority currently anticipates the following procurement schedule:

Meetings with Proposers on Reduced Candidate List	February 15, 2008
Issue Second Industry Review Draft of Request for Proposals to Proposers on Reduced Candidate List	March 10, 2008
Meetings with Proposers on Reduced Candidate List	March 20, 2008
Issue Final RFP	April 8, 2008
Deadline for Submission of Alternative Technical Concepts	June 6, 2008
Deadline for Submittal of Initial Right-of-Way Acquisition Priorities	June 6, 2008
Deadline for Submittal of Aesthetics Details	June 6, 2008
Deadline for Re-submittal of Alternative Technical Concepts	June 6, 2008
Deadline for Submitting Questions	June 13, 2008
Deadline for Issuance of Last Addendum	June 27, 2008
Deadline for Acceptance of Aesthetics Details	June 27, 2008
Deadline for Response to Alternative Technical Concepts	June 27, 2008
Projected "Gap" Funding	July 1, 2008
Technical Proposals and Sealed Price Proposals Due	July 11, 2008

Technical Presentations by Proposer Teams	July 24, 2008
Opening of Price Proposals	August 5, 2008
Projected Financial Closing Date	September 19, 2008

This is a tentative schedule. All dates set forth above and in this ITP are subject to change, in the Authority's sole discretion. To the extent such dates are changed, the Authority shall post updated dates on its website, and Proposers shall be responsible for complying with these dates. The completed Proposal shall be delivered to the addressee at the address specified herein, no later than 4:00 p.m. Eastern Time, on the date specified above. LATE PROPOSALS WILL NOT BE CONSIDERED.

## **2. SUBMISSION OF DESIGN-BUILD PROPOSAL.**

### **A. Responsive Proposal.**

Proposer shall submit a Proposal that provides all the information required by this ITP and in accordance with the other requirements contained in the RFP (Volume II). Proposals that do not fully comply with this ITP and the rest of the RFP may be deemed non-responsive and may not be considered for award.

Each Proposal must be submitted in the official format specified in this ITP. Proposer shall sign each copy of the Proposal submitted to the Authority. Multiple or alternate proposals may not be submitted.

Proposals may be considered non-responsive for any of the following reasons:

- (i) If Proposer is not prequalified with NCDOT prior to submitting its Proposal;
- (ii) If the Proposal is delivered to a place other than as indicated herein or at a time later than prescribed herein;
- (iii) If the Proposal is submitted on a paper form or disk other than that furnished or specified by the Authority; if it is not properly signed by an authorized official of Proposer; or if any part thereof is deleted from the Proposal package;
- (iv) If the Proposal is illegible or contains any omissions, erasures, alterations, unauthorized additions or deletions, conditional or alternate Proposals, or other irregularities of any kind; if the Authority determines that such irregularities make the Proposal incomplete, indefinite, or ambiguous as to its meaning;
- (v) If Proposer adds any provisions reserving the right to accept or reject an award or to enter into a contract following award;
- (vi) If Proposer attempts to limit or modify the bonds, if the Bid Bond or Bid Deposit is not provided, and/or requested information deemed material by the Authority is not provided;



## **TRIANGLE PARKWAY (TIP U-4763B)**

### **FINAL REQUEST FOR PROPOSALS:**

#### **VOLUME II**

**Includes Addendum #1, May 8, 2008 and**

**Addendum #2, June 3, 2008 (changes highlighted)**

**April 8, 2008**

*VOID FOR BIDDING*

DATE AND TIME OF TECHNICAL AND PRICE PROPOSAL SUBMISSION: **July 11, 2008 at 4:00 PM**

DATE AND TIME OF PRICE PROPOSAL OPENING: **August 5, 2008 at 10:00 AM**

CONTRACT ID: C201994

WBS ELEMENT NO. 39942.1.TA1

COUNTY: Wake / Durham

ROUTE: Triangle Parkway – A Portion of the Triangle Expressway

MILES: 4.2

LOCATION: From NC 540 in Wake County to I-40 in Durham County

TYPE OF WORK: DESIGN-BUILD SERVICE AS SPECIFIED IN THE SCOPE OF WORK  
CONTAINED IN THE REQUEST FOR PROPOSAL

#### **NOTICE:**

ALL PROPOSERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE PROPOSER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. PROPOSERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOT WITHSTANDING THESE LIMITATIONS ON BIDDING, THE PROPOSER WHO IS AWARDED ANY PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING, REGARDLESS OF FUNDING SOURCES.

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5% BID BOND OR BID DEPOSIT REQUIRED

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**PROPOSAL FORM ITEM SHEET, ETC.**

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- FUEL USAGE CHART AND ESTIMATE OF QUANTITIES (WHITE SHEET)
- LISTING OF DBE SUBCONTRACTORS (YELLOW SHEETS)
- EXECUTION OF BID, NONCOLLUSION AFFIDAVIT & DEBARMENT CERTIFICATION SIGNATURE SHEET (YELLOW SHEETS)

thus proposed shall be no later than July 1, 2011. Subject to any time extensions approved in writing by the Authority, the Proposer will be liable for liquidated damages in the amount of Five Thousand Dollars (\$5,000.00) per calendar day for each day of delay in achieving Final Completion.

By execution and submission of a Price Proposal, the Design-Build Team agrees and acknowledges that such liquidated damages are reasonable in order to compensate the Authority for damages it will incur as a result of delays in achieving Substantial Completion and Final Completion. Such damages include, without limitation, (1) loss of revenue for the Authority due to late service commencement, (2) loss of use, enjoyment and benefit of the Project and connecting transportation facilities by the general public, (3) additional oversight and administrative costs, (4) debt service costs, and (5) injury to the credibility and reputation of the Authority's transportation improvement program with policy makers and with the general public who depend on and expect availability of service by the planned Completion Dates, which injury to credibility and reputation may directly result in loss of ridership on the Project and connecting transportation facilities, and further loss of revenue and/or toll revenues. The Design-Build Team further agrees and acknowledges that these liquidated damages are incapable of accurate measurement at the time of Contract execution because of, among other things, the unique nature of the Project and the unavailability of a substitute.

#### **PROPOSAL VALIDITY PERIOD**

The Authority anticipates that "gap" funding may become available on, or around, July 1, 2008, prior to bond proceeds and other financial commitments. In such case, the Authority intends to issue a Notice of Award to the Design-Build Team with the lowest Adjusted Price at the time that gap funding becomes available. Immediately upon execution of the Contract, the Authority will issue a written Notice to Proceed to the Design-Build Team for preconstruction activities only. During this limited Notice to Proceed, the Design-Build Team may pursue any design and submittal activities for the NCTA's review and acceptance. Compensation for such preconstruction activities will be provided in accordance with Article 108-2 of the Standard Special Provision entitled "Division One" contained elsewhere in this RFP.

The Financial Closing Date for full funding is anticipated to be on, or before, **September 19, 2008**. The Authority will issue an Unlimited Notice to Proceed immediately following the Financial Closing date. In the event that the Financial Closing Date is delayed beyond **September 19, 2008**, the Design-Build Team agrees, as evidenced by submission of the Technical Proposal and Price Proposal, to remain bound to all terms, conditions, requirements, and technical components of the RFP, the Technical Proposal, and Price Proposal until 120 days after the latest submission of the Technical Proposal and Price Proposal.

If necessary, this 120 day period may be extended if mutually agreeable by the NCTA and the Design-Build Team. Otherwise, the Design-Build Team may withdraw their Price Proposal in accordance with Article 103-4(A) of the Standard Special Provision entitled "Division One" (as amended by the details herein) contained elsewhere in this RFP.

If a delay in the Unlimited Notice to Proceed occurs solely due to the NCTA's failure to provide full funding on or before **September 19, 2008**, contract time extension(s) will be administered in accordance with the Standard Special Provision entitled "Division One" contained elsewhere in the RFP and will apply to the Substantial Completion Date, Intermediate Contract Dates Numbers 1 and 2, and the Final Completion Date. Contract time extensions applicable as a result of the NCTA's inability to execute the contract due to funding will be applicable to the Bonus for early completion.

### **SUBSTANTIAL COMPLETION BONUS** (1-31-08)

Coordination and cooperation among the Design-Build Team on this project, the Design-Build Team on the adjacent Western Wake Freeway Project, the ITS Contractor, and the Toll Integrator is critical. Please refer to Project Special Provision titled "Cooperation Between Contractors".

The NCTA desires that each of these entities work with such labor, equipment and materials as necessary to ensure that the Substantial Completion Date will be met without regard to the time extensions and time reliefs provided for in this contract or any associated Specifications. Therefore, as full compensation for all extra cost involved and subject to the conditions outlined herein, the NCTA agrees to pay as a bonus, the applicable amount noted below:

1. In the event that Substantial Completion, as defined by the Project Special Provision entitled "Substantial Completion," is achieved by the Substantial Completion Date proposed in the Technical Proposal, and toll collection and enforcement technology is fully implemented with appropriate accuracy levels achieved and uninterrupted revenue collection could begin immediately upon opening to traffic, the aggregate sum of \$1,500,000.00 will be paid to the Design-Build Team for this project, the ITS Contractor and the Toll Integrator. The Design-Build Team for this project will receive 85% of this amount and the remainder will be shared with the ITS Contractor and the Toll Integrator in accordance with their respective contract provisions.

In the event that Substantial Completion of this project, as defined by the Project Special Provision entitled "Substantial Completion," is achieved by the Substantial Completion Date proposed in the Technical Proposal and the Design-Build Team has met all contractual obligations to facilitate in a timely manner the work of the ITS and Toll Integration contractors, then the Design-Build Team will be paid a bonus of \$1,000,000.00.

2. In the event the Design-Build Team fails to achieve Substantial Completion in accordance with either case noted above, then no bonus of any kind will be paid under this provision.

If the Unlimited Notice to Proceed is delayed due to a delayed Financial Closing Date as noted in the Project Special Provision, "Proposal Validity Period," the Substantial Completion Date for the purposes of the bonus noted herein will be adjusted in accordance with the Standard Special Provision entitled "Division One" contained elsewhere in this RFP. **An adjustment to the Substantial Completion Date will not apply for the purpose of the bonus unless the adjustment is granted solely due to a delay in the Financial Closing Date.**

Any portion or portions of the Price Proposal documentation designated by the Proposer as a "trade secret" at the time the bid documentation is delivered to the NC Turnpike Authority's Chief Engineer shall be protected from disclosure as provided by *G.S. 132-1.2*.

### **Cost and Escrow Instructions**

The cost of the escrow will be borne by the NC Turnpike Authority. The NC Turnpike Authority will provide escrow instructions to the banking institution or other bonded document storage facility consistent with this provision.

### **Payment**

There will be no separate payment for all costs of compilation of the data, container, or verification of the Price Proposal documentation. Payment at the lump sum price for the Design-Build project will be full compensation for all such costs.

## **THREE-YEAR GUARANTEE**

### **GENERAL**

#### **Definitions:**

**Warranty Initiation Date** - The date that constitutes the start date for the warranty term and coincides with Substantial Completion as determined by NCTA.

**Warranty Bond** - A bond issued by a surety which guarantees that the warranty requirements, including any observation periods extending beyond the Substantial Completion Date will be satisfied.

**Breach of Warranty** - A failure to perform Corrective Work or Immediate Corrective Work in accordance with the provisions contained herein.

**Dispute Review Board** - The team responsible for resolving disputes between the NCTA and the Design-Build Team regarding any claim of noncompliance with the warranty requirements, as detailed elsewhere within the Contract Documents.

**Corrective Work** - Work redone, repaired, corrected or replaced pursuant to the terms of this Warranty Provision. This term is used throughout this provision to collectively mean both Corrective Work and Immediate Corrective Work.

**Immediate Corrective Work** - Work redone, repaired, corrected or replaced that shall be undertaken immediately as it poses an imminent danger to the users of the facilities constructed under this project. If the NCTA determines that Immediate Corrective Work is necessary for public safety, the NCTA or its agent may perform emergency repairs. Prior to such emergency repairs, the NCTA will document the basis for the emergency work and will preserve evidence of the defective condition.

### **Project Warranty Term**

The Warranty Term for each element of the Project shall commence upon Substantial Completion as determined by NCTA. The Warranty Term for municipality utility work shall commence once all water and sewer work for that owner is accepted. Subject to extension under the "Warranty Bond" section below and notwithstanding any warranty term for specific Project

### **No Limitation of Liability**

The foregoing warranties are in addition to all rights and remedies available under the Contract Documents or applicable law, and shall not limit the Design-Build Team's liability or responsibility imposed by the Contract Documents or applicable law with respect to the Work, including liability for design defects, latent construction defects, strict liability, negligence or fraud; provided, however, that, upon expiration of the Warranties, Design-Build Team shall have no further liability to NCTA hereunder for latent construction defects.

### **Warranty Beneficiaries**

In addition to benefiting NCTA and its successors and assigns, the Warranties and subcontractor warranties provided under the section "Initial Project Acceptance" shall insure to the benefit of, and shall be directly enforceable by the NCTA and Utility Owners with respect to those portions of the Work owned or controlled by each such owner.

### **Remedies for Breach of Warranty**

It is the NCTA's intent to reserve the right to recover any and all actual damages, not subject to liquidated damages, resulting from any breach of an express or implied warranty or any defect in the Work.

### **Disputes**

Any disagreement between NCTA and the Design-Build Team relating to this warranty provision shall be subject to the Dispute Review Board provisions contained in the Contract Documents and Article 104-8(B) provided that Design-Build Team shall proceed as directed by NCTA pending resolution of the dispute.

Should disputed Corrective Work pose a safety issue to the motorist, the NCTA may (1) direct the Design-Build Team to perform the Corrective Work with costs being documented in accordance with Article 109-3 of the Standard Special Provision entitled "Division One" contained elsewhere in this RFP; or (2) after notice to the Design-Build Team, the NCTA shall have the right to perform or have performed by third parties the necessary remedy, and all costs thereof shall be borne by responsible party upon resolution of the dispute.

### **Rights and Responsibilities of the NCTA**

The NCTA:

- A. Reserves the right to approve the schedule proposed by the Design-Build Team to perform warranty work.
- B. Reserves the right to approve all materials and specifications used in warranty work.

In the event additional jurisdictional impacts beyond those identified in the permits received by the NCTA result from design or construction details revised by the Design-Build Team, or from utility relocations or construction, suitable compensatory mitigation through EEP for the additional wetlands and streams shall be the sole responsibility of the Design-Build Team. As an exception to the above, if the Design-Build Team demonstrates to the NCTA's satisfaction that the project cannot be constructed, or utilities relocated/constructed, without increasing jurisdictional impacts beyond that shown in the permit, the NCTA will bear the cost for the portion of the additional mitigation that is satisfactorily demonstrated by the Design-Build Team as needed to construct the facility.

The Design-Build Team shall analyze any new areas to be impacted that were not analyzed during the NEPA process or preparation of the permit application. This analysis shall include performing all environmental assessments. The Design-Build Team shall engage the services of a competent environmental consultant to conduct a full environmental investigation to include, but not be limited to, Federally Listed Threatened and Endangered Species, wetlands, streams, avoidance and minimization in jurisdictional areas, Rapanos forms, compensatory mitigation, FEMA compliance, historical, archaeological, and cultural resources surveys in these areas. The environmental consultant shall obtain concurrence through NCDOT from the United States Fish and Wildlife Service to document compliance with Section 7 of the Endangered Species Act for those species requiring such concurrence. In addition, the Design-Build Team shall fulfill any other requirements which may be imposed by the permitting agencies.

It is not anticipated that the Jordan Reservoir Buffer Rules will apply to this project. In the unlikely event that these buffer rules are imposed on the project, any additional work due to these buffer rules will be handled in accordance with Article 104-7 of the Standard Special Provisions, Division One, contained elsewhere in this RFP.

### **CLEARING AND GRUBBING**

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The North Carolina Turnpike Authority is committed to limiting environmental impacts of the project to the extent practicable. Upland forests, which provide habitat for terrestrial wildlife, are instrumental in protecting water and air quality and are one of the natural resources that the NCTA includes in this commitment. For these reasons NCTA is requiring the Design-Build Team to identify and subsequently protect existing upland forests from disturbance within the project right-of-way where feasible. Project safety, constructability and long term project maintenance are not to be compromised in order to implement this commitment. To this end the Design-Build Team shall:

- Identify in the designs the locations where upland trees will be preserved to include quadrants, the median (outside clear recovery zone) and any other locations within the right of way;
- Schedule, coordinate with NCTA, and attend a minimum of two meetings. Two meetings shall occur with representatives from the NCTA, FHWA, USEPA and NCDOT to review the recommended areas for upland tree preservation and discuss the methodology for determining these locations. One meeting shall occur prior to beginning land clearing of any section of the project, and another meeting shall occur after the completion of the Release For Construction (RFC) Roadway and/or other relevant RFC plans to review the plan sheets and discuss the determined and suggested locations for upland forest protection;
- Provide the approach and management plans for implementing the upland forest protection plan in the field with the various contractors and subcontractors;

## **DESIGN REFERENCES**

Design references developed and published by NCDOT and/ or other agencies and adopted for use by NCTA which are to be used in the design of this project may be obtained by contacting the Contract Office of the NCDOT Project Services Unit. Standard prices for materials, which the NCDOT normally sells for a fee, will be in effect. The Design-Build Team is responsible for designing in accordance with the applicable documents and current revisions and supplements thereto. Unique design guides created by the NCTA are available at no charge from the NCTA website.

## **REVIEW OF DESIGN SUBMITTALS**

Major design milestones and required design submittals shall be identified as activities on the CPM. Unless otherwise noted in the RFP, submittals will be reviewed within 10 working days (15 days for temporary structures, overhead sign assemblies, MSE walls, FEMA compliance documents and temporary shoring) from the date of receipt by NCDOT and NCTA unless otherwise stipulated in the scope of work. During the review process, the NCTA may require that a submittal be revised and re-submitted. However, if all issues are not resolved upon review of the second submittal of a particular plan submittal, the Design-Build Team may request a meeting with the NCTA Project Manager, or the NCTA will engage the Design-Build Team Project Manager to assist in the expeditious resolution of the remaining issues surrounding that submittal.

All submittals shall be prepared and submitted in accordance with the “*Design-Build Submittal Guidelines*”, which by reference are incorporated and made a part of this contract. All submittals shall be made concurrently to the NCTA Project Manager, the NCTA Chief Engineer and the NCDOT State Alternative Delivery Engineer. The NCTA or NCDOT will not accept subsequent submittals until prior submittal reviews have been completed for that item. The Design-Build Team shall inform the NCTA Chief Engineer and the NCDOT State Alternative Delivery Engineer in writing of any proposed changes to the NCTA and/or NCDOT preliminary designs, Technical Proposal and / or previously reviewed submittals, and obtain approval prior to incorporation. The Design-Build Team shall prioritize submittals in the event that multiple submittals are made concurrently. All submittals shall include pertinent Special Provisions. No work shall be performed prior to North Carolina Turnpike Authority, FHWA, and NCDOT review of the design submittals.

No review, approval, suggestion, or comment of NCDOT, FHWA, or NCTA with respect to any design submittal shall diminish, reduce, mitigate, or waive the Design-Build Team’s responsibility and liability for the design or design submittal.

All designs shall be in Microstation format using Geopak software (current version used by the NCDOT). Geopak drainage is not required; however, it is strongly encouraged to assist in the development of the coordinately correct As-Built plans.

The Design-Build Team shall submit for NCTA approval a quality control plan for design which is to ensure quality of all design elements. The following elements shall be included in the quality control plan:

consent of the Engineer. In addition, subconsultants and subcontractors not identified in the SOQ or Technical Proposal shall not perform any work without written consent by the Engineer. Individual offices of the Design-Build Team not identified in the Statement of Qualifications or the Technical Proposal submitted shall not perform any work without written consent by the Engineer. Failure to comply with this requirement may be justification for removing the Team from further consideration for this project and disqualification from submitting on future NCTA Design-Build Projects.

### **PROJECT SAFETY PLAN**

The Design-Build Team shall establish and submit to NCTA a project specific safety plan, which provides a safe and healthful environment for all construction personnel, proper maintenance of traffic and safety of the traveling public through the work zone. Identify, within the safety plan, the requirements for all subcontractors.

At minimum, the safety plan should detail the following:

- Safety Officer with contact information
- List of employees with OSHA or safety related certifications
- Individual/s responsible for monitoring and enforcing safe conditions on daily basis
- Employee safety orientation program
- Annual, monthly, weekly or daily safety meetings
- Safety training initiatives
- Safety standards and measurements
- Safety procedures to address the NCTA's four emphasis areas: fall protection, crane safety, back-up alarms and trenching/shoring.
- Required personal protective gear
- Procedures in place for communication of unsafe acts and/or safety improvements
- Accountability process to include incident investigation procedures
- Safety assessment procedures for subcontractors performing work

In addition to the above company policies, provide safety procedures specific to the project work zone and daily project operations such as:

- Identification of ingress and egress from work areas
- Lane closure installation and maintenance
- Night time work plan to include lighting requirements
- Critical lift procedures
- Confined space entry

The Design-Build Team shall also include a plan with established procedures to react to potential security or emergency situations within the project limits.

**ROADWAY SCOPE OF WORK** (05-29-2008)

The Design-Build Team shall design and construct the project such that the functionality and capacity shown in the Triangle Parkway Combined Corridor/Design Public Hearing Map dated March 25, 2008 distributed by the NCTA, is maintained or exceeded, except as otherwise noted herein. Changes to interchange configurations may be considered by the NCTA, but only through the submittal of an Alternative Technical Concept (refer to Section 4.C in the Instructions To Proposers). The NCTA will also provide Right of Way Plans that have incorporated adjustments to the aforementioned map. The Design-Build Team shall incorporate these adjustments into their plans unless otherwise noted herein.

The Design-Build Team shall design the project in accordance with the project permits and permit drawings included in this RFP, or otherwise pursue permit modifications. (Reference the Permit Modifications Project Special Provision.) Any variations to the design or construction methods reflected in the permits acquired by the NCTA shall require additional environmental agency coordination. All such work necessitated by these variations, including, but not limited to, public involvement, NEPA re-evaluation, agency coordination and permit modifications shall be the sole responsibility of the Design-Build Team. The NCTA shall not allow any contract time extensions or additional compensation associated with any coordination or approval processes resulting from these design or construction modifications.

Only open road tolling (inclusive of electronic toll collection and video toll collection technologies) will be utilized on the Triangle Parkway. Any contract documents, oral explanations, instructions and / or supplied information that depicts or refers to cash collection and associated facilities / activities necessitated by cash collection shall be disregarded and excluded from the design and construction of this project.

The design and construction of this project shall accommodate future improvements along the project corridor to the extent that items such as gantries, and bridges and, to the greatest extent practicable, conduit and lighting, do not require relocation or replacement at the time that these future improvements are made. Future improvements include: (1) Future widening of one lane in each direction within the Triangle Parkway and NC 540 medians; (2) A future flyover from northbound Triangle Parkway to westbound I-40 and (3) future improvements required by the preliminary design at the Triangle Parkway/McCrimmon Parkway/NC 540 interchange. The Design-Build Team shall not waste any unsuitable materials in any areas of future widening.

**Project Details**

- The Design-Build Team shall design and construct a six-lane divided facility with a 46-foot median from NC 540 in Wake County to south of the I-40 / NC 147 interchange in Durham County. The proposed new location facility shall be designed and constructed to meet a 70-mph design speed for a rolling urban freeway. Unless noted otherwise in the RFP, the Design-Build Team shall design and construct the -L- Line, -LNB-, -Y- Lines, ramps and service roads providing access, widening and improvements as indicated on the Triangle Parkway Combined Corridor / Design Public Hearing Map dated March 25, 2008 and the provided Right of Way Plans. The limits of -Y- Line construction shall be of sufficient length to tie to existing facilities based upon current NCDOT guidelines and standards.

The Design-Build Team is responsible for all culverts and culvert extensions necessary to complete the project. The Design-Build Team shall adhere to all permit, FEMA, and hydraulic design criteria when designing culverts and culvert extensions.

The Design-Build Team shall be responsible for removal and disposal of all structures, including the small bridge at approximate Station 220+00 -L- over Burden's Creek.

All bridge rails shall satisfy the appropriate NCHRP test level for that facility. Any bridge rail adjacent to sidewalk or future sidewalk shall be a minimum of 42 inches high above the sidewalk surface. Any bridge rail adjacent to multi-use path or future multi-use path shall be a minimum of 54 inches high. Mandatory Aesthetic Treatments are required. Reference Aesthetic Design Scope of Work.

The Design-Build Team shall be responsible for the design and construction of the noise wall as required by the Final Design Noise Report, including any geotechnical investigations necessary to design the foundations. The Design-Build Team shall be responsible for the wall envelope details. Reference Roadway Scope of Work.

### **Aesthetics Design**

Bridges, retaining walls, sound barrier walls and signs/gantries shall have Mandatory Aesthetic Treatments as required by the Aesthetics Design Scope of Work found elsewhere in this RFP.

### **Open Road Tolling Infrastructure**

The Design-Build Team shall be responsible for the design and construction of the infrastructure required to support the toll collection system. Reference the Open Road Tolling (ORT) Infrastructure Scope of Work found elsewhere in this RFP.

### **General**

Design shall be in accordance with the latest edition of the AASHTO *LRFD Bridge Design Specifications*, NCDOT Structure Design Manual (including policy memos), and NCDOT Bridge Policy Manual. Construction and materials shall be in accordance with the current NCDOT *2006 Standard Specifications for Roads and Structures*, NCDOT Structure Design Unit Project Special Provisions, and NCDOT Structure Design Unit Standard Drawings.

Bridge geometry (width, length, skew, span arrangement, typical section, grade, alignment, etc.) shall match approved Bridge Survey Reports, Roadway Plans and Structure Recommendations. Bridges shall meet all hydraulic design requirements for drainage.

The Design-Build Team's primary bridge design firm shall be on the NCDOT Highway Design Branch's list of firms qualified for structure design and maintain an office in North Carolina.

Alternate designs, details, or construction practices (such as those employed by other States, but not standard practice in North Carolina) are subject to NCTA and NCDOT review and shall be evaluated on a case by case basis.

**HYDRAULICS SCOPE OF WORK** (5-27-08)**Project Details**

The Design-Build Team shall:

- Hold a pre-design meeting with the NCTA upon acceptance of the Preliminary Roadway Plans.
- Design and install all Storm Drainage systems within the project limits.
- Provide Stormwater Management Plan using NCDOT's Best Management Practices.
- With the exception of Burden's Creek and Burden's Creek Tributary, verify and finalize all preliminary culvert and bridge survey reports provided by NCTA. The NCTA will provide sealed reports for Burden's Creek and Burden's Creek Tributary. In the event that the Design-Build Team elects not to adhere to the design depicted in the reports for Burden's Creek and Burden's Creek Tributary, submit revised reports for review and acceptance.
- Provide bridge drainage features that prevent direct discharge into surface water.
- Provide permit drawings and calculations as may be necessary to obtain permit modifications resulting from any variation in NCTA's design, construction methods or utility relocation/construction included in the permits. Reference the Project Special Provision for Permit Modifications.
- Analyze existing culverts and cross pipes within the right of way (existing and proposed for both NCTA and NCDOT), impacted or affected by the project's design. Replace or supplement any pipes or culverts that are deemed hydraulically deficient as a result of this project. Replace any structurally deficient pipes or culverts within the project limits. The 72" welded steel pipe which crosses Davis Drive at approximate Station 320+00 -Y1- as shown in the U-4026 plans will not be installed by the U-4026 contractor.
- Prepare Pre- and Post-Construction Analysis for increases in discharge and take appropriate action in accordance with the General section below to make sure additional drainage is adequately handled.
- The NCTA has received a CLOMR for Burdens Creek and a No Impact Certification for the Burden's Creek Tributary. If the Design-Build Team elects to revise the design at these locations, then the Design-Build Team shall be responsible for coordinating with N.C. Floodplain Mapping, through NCTA, to determine whether a new CLOMR is required. If it is determined that a revised or new CLOMR is needed, the Design-Build Team is responsible for this work; otherwise, the Design-Build Team shall incorporate the changes into the LOMR package. No work shall begin at Burden's Creek until such time that the revised FEMA compliance is obtained.
- Complete a LOMR package for Burdens Creek, and all other LOMR packages for regulated streams impacted by the design, for NCTA's submittal to FEMA after the project is complete

Drainage over the top of retaining walls shall not be allowed. Sags in the top of walls are not permissible. Direct runoff above and below walls away from walls, if possible, or collect runoff at the walls and transmit it away. Curb and gutter or cast-in-place single faced barrier with paving up to the wall shall be required when runoff can not be directed away from the back or front of the wall. A paved concrete ditch with a minimum depth of six inches shall be required at the top of walls when slopes steeper than 6:1 (H:V) intersect the back of walls.

Precast or cast-in-place coping shall be required for walls without a cast-in-place face with the exception of when a barrier is integrated into the top of the wall.

Extend coping or cast-in-place face a minimum of six inches above where the finished or existing grade intersects the back of the wall. A fence shall be required on top of the facing, coping or barrier or immediately behind the wall, if there is no slope behind the wall. Submit fence type and details for NCTA review and acceptance. (Reference Aesthetic Design Scope of Work)

When using abutment retaining walls, design and construct the end bent and the wall independent of each other. When using abutment retaining walls, the end bent foundation shall be designed and constructed with one of the following deep foundations: (1) a single row of plumb piles with brace piles battered toward the wall, (2) a single row of plumb piles with MSE reinforcement strapped to the back of the cap, (3) a double row of plumb piles or (4) drilled piers. If fill is required around piles or drilled piers, install foundations before placing any fill. Wing walls independent of abutment retaining walls shall be required unless accepted otherwise by the NCTA. Do not consider lateral support from any fill placed around drilled piers behind abutment retaining walls when analyzing end bent stability. All pile foundations for end bents with abutment retaining walls shall penetrate **minimum 10 feet** into natural ground. For bearing piles behind such retaining walls, the penetration can be reduced to 5 feet below the bottom of the wall provided the Design-Build Team analyzes and determines that the vertical piles are “fixed” in natural ground such that the decrease **in pile embedment** shall not significantly increase the top deflection under lateral loading. This analysis(es) shall be submitted to the NCTA for review and acceptance prior to construction.

#### **D. Temporary Structures**

Design temporary retaining structures, which include earth retaining structures and cofferdams, in accordance with current allowable stress design AASHTO *Guide Design Specifications for Bridge Temporary Works* and the NCDOT *Temporary Shoring Special Provision*. The only submittal required to use the standard sheeting design is the “Standard Shoring Selection Form”.

Design and construct temporary retaining walls in accordance with the applicable NCDOT *Project Special Provision* available upon request by the Design-Build Team. Traffic Control barrier on top of walls shall be in accordance with the NCDOT Work Zone Traffic Control Unit details available upon request by the

7. *NCDOT Roadway Standard Drawing No. 1101.11* shall be used for merge and shift tapers. All other temporary roadway designs shall follow the *NCDOT Roadway Design Manual, 2004 AASHTO A Policy on Geometric Design of Highways and Streets* and the most current *Highway Capacity Manual*.

Changes in super elevations should be avoided in the travel lane and shall not exceed 0.04 between edge lines of any direction of travel.

8. Maintain access to all residents, schools and businesses at all times, unless otherwise noted below.
9. No splitting of traffic in the same direction will be allowed, (i.e. separation by any type of barrier, bridge piers, existing median, etc.).
10. All road closures are subject to approval by the North Carolina Turnpike Authority (NCTA). The Design-Build Team shall be responsible for investigating all detour routes, including but not limited to, analyzing the traffic capacity, investigating all impacts to emergency services, schools and determining improvements required to accommodate the detoured traffic. Possible detour needs could include, but are not limited to, road closures due to limited horizontal or vertical clearance limits, grade changes in tie in areas and oversize and / or overweight limits. Prior to utilizing a detour, the Design-Build Team shall be responsible for obtaining NCTA approval and installing improvements required to accommodate the detoured traffic. Proposed offsite detours shall not have any non signalized at-grade railroad crossings.

Based upon road user costs, the Design-Build Team can only propose offsite detours for Kit Creek Road and the access to and from NC 147 and T.W. Alexander Blvd.

11. For all roadways within the project limits and accepted detour routes, the Design-Build Team shall provide access for wide-loads and oversized permitted vehicles. The Design-Build Team shall widen existing facilities, if necessary, for wide loads and oversized permitted vehicles to safely travel through the work zone.
  - a. For annual permitted vehicles, a clear width of 18 feet is required for all roadways with the exception of I-40, I-540/NC 540/Western Wake Freeway, NC 147/Triangle Parkway and NC 54.
  - b. For I-40, I-540/NC 540/Western Wake Freeway, NC 147/Triangle Parkway and NC 54, a minimum clear width of 20 feet shall be maintained for single use permitted wide-loads up to 16 feet wide.
  - c. The Design-Build Team is responsible for verifying that vertical clearances and horizontal clearances are sufficient for the wide-loads and oversized permitted vehicles.
12. At a minimum, one CMS board shall be required per direction when construction activities adversely impact the traveling public on the following roadways: I-40, I-540, NC 147, Triangle Parkway, NC 55 and NC 54. Depending on the impact to traffic the CMS board(s) may need to be in continuous operation until the construction activity impacting traffic is complete. CMS boards shall also be required

**SIGNING SCOPE OF WORK** (06-03-2008)**General**

The signing shall be designed, fabricated, and constructed by the Design-Build Team in accordance with the latest edition of the *Manual on Uniform Traffic Control Devices (MUTCD)*, the *NC Supplement to the MUTCD*, *NCDOT Standard Specifications for Roads and Structures (July 2006)*, the *NCDOT Roadway Standard Drawings (July 2006)*, the latest *Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals* published by AASHTO, “Guidelines for Preparation of Signing Plans for Design-Build Projects”, “Design-Build Submittal Guidelines”, NCTA's Triangle Expressway Signing Schematic dated May 16, 2008, and NCTA's Toll Facility Signing Requirements.

**Signing Plan Requirement**

The Design-Build Team shall select a Private Engineering Firm (PEF) that has experience in designing Signing Plans for NCDOT on projects comparable to this project. NCTA shall provide the Design-Build Team with the Triangle Expressway Signing Schematic dated May 16, 2008 and the Toll Facility Signing Requirements for the Triangle Expressway corridor for the Design-Build Team's use in developing its signing plan. The Design-Build Team shall not reduce any signing shown in the Triangle Expressway Signing Schematic dated May 16, 2008.

**Signing Project Limits**

The Design-Build Team shall be responsible for the design, fabrication and installation of all toll road and standard signs required on Triangle Parkway, I-40, I-540, NC 540, and NC 147, all ramps and loops, and -Y- lines. The signing limits at the south end of the project shall extend to the railroad near NC 55, except that all new signs on NC 55 for the Triangle Expressway northbound traffic shall also be the responsibility of the Design-Build Team. The signs shall accommodate future cardinal direction, shields, and messages that will complete the signing system for the Triangle Expressway.

The Design-Build Team shall design and fabricate overlays for the future messages shields and cardinal directions and deliver the overlays to the Design-Build Team constructing the Western Wake Freeway. The Design-Build Team and NCTA shall inspect the overlays prior to delivering the signs to the Western Wake Freeway Design-Build Team. The Design-Build Team, at no cost to the NCTA, shall replace any signs damaged prior to delivery and acceptance by NCTA and the Western Wake Freeway Design-Build Team.

The Design-Build Team shall also be responsible for the design, fabrication and installation of all signs required beyond the construction limits of the mainline and all -Y- Lines to ensure adequate advance signage and spacing is provided. The Design-Build Team shall coordinate the posted speed limits for this facility with the NCDOT Traffic Engineering and Safety Systems Branch's Capital Region Traffic Engineer.

## **Temporary Signs**

See Signing Section of the Traffic Control Scope of Work for temporary signing.

## **Sign Locations**

The Design-Build Team shall be responsible for determining the station locations for all signs. To avoid sign placement in locations where their usefulness will be short-lived, the Design-Build Team shall coordinate the proposed sign locations with existing and future projects through NCTA and NCDOT.

## **Ground Mounted Support Designs**

NCDOT will provide the software for ground mounted sign support designs. The Design-Build Team is responsible for all design, fabrication, and installation of ground mounted supports and signs. Instructions for loading support design software will be made available upon request.

Exit gore signs shall be erected on omni-directional breakaway supports.

## **Overhead Sign Assemblies**

The Design-Build Team shall be responsible for the design, fabrication, and installation of new overhead sign assemblies for the project as identified on the Triangle Expressway Signing Schematic dated May 16, 2008.

The Design-Build Team may modify existing overhead sign assemblies to accommodate proposed signs if the following conditions are met:

- Aesthetic treatments, as may be required; and
- A structural analysis is performed for any sign structure where the total area of all sign panels on the structure exceeds the original design wind load area for that structure which satisfies the NCTA that the existing structure can accommodate the proposed sign panels in accordance with the latest version of the latest AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals; or
- Demonstration that the total area of all sign panels on the structure does not exceed the original design wind load area for that structure.

The Design-Build Team shall prepare shop drawings for NCTA and the NCDOT Alternative Delivery Unit's review of all modified overhead sign structures.

The windspeed for the overhead sign assembly designs is 90 MPH. The Design-Build Team is responsible for calculating the windload area for the overhead sign assemblies. The windload area will be equal with the proposed sign panel height and width on the overhead sign assemblies. Include exit panels as part of the sign height when calculating the windload area. The coordination with future projects and sign messages shall be considered when designing and fabricating overhead sign assemblies.

Overhead Sign Assemblies denoted in color on the Triangle Expressway Signing Schematic dated May 16, 2008 shall be designed, fabricated and installed in accordance with the Aesthetics Design Scope of Work.

The Design-Build Team shall design, fabricate, and install overhead sign supports and foundations in accordance with the Standard Special Provisions for Overhead Sign Supports and Overhead Sign Foundations found elsewhere in this RFP.

The Design-Build Team shall be responsible for designing, fabricating and installing median barrier footing and median transitional barrier in accordance with the *2006 Roadway Standard Drawing No 854.05* for any new overhead sign assembly that will replace an existing assembly mounted on median barrier.

The Design-Build Team shall justify the bottom edge of all signs on each assembly in a horizontal plane.

Monotube sign support structures shall not be allowed.

### **Pedestal Overhead Sign Assemblies**

The Design-Build Team has the option to design pedestal overhead sign assemblies for advance guide signs on multi lane facilities as an alternative to cantilever overhead sign assemblies. Signs with exit directionals and "EXIT ONLY" designation shall not utilize pedestal assemblies.

The Design-Build Team shall use pedestal overhead assemblies for DMS signs. Pedestal DMS sign assemblies shall include aesthetic considerations consistent with the overhead sign structures.

Pedestal overhead sign assemblies shall have a minimum 20 feet offset from the edge of pavement to the centerline of the support. The Design-Build Team shall install guardrail or other approved protection for the overhead sign support.

The Design-Build Team shall use the minimum specifications below for the design of pedestal sign supports for DMS boards:

Color DMS with 3 lines of text (18" characters) with walk-in access. DMS size of 25-9" width, 7'-11" height, and 4'-0" depth. DMS weight of 3530 lbs. Note that specifications equate to a Daktronics model VF-2000-27x110-66-RGB.

The Design-Build Team shall design, fabricate, and install pedestal sign supports and foundations in accordance with the Standard Special Provisions for Overhead Sign Supports and Overhead Sign Foundations found elsewhere in this RFP.

### **Overhead Sign Supports**

On freeway and expressway facilities, overhead sign supports shall be located 40 feet and 32 feet, respectively, from the edge of travel lane to the center of the sign supports with median supports

located in the center of the median. If the above distances cannot be obtained, the overhead sign supports shall be located 20 feet minimum from the edge of the travel lane and protected by guardrail or other approved protection device for the overhead sign supports.

### **Overhead Sign Sheeting**

The Design-Build Team shall use either Type VIII or IX reflective sheeting for the legends (text) and background on overhead signs; however, the sheeting used shall be consistent throughout the project. For proposed signs to be erected on existing overhead sign assemblies with sign lighting, the Design-Build Team shall use Type III sheeting.

No overhead sign lighting is required for advance guide or exit directional overhead signs.

### **Guardrail or Other Protection for Signs and Overhead Assemblies**

The Design-Build Team shall be responsible for determining, designing and installing any protection for proposed and existing sign supports.

### **Signing Roadway Standards, Typical Sheets and Specifications**

Signing roadway standards and typical sheets to be used in summarizing quantities, standard specifications, and compiling Type E and F signs can be located at the following website:

<http://www.ncdot.org/doh/preconstruct/traffic/congestion/SIGN/default.html>

The Design-Build Team shall incorporate the appropriate information onto these sheets and submit them to NCTA and the NCDOT State Alternative Delivery Engineer for review and acceptance.

### **Removal and Disposal of Existing Signs**

The Design-Build Team shall be responsible for determining those existing signs that will no longer be needed upon completion of the project, such as on -Y- lines and project tie-ins. The Design-Build Team shall be responsible for removal and disposal of these signs and supports. The Design-Build Team shall show and note these signs on the signing plan view sheets.

### **Signing Construction Revisions**

Any construction revision must be submitted to NCTA and the NCDOT Alternative Delivery Unit for review prior to incorporation.

### **Toll Road and DMS Assemblies**

The DMS locations are shown in the Triangle Expressway Signing Schematic dated May 16, 2008. The NCTA and the NCDOT Alternative Delivery Unit shall review all proposed DMS locations.

The Design-Build Team shall determine exact station locations for Toll Road and DMS assemblies; prepare structure line drawings to include dead loads, DMS notes and details, and design

windspeed; complete field verification; and provide conduit and all other requirements for overhead sign assemblies to be approved by NCTA.

The Dynamic Message Signs will be installed under a separate contract. The Design-Build Team shall coordinate all requirements of this scope of work with the Contractor that will install the Dynamic Message Signs.

The Design Build Team shall be responsible for modifying or replacing the existing NC 540 overhead and pedestal sign uprights, denoted in color on the Triangle Expressway Signing Schematic dated May 16, 2008, to be consistent with the aesthetic treatments defined elsewhere in this RFP (Reference Aesthetic Design Scope of Work). New or modified uprights for these structures shall be designed with a design wind speed of 90 mph. Remove the existing DMS located on east-bound NC 540 between NC 55 and the Triangle Parkway interchange and provide to NCDOT, Division 5, Traffic Services. Install a new DMS support, with aesthetic treatment, at approximately this location to support a DMS as indicated on the ITS/Toll Communication Plans.

- E. Temporary access and haul roads, other than public roads, constructed or used in connection with the project shall be considered a part of the project and addressed in the Erosion and Sedimentation Control Plans.
- F. Borrow or waste areas that are part of the project shall require a separate Erosion and Sedimentation Control plan, unless the borrow or waste activity is regulated under the *Mining Act of 1971*, or is a landfill regulated by the Division of Solid Waste Management (DSWM). The Design-Build Team shall submit the permit number for waste / borrow sites covered by the Mining Act or regulated by DSWM (DENR) concurrently to NCTA and the State Alternative Delivery Engineer.
- G. Whenever NCTA or NCDOT determines that significant erosion and sedimentation continues despite the installation of approved protective practices, the Design-Build Team shall be required to and shall take additional protective action.
- H. An accepted Erosion and Sedimentation Control Plan does not exempt the Design-Build Team from making every effort to contain sediment onsite.
- I. Any Erosion Control Design revisions made during the construction of the project shall be submitted to NCDOT REU by the 15<sup>th</sup> of the month via the State Alternative Delivery Engineer. At anytime requested by NCTA, the State Alternative Delivery Engineer or the Roadside Environmental Unit, the Design-Build Team shall provide an updated version of the Erosion and Sedimentation Control Plans for distribution to all parties involved in the construction process.
- J. The Design-Build Team shall comply with the *North Carolina Administrative Code Title 15 A Department of Environment and Natural Resources Chapter 4, Sediment Control*.
- K. A pre-design meeting shall take place between the NCTA, NCDOT REU Soil & Water Engineering Section, the Design Build Team, and any other pertinent NCDOT personnel before Erosion and Sedimentation Control Design begins. Erosion and Sedimentation Control Plan submittals shall only be reviewed and accepted by NCTA and NCDOT REU after the Erosion Control Pre-Design Meeting.
- L. All RFC Erosion and Sedimentation Control Plans, including any red line revisions, shall be kept on site at all times throughout the duration of the project.
- M. Erosion Control / Stormwater Certification shall be required according to the Project Special Provision found elsewhere in this RFP.
- N. Prior to installation of any erosion control devices, the Design-Build Team shall verify all jurisdictional area boundaries and delineate the boundaries with Safety Fence.
- O. The Design-Build Team shall be responsible for supplemental seeding, topdressing, and mowing.

#### **WATER QUALITY STORMWATER MEASURES:**

Stormwater controls, both temporary and permanent, intended to serve water quality purposes will be highlighted on all phases of the erosion control and right of way plans in such a way to denote specific attention. Water quality stormwater controls include the level spreader, preformed scour hole, detention basin, swale, forebay, hazardous spill basin, bridge stormwater controls filtration basin, stormwater wetland, filter strip and buffer as well as any other measures included in the most current version of the NCDOT Stormwater Best Management Practices Toolbox or deemed appropriate by the Design-Build Team. Construction and maintenance of water quality stormwater controls is to be completed as specified in the plans so as not to alter the purpose of the design. Any field modifications of these stormwater measures require prior approval by the Design Engineer.

**OPEN ROAD TOLLING (ORT) INFRASTRUCTURE SCOPE OF WORK** (06-03-08)

This ORT Infrastructure scope of work includes design, engineering, fabrication, delivery and erection of gantries, toll facility buildings, pavements, sidewalks, electrical work, heat ventilation, air conditioning (HVAC) work, plumbing work, conduit duct banks and associated vaults and equipment cabinets necessary for the infrastructure of the open road tolling system. The design, fabrication and installation of DMS message boards, toll equipment brackets and toll system integration will be by others in coordination with this contract.

The Design-Build Team shall coordinate with the Toll System Integrator in the final design and construction of the ORT Infrastructure to readily accommodate the NCTA selected Toll System Integrator components without the need for modifications and to achieve the NCTA tolling performance requirements. Some information contained within this ORT Infrastructure scope is typical and may not be applicable for the specific tolling system provided by the Toll System Integrator selected by NCTA. Therefore, reduction, deletion or addition of items indicated within this scope, if allowed and necessary, shall result in compensation adjustments in accordance with the 2006 NCDOT *Standard Specifications for Roads and Structures*.

**References**

Design and construct ORT Facilities, included herein, in accordance with the following:

- Aesthetic Design Guidelines, dated September 28, 2007
- Aesthetic Design Scope of Work
- Signing Scope of Work
- Typical Open Road Tolling (ORT) Facility Guidelines

**General**

Design, drawings, details, and specifications detailed within this scope are the responsibility of the Design-Build Team, unless noted otherwise. Provide all details and plans consistent with industry standards and professional requirements.

The Design-Build Team shall minimize, as much as practicable, the footprint of the ORT Facility while maintaining consistency with design standards and the contract requirements.

**ORT Site Location**

Locate each tolling site in accordance with the ORT Site Geometry Design Criteria below and generally at the locations indicated on the ORT Collection Facility Layout Drawing. Accommodate the lane configurations and shoulder widths detailed in the ORT Collection Facility Layout Drawings provided by the NCTA. Place tolling locations to allow optimum performance of the tolling system and for ease of maintenance access under operating conditions.

**ORT Site Pavement Design**

Install pavement at the ORT sites consistent with the adjacent pavement and shoulders, except as noted herein. The ORT site limits are defined as the pavement beginning 60 feet prior to the first ORT gantry span and extending through and a length of 90 feet beyond the second ORT gantry span.

**RIGHT-OF-WAY SCOPE OF WORK** (6-03-08)**Mutual Right-of Way Agent**

The NCTA has retained Carolina Land Acquisition, Inc. herein referred to as the “Agent,” to perform all asbestos assessment and abatement, appraisals, appraisal reviews, negotiations, and relocation services. A list of all parcels acquired by NCTA and NCDOT prior to the submission of Proposals will be provided to all teams on the Reduced Candidates List.

Carolina Land Acquisition, Inc. will serve as the Right-of-Way Agent for both the NCTA prior to contract award and the Design-Build Team after contract award. After Notice to Proceed, the Agent will report directly to the Design-Build Team and prioritize their work as directed by the Design-Build Team. The Agent’s fees will be borne solely by the NCTA, regardless of the cause for additional Right-of-Way or easement. In the event the Design-Build Team deems the Agent non-responsive to the Design-Build Team’s priorities, the Design-Build Team may recommend to the NCTA that payment be withheld from the Agent.

Prior to contract award, the Design-Build Team shall have no direct contact with the Agent in any manner except as identified herein. After contract award, all requests for Agent services shall be in writing, with copies to NCTA.

The Design-Build Team shall provide to the NCTA area data sheets based upon the accepted Right-of-Way Plans and the preliminary design of the McCrimmon Creek/NC 540/Triangle Parkway Interchange. The Design-Build Team shall perform the initial right-of-way staking for the purpose of initial contact with owners, as well as final staking of right-of-way and placement of rebar and metal caps.

In an effort to minimize impacts to Research Triangle Park business campuses and future campus expansions, the Design-Build Team shall minimize the right-of-way to the degree practicable for construction, maintenance and operations and utilize construction and drainage easements wherever possible.

**Priority Acquisition**

A list of parcels in order of right-of-way or easement acquisition priority, shall be submitted directly to the NCTA Chief Engineer no later than the date specified in Section 1.G. of the ITP (Volume I). The Design-Build Team shall allocate their list into three categories as noted in the table below. Unless otherwise noted herein, the Agent will acquire, or otherwise gain right-of-entry to these parcels in the respective timeframes in the table.

<b>Parcel Category</b>	<b>Number of Allocated Parcels</b>	<b>Calendar Days for Access</b>
A	15	120
B	10	240
C	Remainder of Parcels	360

Due to the large number of parcels associated with the Triangle Expressway corridor and the complex nature of numerous parcels, the Agent may choose up to five of the parcels in Category A and re-allocate these parcels to Category B or C if the Agent anticipates that such parcels are not attainable within the timeframes of Categories A and/or B, as applicable. Moreover, parcels that involve relocatees will automatically be assigned to Category C. Parcels with impacted cemeteries will automatically be assigned to Category C. In the event that unknown archaeological sites, hazardous materials, or asbestos abatement requirements are revealed during the contract, the NCTA may require up to an additional 30 calendar days beyond that shown in the table to gain access to that parcel; however, in such case, the contract time will be extended on a calendar day for calendar day basis, subject to the conditions outlined in “Contract Time” herein.

The calendar days noted in the table begin once the final Right-of-Way plans are accepted by NCTA for that parcel and the Design-Build Team has completed the preliminary staking such that the Agent can make initial contact with the owner.

Within five business days of receipt of the Design-Build Team’s priorities, the NCTA Chief Engineer will host a meeting between the NCTA, NCDOT State Alternative Engineer, the Agent, and the Design-Build Team. This meeting will serve to clarify the priorities for acquisition. Within five business days after this meeting, the NCTA will provide the Design-Build Team with an official acknowledgement of the parcel priority list and the re-assignment of parcels from Category A to Categories B or C. Any estimate received outside of the process established herein shall be non-binding.

At least one additional meeting will be afforded to each Design-Build Team following the Team’s receipt of the NCTA’s initial response. These meetings are to afford the Design-Build Team the opportunity to adjust their priority list, provide an opportunity to ask questions about the NCTA’s initial response, and receive the NCTA’s final response within five business days of each meeting. The NCTA will not honor a request for any such meeting any later than two weeks prior to the deadline for the submission of Technical and Price Proposals.

The Design-Build Team shall submit, as part of their Technical Proposal, the priority list last conveyed to the NCTA for which the NCTA’s final response was provided.

The Design-Build Team is encouraged to verify and/or adjust the estimates provided by the NCTA for the purpose of determining their own schedule.

### **Right-of-Way Costs Borne by Design-Build Team**

The cost of the right-of way as shown on the Right-of-Way plans provided by NCTA for U-4763B will be borne by the NCTA. The cost of any additional Right-of-Way or easements, as required by the Design-Build Team’s design or construction methods, beyond that shown on the Right-of-Way plans shall be the responsibility of the Design-Build Team.

There are two exceptions to the above paragraph:

- 1) If the Design-Build Team demonstrates to the NCTA’s satisfaction that the project cannot be constructed, or utilities relocated/constructed, within the right-of-way shown on the Right-of-Way plans provided by the NCTA, the NCTA will bear the cost for the portion of the additional Right-of-Way or easement that is satisfactorily demonstrated by the Design-Build Team as needed to construct the facility.

- 2) If the Design-Build Team implements design or construction changes that increase the right-of-way costs in one or more parcels but also reduce the right-of-way costs for other parcel(s), then the Design-Build Team will only be responsible for the net change in the right-of-way cost attributable to the design or construction change.

### **Contract Time**

The calendar days in the table, as adjusted by the NCTA's final response in accordance with this scope of work, will be considered binding in regard to contract time. In the event that a parcel is not obtained, or otherwise granted right-of-entry, within the timeframe shown in the table, as adjusted by the NCTA's final response, the NCTA will entertain requests for additional contract time. If the Design-Build Team demonstrates, in accordance with Article 108-2 of the Standard Special Provision entitled Division One contained elsewhere in this RFP, to the satisfaction of the NCTA that the delay in right-of-way or easement availability affects their controlling operation, the contract time will be extended one calendar day for each calendar day delay beyond the timeframe shown in the table or otherwise adjusted in the NCTA's final response. In no case shall further contract time extensions be granted due to further indirect delays (such as weather, seasonal construction limitations, or borrow availability) that may result from the delay in parcel availability.

Any change to the priority list after project award that accelerates the Design-Build Team's expectation for a parcel's availability will nullify this consideration for contract time extension for that parcel. Furthermore, any change to the accepted Right-of-Way plans that require second takings or revised limits will nullify this consideration for contract time extension for such parcels.

### **Incentive for Reduction in NCTA Right-of-Way Costs**

The current estimate for the Right-of-Way/easement costs for U-4763B is \$23,000,000. If the Design-Build Team generates and incorporates satisfactory design or construction innovations to reduce the Right-of-Way/easement costs to the NCTA, an incentive will be paid to the Design-Build Team as outlined below.

The baseline cost for this incentive is \$21,850,000 or as adjusted in accordance with below. If, after all parcels and easements are acquired, the total Right-of-Way cost to the NCTA is below the baseline cost, and the reduction in Right-of-Way/easement costs directly results from design or construction innovations generated and employed by the Design-Build Team, an incentive will apply. This incentive will be equal to 40% of the difference between the baseline cost and the actual verified cost of the projects Right-of-Way/easements. This incentive payment will be paid with the final partial payment.

In the event that a parcel is condemned but not yet settled by the time of the final partial payment, a cost of 10% above the final offer made prior to condemnation will be used in the calculation of the incentive.

In the event that the reduced Right-of-Way/easement cost is only partially attributable to design or construction innovations generated and employed by the Design-Build Team, the baseline cost will be adjusted downward for that portion of the cost savings not directly attributable to the Design-Build Team's design or construction innovations.

**UTILITY CONSTRUCTION SCOPE OF WORK** (6-03-2008)**GENERAL**

The design and construction of any utilities not specifically mentioned in this Scope of Work shall be handled and paid for in accordance with the Utilities Coordination Scope of Work.

The NCTA is entering into agreements with the utility owners described below and the preparation of these agreements is not the responsibility of the Design-Build Team. Upon final design approval, the Design-Build Team shall provide five sets of 1/2-size plans for each of the utility owner's facilities to the NCTA for addendum to the NCTA / Utility Owner agreement. Concurrently with this submittal, the Design-Build Team shall submit one set of 1/2-size plans for each of the utility owner's facilities to the Alternative Delivery Unit, and one set of 1/2 -size plans to the NCDOT State Utility Agent.

The Design-Build Team shall design, permit, furnish, install, inspect and coordinate the certification of the following utility facilities in accordance with the *Utility Construction Criteria* dated January 30, 2008, the Utility Conflict Plans dated January 15, 2008 and Division 15 of the 2006 NCDOT Standard Specifications for Roads and Structures.

**City of Durham** - Water Line

**Town of Cary** - Water Line, Sanitary Sewer Force Main, and Sanitary Sewer

**County of Durham** - Sanitary Sewer and Sanitary Sewer Force Main

The Design-Build Team shall develop and provide As-Built Drawings in accordance with the CADD guidelines, which are coordinately correct, horizontal and vertical, and tied to the state coordinate system. As-Built Drawings shall be provided for all utility facilities designed and constructed as part of this Scope of Work. In addition, the following As-Built information shall be provided to the NCTA and the municipalities:

**City of Durham** - Three hard copies on 24"x36" mylar or vellum and one electronic copy  
- AutoCad 2005 version or greater in .dwg drawing format.

**Town of Cary** - One hard copy on 24"x36" mylar or vellum and one electronic AutoCAD version on CD with TIFF images of the utility construction on each sheet.

**County of Durham** - Three hard copies on 24"x36" mylar or vellum and one electronic copy  
- AutoCad 2005 version or greater in .dwg drawing format.

The Utility Conflict Plans dated January 15, 2008, are provided for general information only. These plans are considered preliminary **roadway design** plans that were based on preliminary plans, cross sections and profiles, and should not be construed as final engineered design plans or as representing all possible conflicts. It shall be the responsibility of the Design-Build Team to identify all conflicts, obtain all municipality and environmental agency approval, and develop final construction documents accordingly.

Relocation and construction of all water and sewer, including but not limited to valves, fire hydrants, meters, that are impacted by the Design-Build Team's design and construction shall be the responsibility of the Design-Build Team, regardless of whether or not the conflict is specifically mentioned in this Scope of Work. All costs for design, materials, permits and fees, installation, testing and relocation shall be the responsibility of the Design-Build Team and shall be included in their lump sum bid for the project.

Coordinate all installations, connections and interruption of service with the utility owner.

The Design-Build Team shall coordinate and obtain approvals of the design and construction with the utility owner, the NCTA and the NCDOT, as appropriate. The Design-Build Team shall be responsible for all permits and fees (unless otherwise stated herein), shall adhere with DENR and MSD requirements, and shall be responsible for all DENR coordination and approvals associated with the facilities.

The Design-Build Team shall be responsible for making application and permitting both water and sewer utilities with the utility owner, to include any application or permitting fees.

The Design-Build Team shall submit two copies of the utility design to the NCDOT State Alternative Delivery Engineer for review and acceptance. The Design-Build Team shall provide the utility companies the appropriate number of copies for their review and approval.

The existing utility facilities are to remain in place and fully functioning until new or temporary facilities are certified and accepted as complete by the appropriate utility owner. There shall be no interruption of utility service, unless specifically stated for that conflict herein. Maintain service to all fire hydrants until relocated. Immediately repair and re-establish service line damage resulting from construction activities.

Existing facilities to be placed out of service shall be removed or grouted in accordance with Article 1000-7 of the *2006 NCDOT Standard Specifications*. The Design-Build Team shall properly remove and dispose of any matter within the utility, in accordance with local, State and Federal requirements.

Adhere to all NCDOT policies and procedures for accommodating utilities on highways rights of way.

Locate and verify the exact location, material, size, and condition of all water and sewer facilities.

Unless noted otherwise, the Design-Build Team shall locate the new utility facilities as far from the roadway as possible while remaining within the NCTA or NCDOT right of way. Except for crossings and transitions from existing lines and tie-ins to bridge attachments, utility lines shall be beyond a 1V: 1H distance and a minimum of five feet from edge of pavement. The location of new utilities shall allow for access and future maintenance.

Maintain adequate separation between storm sewers, sanitary sewers, duct banks and potable water mains per utility owner standards.

All materials shall be new, including fire hydrants. Water mains and appurtenances shall be NSF approved.

All fire hydrants removed during construction shall be provided to the appropriate municipality in like condition to that it was found.

PVC pipe used for temporary installations shall be a minimum DR18 and shall be appropriate for the working pressure. PVC pipe used for sanitary sewer shall be a minimum SDR 35.

Prior to placing any fire hydrants out of service, notify municipality Fire Department with jurisdiction within such area.

All steel casings up to 30-inch shall be a minimum 3/8 inch wall thickness; 30-inch to 42-inch shall be minimum 1/2 inch wall thickness; and 48-inch to 60-inch shall be a minimum 5/8 inch wall thickness. All casings shall be sealed on each end. Casings shall be located such that the utility owner may install the future utility main at a later date, which may be prior to project completion by means of open cut without hindrances such as pavement, guardrail, utilities, landscaping, drainage structures, signage, lighting, and others.

For all casings installed for future utilities, obtain and use elevations and inverts from the municipality.

All pipe joints that require constraint per the Utility Construction Criteria dated January 30, 2008, or the 2006 NCDOT Standard Specifications shall be mechanically restrained.

## **COMPENSATION**

All costs for the design and construction of the proposed facilities described herein shall be included in the lump sum price bid for the project. No additional payments shall be made either by the Department or the utility owners for the utility design or construction work outlined in this Scope of Work.

All references to Method of Measurement, Basis of Payment or any other statement regarding direct payment for utility design and / or construction shall be disregarded.

## **UTILITY OWNER: City of Durham**

**CONTACT:** Mr. Michael Hughes (919) 560-4326 Ext. 266

## **WATER MAINS**

### **Description of facilities**

**Conflict # 1.** See Utility Conflict Plans, Sheet UC-28. The City has an existing 16-inch ductile iron water main along the south side of NC 54 that crosses to the north side just west of NC 147, crosses under NC 147 and then crosses back to the south side of NC 54. There are approximately two hydrants on this line.

The Design-Build Team shall note a potential conflict with a proposed 15-inch pipe right of Station 15+50. Confirm that the remainder of this water main is not impacted. Provide no interruption of service.

**Conflict # 6.** See Utility Conflict Plans, Sheet UC-6. The City has an existing 16-inch ductile iron water main along the west side of Davis Drive. There are approximately 2 hydrants on this line throughout Davis Drive.

The Design-Build Team shall note a potential conflict with a proposed 15-inch pipe left of Station 240+85. Confirm that the remainder of this water main is not impacted. Provide no interruption of service.

The Design-Build Team shall note the conflict with the proposed improvements right of approximate Station 220+37 to 229+66. The relocation of the privately owned sewer lines will be addressed during the right-of-way settlement process and is not the Design-Build Team's responsibility.

**CONTACT:** Mr. Andy Lambeth (919) 560-7993

## **FORCE MAINS**

### **Description of facilities**

**Conflict # 23.** See Utility Conflict Plans, Sheet UC-25. The County has an existing 4-inch ductile iron pipe sanitary sewer force main along the south side of Hopson Road.

The Design-Build Team shall note a potential conflict with the proposed 15-inch pipe right of Station 70+88. Confirm that the remainder of this FSS main is not impacted. Force main may be placed out of service temporarily in order to make connections to the new line. Any temporary disruption of this force main shall be coordinated with the Durham County Utility Division.

**Conflict # 25.** See Utility Conflict Plans, Sheet UC-25. The County has an existing 4-inch ductile iron pipe sanitary sewer force main along the south side of Hopson Road.

The Design-Build Team shall note a potential conflict with the proposed 15-inch pipe right of Station 71+73. Confirm that the remainder of this FSS main is not impacted. Force main may be placed out of service temporarily in order to make connections to the new line. Any temporary disruption of this force main shall be coordinated with the Durham County Utility Division.

**Conflict # 25A.** See Utility Conflict Plans, Sheet UC-7. Durham County requests the installation of a 48 inch steel casing for a future ductile iron reclaimed water pipe crossing the centerline -L- at approximate Station 159+74.

The Design-Build Team shall design and construct a 48 inch steel casing. The Design-Build Team shall furnish, within 60 days after the installation of this casing, the final horizontal and vertical location of this steel casing to the Durham County Utility Division. The as-built plans shall be certified by a Registered Land Surveyor or Professional Engineer licensed in the State of North Carolina.

### **Standards**

The County of Durham uses the both the City of Durham's Standard Specifications and their own specifications. In case of conflict, the County of Durham's specifications govern.

the Design-Build Team is encouraged to communicate this concern to the NCTA prior to their submittal of the aesthetics details package (Reference Section 1.G. of the ITP (Volume I)).

### **Submittal of Aesthetics Details Package (Pre-Bid)**

The Design-Build Team shall submit a package (five copies) to the NCTA that conveys their approach to aesthetics and satisfies the requirements of Section 1.G. of the ITP (Volume I). The Design-Build Team is cautioned that the aesthetics details for at least all Mandatory Aesthetic Treatments identified herein must be pre-approved in writing by the NCTA within the timeline specified in the aforementioned section of the ITP or the Technical Proposal may be deemed non-responsive. The Design-Build Team must also include, at a minimum, the pre-approved aesthetics details package in the Technical Proposal.

The Design-Build Team shall also address the attributes of their approach to aesthetics in their Oral Presentation with the Technical Review Committee.

### **Preliminary Design**

After contract award, the Design-Build Team shall clearly present, with appropriate visual aids, the design intent, their aesthetic theme, general plan, and preliminary details for each design element within the project. The NCTA will require 30 days to review these details to ensure that they are acceptable and complementary to those for the Western Wake Freeway Project.

### **Final Design**

The Design-Build Team shall include the accepted aesthetics details with the appropriate submittal of preliminary and final designs plans for each element (bridge, roadway, sign structure, gantry, etc.).

The Design-Build Team shall develop and submit for review any specifications, material requirements or construction processes needed to accomplish the aesthetic work along with the final design submittal for each element.

### **Mandatory Aesthetic Treatments**

The Design-Build Team shall include the following aesthetic treatments, as a minimum, in their plans and their lump sum price bid for the entire project.

- Brick appearance using form liners and concrete stains on bridge abutments and side retaining walls with decorative pilasters, emblems, coping, and any necessary pedestrian safety railing. **Emblems beneath bridges are not required.**
- Bridge barrier rails with a traffic face on –Y- lines that satisfies the requirements of this RFP and the New Jersey traffic face on all bridges on the mainline. All bridge barrier rails shall have the outside face detail comparable to that shown in the Aesthetics Design Guidelines. **Metal rail on parapets will be permissible to meet pedestrian and bicycle height requirements.**
- Decorative interior bents and columns to match bridge abutment pilaster details

- Decorative column or column façade for toll gantries and overhead and pedestal sign structures
- Aesthetic treatment to gantry structural elements (Reference the Open Road Tolling (ORT) Infrastructure Scope of Work)
- Brick appearance using form liners and concrete stain on noise walls with decorative pilasters on the traffic side only
- Noise walls shall be constructed with periodic horizontal offsets in lieu of in a straight line. Include access breaks for maintenance behind the walls.
- Unless otherwise noted herein, brick appearance using form liners and concrete stain on retaining walls with decorative pilasters and coping to match bridge abutment details for those retaining walls that can be seen by the travelling public
- Decorative screening at toll system utility buildings to visually shield the motorist from such buildings consistent with the noise wall aesthetics.
- Unless otherwise noted herein, coloring of all elements as identified in the Aesthetic Design Guidelines, or as otherwise approved by the NCTA. The face of all barrier rails that can be seen when travelling on the Triangle Expressway shall be colored.
- With the exception of coloring the traffic face of all barrier rail, aesthetic treatments are not required for stream crossing structures or structures on NC 540, -YBFLY- and -YCFLY-.

### **Voluntary Aesthetic Treatments**

The Design-Build Team may elect to include other Voluntary Aesthetic Treatments in their Technical Proposal and/or design, such as the following, that will increase the visual appearance of the toll facility.

- Brick façade (embedded brick, brick veneer, or full brick) on bridge abutments and side retaining walls
- Brick façade (embedded brick, brick veneer, or full brick) on noise walls
- Brick façade (embedded brick, brick veneer, or full brick) on retaining walls
- Ornamental lighting across bridges along Davis Drive and Hopson Road
- Battered Abutments
- Bridge abutment planters on traffic approach with pedestrian rail along the -Y- line edge of the planter
- Embossed Street Identification on Bridge Abutment
- Fascia concrete girders with as smooth a face as is practicable
- Identity logos on noise walls
- Other such features included in the Aesthetic Design Guidelines but not specifically mentioned as Mandatory Aesthetic Treatments

The incorporation of both Mandatory and Voluntary Aesthetic Treatments into the Technical Proposal will be evaluated in accordance with the Section 3.B.(vi) of the ITP (Volume I).

**\*\*\* PROJECT SPECIAL PROVISION \*\*\***

(10-18-95)

Z-1

**PERMITS**

The Design-Build Team's attention is directed to the following permits that have been issued to the NCTA by the authority granting the permit.

<b><u>PERMIT</u></b>	<b><u>AUTHORITY GRANTING THE PERMIT</u></b>
Dredge and Fill and/or Work in Navigable Waters (404)	U. S. Army Corps of Engineers
Water Quality (401)	Division of Environmental Management, DENR State of North Carolina

The Design-Build Team shall comply with all applicable permit conditions during construction of this project. Those conditions marked by \* are the responsibility of the NCTA and the Design-Build Team has no responsibility in accomplishing those conditions.

Agents of the permitting authority will periodically inspect the project for adherence to the permits.

The Design-Build Team's attention is also directed to Articles 107-10 and 107-14 of the Standard Special Provision entitled Division One contained elsewhere in the RFP and the following:

Should the Design-Build Team propose to utilize construction methods (such as temporary structures or fill in waters and/or wetlands for haul roads, work platforms, cofferdams, etc.) not specifically identified in the permit (individual, general, or nationwide) authorizing the project it shall be the Design Build Team's responsibility to coordinate with the Engineer to determine what, if any, additional permit action is required. The Design-Build Team shall also be responsible for initiating the request for the authorization of such construction method by the permitting agency. The request shall be submitted through the Engineer. The Design-Build Team shall not utilize the construction method until it is approved by the permitting agency. The request normally takes approximately 60 days to process; however, no extensions of time or additional compensation will be granted for delays resulting from the Design-Build Team's request for approval of construction methods not specifically identified in the permit.

**Where construction moratoriums are contained in a permit condition which restricts the Design-Build Team's activities to certain times of the year, those moratoriums will apply only to the portions of the work taking place in the waters or wetlands provided that activities outside those areas is done in such a manner as to not affect the waters or wetlands.**

- (b) the controlling operation(s) alleged to have been delayed,
- (c) the calendar dates or calendar dates and times on which the controlling operation(s) were delayed and
- (d) the number of calendar days or hours by which he is requesting the completion date, intermediate completion date, or intermediate completion time to be extended.

If the Engineer determines that the controlling operation(s) were delayed because of circumstances beyond the control of and without the fault or negligence of the Design-Build Team, and that the Design-Build Team has pursued the work in accordance with Article 108-1, he will extend the completion date, intermediate completion date, or intermediate completion time unless otherwise precluded by other provisions of the contract. No extension of the completion date, intermediate completion date, or intermediate completion time will be allowed for delays caused by restrictions, limitations or provisions contained in the contract.

Consideration will be given for an extension in the completion date, intermediate completion date, or intermediate completion time involving an intermediate contract time of more than 96 hours if the Design-Build Team's current controlling operation(s) is delayed in excess of 8 percent of the total contract time (days), as defined in Section 101, the total intermediate contract time (days), as defined in Section 101, or the total intermediate contract time (hours), as defined in Section 101; due to weather or conditions resulting from weather. No other consideration will be given for extensions in the completion date, intermediate completion date, or intermediate completion time due to delays caused by weather.

Where the intermediate contract time is 96 hours or less, no consideration whatsoever will be given for an extension in the intermediate completion time due to weather or conditions resulting from weather.

- (2) If changes in the work from that originally contemplated in the contract are ordered by the Engineer and these changes result in reduction in quantities, elimination of items, additional work and/or extra work, the Engineer will allow an extension in the completion date, intermediate completion date, or intermediate completion time as he may deem warranted by such changes. Pursuit of the work with adequate forces and equipment and efficiency of the Design-Build Team's operations will be considered by the Engineer in determining an extension in the completion date, intermediate completion date, or intermediate completion time. It is, however, the Design-Build Team's responsibility to show just cause for an extension in the completion date, intermediate completion date, or intermediate completion time due to the aforesaid conditions.

The Design-Build Team's plea that insufficient contract time (days), intermediate contract time (days), or intermediate contract time (hours) was specified in the contract will not be considered as a valid reason for an extension in the completion date, intermediate completion date, or intermediate completion time.

When all work on the project is totally complete, with the exception of an item or items on which work is precluded by seasonal limitations set forth in the contract, the Engineer may, provided that the Design-Build Team has diligently pursued the work with adequate forces and equipment, waive the assessment of liquidated damages during the period of time from the date