Design-Build Policy & Procedures

North Carolina Turnpike Authority
5400 Glenwood Avenue, Suite 400
Raleigh, North Carolina 27612

December 16, 2007

NORTH CAROLINA
Turnpike Authority

Table of Contents

Executive Summary ---------- 3

Definitions ---------- 5

Project Considerations ---------- 5

Request for Proposals ---------- 6

1. General ---------- 6
2. Design and Preconstruction Services/Requirements ---------- 7
3. Environmental Services ---------- 7
4. Construction Engineering Services/Requirements ---------- 7
5. Special Construction Requirements ---------- 8
6. Quality Assurance Requirements ---------- 8
7. Project Access ---------- 9
8. Design Plans and Engineering Calculations Review ---------- 9
9. Utilities ---------- 9
10. Existing Project Features ---------- 9
11. Survey Requirements ---------- 9
12. Final Documents ---------- 9
13. Staffing Requirements ---------- 9
14. Geotechnical Requirements ---------- 10
15. Items To Be Furnished By The NCTA ---------- 10
16. Computer Services ---------- 10
17. Issue Resolution ---------- 10
18. Professional Liability Insurance and Bond ---------- 10
19. Public Involvement ---------- 10
20. Project Time/Schedule ---------- 11
21. Progress Payments ---------- 11
22. Technical Proposal ---------- 11
23. Price Proposal ---------- 11
24. Subcontracting ---------- 11
25. DBE/MBE/WBE goals and Requirements ---------- 11

The DB Team Selection Process ---------- 12

- Technical Review Committee ---------- 12
- DB Team Selection ---------- 12

1. Pre-qualification Requirements ---------- 12
2. Advertisement for Statements of Qualifications ---------- 12
3. Statement of Qualifications and Shortlisting ---------- 13
4. Technical Proposals and Price Proposals ---------- 14
5. Opening of Price Proposals ---------- 15
   Best and Final Offer ---------- 16
6. Best-Value Determination ---------- 17

- Use of Consulting Engineers ---------- 18

NCTA Design-Build Policy & Procedures
Executive Summary

Background

Design-Build (DB) combines into a single contract the design and construction of a given project. This contracting process allows the contractor to participate in design and other preconstruction activities in an effort to reduce costs and expedite construction.

The DB Team Selection Process

DB Teams will be selected by the following process:

(1) Advertisement for Statements of Qualifications
(2) Submission of Statements of Qualifications
(3) Shortlisting of DB Teams
(4) Issuance of an RFP
(5) Submission of Technical Proposals and Price Proposals
(6) Evaluation of Technical Proposals
(7) Opening of Price Proposals
(8) Calculation of Best-Value
(9) Award to DB Team

Request for Proposals

The Request for Proposals (RFP) document is the scope description for any given project and becomes the project contract. Any desired project elements, design requirements, selection criteria, guiding documents, responsibilities of the DB Team, responsibilities of the NCTA, etc. are stipulated within this document.

Technical Review Committee

The Technical Review Committee (TRC) is a critical element of the DB Team selection process. There will be a TRC composed of at least five senior engineers. These engineers will be comprised of both NCTA staff and NCDOT staff. These engineers will represent major areas of the project design, construction, and/or operation. The TRC will serve as a selection committee that will be responsible for both the shortlisting process as well as scoring the Technical Proposals as submitted by the shortlisted DB Teams.

Typical Quality Elements

The RFP quantifies those quality elements that the DB Teams' Technical Proposals will be judged on. Points are assigned to each of the elements given the criticality of each as it relates to project specific issues. Typical Technical Proposal Evaluation Criteria outlined in the RFP include:

- Design-Build Team Management
- Responsiveness to the RFP
- Long Term Maintenance
- Schedule and Milestones
- Innovation
- Maintenance of Traffic and Safety Plan
- Oral Interview
- Warranty and/or Guarantee

Determination of Best-Value

The determination of best-value will be made based on an algorithm that combines the Technical Score with the Price Proposal. Theoretically, this balances the quality of a design with a bid price to create a best-value solution for a project. The quality credit varies from project to project based on project complexity, specific project elements, and/or potential for innovation.

Stipends

It is common industry practice to pay a stipend to shortlisted teams that are not awarded the project. It is strongly recommended that a stipend be paid for NCTA projects. The stipend amount should be determined based on the size and complexity of the project. Stipend amounts may be as much as several hundred thousand dollars.

DBE Utilization

Traditional contract goals and reporting requirements are stipulated in the RFP for utilization of DBE subcontractors

NCTA Design-Build Policy & Procedures

Purpose

The purpose of this policy is to establish the North Carolina Turnpike Authority's (NCTA) process for procuring and administering design-build contracts.

Definitions

Design-Build (DB) – the combination of the design, other preconstruction activities, and construction phases of a project into a single contract.

Design-Build Team (DB Team) - any company, firm, partnership, corporation, association, joint venture, or other legal entity permitted by law to practice engineering, architecture, and construction contracting, as appropriate, in the State of North Carolina.

Request for Proposal (RFP) - the document that outlines the scope requirements of a project, describes the procurement process, and forms the basis for final proposals. The RFP becomes an element of the contract.

Project - the project to be designed and constructed as described in RFP.

Design-Build Proposal– a separately sealed Technical Proposal and a sealed Price Proposal submitted by each short listed DB Team.

Background

DB combines into a single contract the design, and/or other preconstruction activities, and construction of a given project. Construction Engineering and Inspection services may also be included in the project scope. All of the associated activities are to be performed in accordance with standard NCTA and NCDOT criteria, specifications and contract administration practices. These projects allow the contractor to participate in design in an effort to reduce costs and expedite construction.

The North Carolina Legislature authorized the NCTA to use the design-build process on projects administered by NCTA.

Project Considerations

The following five principal areas of concern should be carefully evaluated when applying the DB process:

1. Right of Way Procurement – Right of way procurement may be performed directly by the NCTA or by the DB Team. It is permissible to specify right of way limits in the RFP and require all design features to remain within the limits of the existing right of way. Due to schedule constraints it may be advantageous to have the DB Team procure the right of way.

2. Environmental Issues - The preparation of all environmental documents (i.e. NEPA documents) will, in most cases, remain the responsibility of NCTA. Environmental permits can be obtained either by NCTA or by the DB Team, depending on schedule constraints, level of design obtained prior to award, etc. Mitigation requirements will typically be the responsibility of NCTA. On-site mitigation may be required. If so, this work may be assigned to the DB Team. This assignment would be made based on the letting schedules. In addition, consideration must be given to any FEMA requirements (CLOMR/LOMR)

3. Utilities – NCTA will, through investigation of existing utility facilities in the project area, provide the location and ownership of existing utilities to the DB Team. On each project a determination will be made as to whose responsibility relocation of existing utilities will be. When utility relocation is the DB Team's responsibility, the DB Team, through consulting with utility companies, shall determine utility conflicts and make arrangements for relocation or adjustments as required. Information regarding "prior rights" and compensation responsibilities for utility relocations must be clearly defined in the RFP to eliminate costs of unknown risks. Internal procedures will be utilized when the NCTA is responsible for utility relocation and this information will be provided to DB Team.

4. Railroads – Responsibility for railroad issues must be addressed adequately in the RFP.

5. Toll Technology – The approach to applying toll technology to any given project must be evaluated from a physical construction application as well as from a system integration aspect. Coordination between these two activities, and coordination between the DB Team and the system integrator, are critically important.

Request for Proposals

In developing the Requests for Proposals (RFP) the following items should be addressed:

1. General - The RFP will include the design services required, the construction engineering requirements, the construction services required and the NCTA's responsibilities. The DB requirements/services shall be clear and complete, including any information, data and services to be furnished by the NCTA.

   The RFP shall include sufficient information upon which DB Teams may prepare DB Proposals. The RFP should include a summary of the NCTA's project objectives.

   Project requirements shall be described completely and in a manner that will be easily interpreted and understood. The NCTA shall conduct adequate research

and investigations to determine the facility requirements and to document them in an unambiguous manner. This portion of the procedure provides guidance as to the types of information that should be discussed for possible inclusion into the scope of services package.

In the event that there are questions of significant magnitude concerning the RFP requirements, the NCTA will contact all DB Teams in writing to clarify any and all issues. Question and Answer sessions with the individual DB Teams may be held on all projects.

The DB Team to whom the DB contract is awarded will be responsible for developing the project design based on the criteria and information contained in the RFP and for the construction of the facility in compliance with the plans and specifications developed by the DB Team. The evaluation criteria to be used to compile the total Technical Score for each DB Team shall be clearly delineated in the RFP. The evaluation criteria should be concise and clear. The evaluation criteria may vary on a project specific basis based on the demands of that project.

The best-value procurement process should be clearly defined in the RFP. The RFP shall include the maximum Quality Credit percentage assigned for that project. The RFP shall also include provisions for opening of the Price Proposals, the Best and Final Offer process, correlation between total Technical Score and Quality Credit percentage, and the process for determining the Quality Value and Adjusted Price for each DB Team. The RFP shall include an example demonstrating the calculations of Adjusted Price.

2. Design and Preconstruction Services/Requirements - The RFP must clearly define both the design services and the design requirements for right-of-way acquisition and easements. Design services may include geotechnical analysis, surveying, permitting, utility coordination, etc. The design requirements with specifications are essential to ensure that the project is constructed to meet the needs as determined by the NCTA.

3. Environmental Services - The NCTA will generally prepare the Environmental Documents and clearly define any special environmental considerations to be addressed by the DB Team. The NCTA will closely cooperate with the DB Team in this area. Specific projects will have a requirement that the DB Team obtain the environmental permits.

4. Construction Engineering Services/Requirements - The RFP must clearly define the construction engineering services to be provided by the DB Team. Services may include off-site fabrication review, as-built drawings, surveying, and other services as necessary for the particular project. Requirements may include but are not limited to the type and frequency of reports, submittal of shop drawings, the level of detail and type of documentation for materials used in the

construction of the project, and other such requirements necessary for the particular project.

The NCTA will determine the type of Construction Engineering Inspection (CEI) and Quality Assurance (QA) to be required on a project-by-project basis. The NCTA will consider the DB Team, a third party private engineering firm, or some other arrangement to provide these services.

5. Special Construction Requirements - The scope shall reference any applicable NCTA specifications including standard specifications, supplemental specifications, and/or special provisions as deemed appropriate by the NCTA. NCTA will consider whether there are any particular processes, traffic requirements, construction phasing, or techniques that need to be specified in order to satisfactorily construct the project. As a general rule, it is better to describe unique social, environmental, and community values desired and let the DB Team select the construction method/technique.

6. Quality Assurance Requirements - The fundamental process for QA requirements is defined by a variety of external documents. These include:

   - Glossary of Highway Quality Assurance Terms, April 1996, Transportation Research circular #457 which covers specifications, materials and workmanship;
   - Implementation Manual for Quality Assurance, February 1996 by the AASHTO Highway Subcommittee on Construction which primarily covers materials;
   - Quality Assurance Procedures for Highway Construction, June 29, 1995,DOT/FHWA 23 CFR Part 637 that covers materials and workmanship; and
   - NC DOT Construction Manual

   The criteria require at least three independent roles, including (1) quality control by the DB Team, (2) acceptance or verification by the agency field office, and (3) independent assurance by the agency central staff. The responsibilities for all three roles and minimum sampling, testing, and inspection frequencies shall be defined in contract documents. If any of the three roles is eliminated, project quality shall be closely monitored and an objective analysis shall be made of the impact of the change on the quality of the project.

   The RFP shall address any QC requirements that the DB Team must follow which are in addition to those already in the referenced specifications, policies and procedures. The RFP should also note any standard QC practices that do not apply (such as the designer submitting phase plans to the NCTA for review).

   This part of the RFP shall also require that the DB Team explain their program which will assure quality products (plans, construction, etc.).

In all cases, the NCTA will have an Independent Assurance and field review program. In addition, the NCTA will always retain the right to review any and all records and conduct tests at anytime in order to ensure quality products and services are being provided.

7. Project Access - The NCTA must determine who will be responsible for right-of-way access and how the coordination process will be handled. The scope will clearly state when the DB Team is to be responsible for identifying and obtaining all required rights of entry, etc.

8. Design Plans and Engineering Calculations Review - The RFP shall clearly define any documentation (included but not limited to design plans, shop drawings, or engineering calculations) that is to be received by the NCTA. Under DB, these submittals are not for the NCTA's approval but rather for verification of compliance with specified criteria. Phased construction plans shall require sealed drawings and specifications prior to beginning construction on that phase.

   The RFP should outline the time allowance for design review.

9. Utilities - The NCTA shall investigate thoroughly any right-of-way, utility relocation issues, and railroad issues to determine what utility considerations are present and what utility efforts may be required. The RFP shall clearly specify all utility efforts required of the successful DB Team.

10. Existing Project Features - The RFP shall include a section that specifies the responsibility for demolition and disposal or retainage of existing features, i.e. bridge components, overhead sign assemblies, etc.

11. Survey Requirements - The RFP shall specify any survey information required by the DB Team. The RFP will outline existing survey information that is available. It may be necessary for the NCTA to perform some survey work in the preparation of the scope. In any event, the NCTA must determine who will provide the survey control for layout, the layout itself and if it is to be tied to the State Plane Coordinate System.

12. Final Documents - The RFP shall clearly define the final documents required to be submitted by the DB Team. Additionally, the format the documents should be in will be described. This information, typically, will be required upon completion of the project. These should include: As-built plans (100% automated), engineering reports, shop drawings, test results, documentation, and daily reports.

13. Staffing Requirements - The RFP may outline the minimum training and experience requirements for any professional personnel deemed appropriate by the NCTA.

14. Geotechnical Requirements - The RFP shall specify any geotechnical information or reports required by the NCTA. The NCTA may perform some preliminary geotechnical work in the preparation of the scope. The NCTA may conduct the geotechnical investigations in order to save the shortlisted teams the time and expense. The NCTA shall provide copies of any existing geotechnical information that is available to all shortlisted DB Teams. Each project RFP shall identify Geotechnical Investigation responsibilities.

15. Items To Be Furnished By The NCTA - The RFP shall include a section that details any items or services to be furnished by the NCTA. This should include any information (data, reports, etc.), support functions (computer services, etc.), materials, equipment, testing devices, or other items that would affect the bid or technical approach. Such information might include survey data, geotechnical information, bridge hydraulic reports, existing plans, traffic projections, right of way maps, etc. Typically, NCTA will perform the permanent pavement designs. The DB Team may be required to perform temporary pavement designs. The RFP shall specify any pavement design considerations that may be required by the DB Team.

16. Computer Services - The plans for the project shall be prepared in electronic format. All electronic files shall be in Microstation format using Geopak software.

17. Issue Resolution - The scope shall include an issue escalation matrix or process that clearly defines the process for addressing questions or disagreements that may arise. This process should identify a resolution ladder within the NCTA and require the DB Team to provide a similar list of people in responsible charge. For the NCTA, the escalation should begin with the NCTA's Project Engineer and continue through to the NCTA Chief Engineer. Each level of resolution should also include a time frame for resolving the conflict.

    Partnering should be used on all DB projects in order to enhance team work.

18. Professional Liability Insurance and Bond - Professional liability insurance requirements shall be included in the RFP. The insurance shall be project specific and the dollar amount and term (length of time) clearly defined. The successful DB Team shall provide a performance and payment bond for the entire amount of the contract pursuant to Chapter 44A, Article 3 of the North Carolina General Statutes.

19. Public Involvement - Public involvement is an important aspect of the project development process. It includes communicating to all interested persons, groups and government organizations regarding the development of the project. Therefore, it is imperative that the NCTA clearly define in the RFP the level of coordination and/or involvement required for a particular project.

20. Project Time/Schedule - The RFP will state a time period in which the DB Proposal is to be delivered. The advertisement should also summarize the NCTA's selection schedule for the prospective DB Teams. Schedule should include all activities from initial advertisement to notice to proceed. The schedule should be stated in specific calendar dates, and it should clearly identify the time allotted for the preparation of qualification statements and for DB Proposals. An outline of the selection schedule should be included in the advertisement and a detailed schedule included in the RFP.

    The DB Team's project schedule shall be developed using scheduling techniques specified in the RFP based on the type of project. The DB Team's project schedule should specify the time frame for interim events such as design development drawings or construction documents. The RFP should state whether phased construction is permitted. However, construction can proceed only with approved and sealed phasing plans. A total plan set will not be required to start phased construction activities. The DB Team's project schedule should also include requirements of the NCTA, directly or through a third party, (i.e., site availability, completion of any environmental reports or permits, delivery of NCTA furnished equipment or materials, and utility requirements). The obligation of the NCTA to complete specific submittal reviews (if required) within a specified time period may also be included in the project schedule.

21. Progress Payment - The RFP must clearly address the invoicing and payment process including requirements for a payout schedule. The payout schedule should be based on major, well-defined deliverables related to the DB Team's schedule. The payout schedule should also include provisions for tracking DBE or MB/WB participation. The NCDOT's DBE Payment Tracking System will be utilized by the DB Team.

22. Technical Proposal - The RFP shall include well-defined Technical Proposal requirements. This should include detailed instructions regarding the content and format. The RFP shall also provide instructions as to the Technical Proposal and submittal deadline and submittal location.

23. Price Proposal - The RFP shall include well-defined Price Proposal requirements. DB projects are lump sum projects and are paid throughout a payout schedule based on major items or tasks. The RFP may require the DB Team to submit bid documentation prior to the execution of the contract. The RFP shall also provide instructions as to the Price Proposal submittal deadline and submittal location.

24. Subcontracting - The RFP shall address the amount of work the DB Teams will be allowed to subcontract.

25. DBE/MBE/WBE goals and Requirements - The RFP shall state the NCTA's goals for DBE/MBE/WBE utilization on the project.

The DB Team Selection Process

DB Teams are selected through what is commonly referred to as a "2-step" process. This process includes a shortlisting step that, in essence, prequalifies DB Teams on a project specific basis. These shortlisted DB Teams then compete for the project on a best-value basis. The following steps outline the process beginning with the role of the Technical Review Committee:

Technical Review Committee

The Technical Review Committee (TRC) is a critical element in the DB Team selection process. There will be a TRC composed of at least five senior level engineers. These engineers will be comprised of both NCTA staff and NCDOT staff. These engineers will represent major areas of the project design and/or construction. The TRC will be formed prior to, and will participate in, the development of the RFP documents. In addition, the TRC will serve as a selection committee that will be responsible for the evaluation of both (1) the Statements of Qualifications for the purpose of shortlisting and (2) the Technical Proposals for the purpose of determining a committee consensus Technical Score for the Technical Proposals submitted by the shortlisted DB Teams. A confidentiality agreement will be signed by all members of the TRC that limits their discussion on the Technical Proposals to only those personnel that they deem necessary to assist in the evaluation.

DB Team Selection

1. Pre-qualification Requirements

   Unless otherwise allowed in the RFP, The NCTA requires any entity involved with these projects to be prequalified by NCDOT's standard pre-qualification requirements. These requirements apply to each entity providing professional engineering services and/or contract construction services. Standard contractor pre-qualification requirements apply to each contractor entity within, or utilized by, the DB Team based on the applicable categories for the specific project. Each entity must be pre-qualified prior to the date specified in the contract documents.

2. Advertisement for Statements of Qualifications

   The NCTA will follow the standard NCDOT project advertisement process for acquiring professional services. In addition, a copy of the advertisement will be sent to all pre-qualified contractors.

   The advertisement process will generally include the advertising notices, project timeline, project synopsis, stipend notice, and a Request for Qualifications (RFQ) package.

The RFQ shall state a general description of the work and will include the requirements stated in the above procedure, any additional technical qualifications desired, and the timeline through project award. The advertisement gives instructions for acquiring a Request for Qualifications (RFQ) package. Requirements in the RFQ shall be general and not require the proposer to do technical evaluations and/or detailed scheduling of project specifics. In order to take full advantage of the process, each project advertisement should be drafted to fit the unique needs of that particular project.

A project synopsis of the preconstruction and construction activities projected to be a part of the Contract shall be made available to all prospective DB Teams. This document is not contractually binding, but rather serves as a guide for the formation of prospective DB Teams.

A timeline of events beginning with the advertisement date and concluding with the projected contract award date will be made available to all prospective DB Teams. This timeline will include all dates for submittals, meetings with prospective DB Teams, and the date for the determination of best value. The timeline shall be stated in specific calendar dates and shall clearly identify the time allotted for the preparation of Statements of Qualifications and Technical Proposals.

If applicable, the notice of a stipend and the amount of the stipend will be made available to all prospective DB Teams. This stipend will be made as partial compensation for each unsuccessful shortlisted DB Team that submits a responsive Technical Proposal. The stipend will be determined on a project-specific basis and will be based on both the project size and complexity.

3. Statement of Qualifications and Shortlisting of Design-Build Teams

Once the Statements of Qualifications are received, a "shortlist" of DB Teams will be developed. The shortlist shall be developed by the Technical Review Committee. The factors considered in the shortlisting process will be as outlined in the RFQ and will typically include, as a minimum, the DB Teams' project understanding, team composition, capabilities, quality program, safety program, and past performance.

The NCTA will consider a stipend for any shortlisted DB Teams that are not awarded the project. The amount will be determined prior to advertisement on a project-by-project basis.

A minimum of two prospective DB Teams will be shortlisted. In addition, at the NCTA's discretion, one additional DB Team may be designated by the Technical Review Committee as the shortlist alternate. In the event of a shortlisted DB Team withdrawing from further consideration on the project, the NCTA may invite the shortlist alternate to submit a Technical Proposal and Price Proposal for the

project. In this event, all previously shortlisted DB Teams will be made aware of this invitation.

All prospective DB Teams, regardless of shortlist status, will be afforded the opportunity for a debriefing with the NCTA regarding the relative merits of their Statements of Qualifications.

A meeting may be held, at NCTA's discretion, with the shortlisted DB Teams before they are advised to proceed with development of Technical Proposals and Price Proposals to clarify any issues and address any questions the DB Teams may have.

4. Technical Proposals and Price Proposals

In response to the Final RFP and all addenda, the shortlisted DB Teams will submit a Technical Proposal and Price Proposal for the project. The Technical Proposal shall be submitted concurrently with the Price Proposal. The Technical Proposal shall be submitted in a sealed package. The Price Proposal shall be submitted in a separate sealed package. The Technical Proposal and Price Proposal shall be submitted to the NCTA Chief Engineer or designee in strict accordance with the requirements and timeline contained in the Final RFP and as amended by addendum. The Price Proposals will remain sealed in a secure location with the NCTA Chief Engineer or designee. The Technical Proposals will be transmitted to the Technical Review Committee for evaluation.

Technical Proposals will address the technical elements of the design and construction of the project. In general, the evaluation process will consider the DB Team's composition, understanding of the project, the anticipated problems, the solutions to those problems, schedule, design, and other criteria as specified in the RFP. Schedule will be important. Thoroughness and quality will be considered in both design and construction as will the resources committed to the project. Detailed directions on presenting the Technical Proposal will be furnished to each shortlisted DB Team.

The Technical Review Committee shall first determine whether or not the Technical Proposals are responsive to the requirements of the RFP. If any of the Technical Proposals are considered non-responsive, the facilitator will notify the NCTA Chief Engineer accordingly, who in turn will notify the DB Team of that fact.

Each Technical Proposal found to be responsive will be evaluated by the Technical Review Committee. The Technical Review Committee may be provided tools to assist in the evaluation of the Technical Proposals. The Technical Review Committee may solicit input from other professionals regarding specific information that may be needed outside their experience or expertise.

Following a period of preliminary evaluation of the Technical Proposals, each shortlisted DB Team will address the Technical Review Committee with a presentation based on their Technical Proposal. To the greatest extent possible, all DB Teams will make these presentations on the same day. The DB Team will field any questions generated by the Technical Review Committee during their preliminary evaluation period or the DB Teams' technical presentations. All DB Teams will be afforded equal time for these presentations.

Following the technical presentations, the Technical Review Committee will convene with at least one facilitator to determine the Committee's consensus score in each of the major evaluation categories outlined in the RFP. For each DB Team, the sum of the consensus score in each of the major evaluation categories will represent the Committee's consensus Technical Score.

The facilitator serves in an ex officio capacity and facilitates the Technical Review Committee's discussion necessary for their determination of a consensus Technical Score for each DB Team. The facilitator may answer questions regarding the evaluation criteria and process as well as specific questions about Technical Proposal contents. The role of the facilitator is to ensure that (1) the evaluation process occurs in a systematic and consistent manner, (2) false or irrelevant data is not used in the evaluation process, (3) to the greatest extent possible, the overall evaluations are properly valued as relates to the anticipated cost of the project and (4) the Technical Review Committee understands the confidential nature of their work and the resulting Technical Scores.

Upon determination of a consensus Technical Score for each DB Team, the evaluation results are transmitted in confidence to the NCTA Chief Engineer or designee. These scores remain in the possession of the NCTA Chief Engineer or designee until such time that the Price Proposals are unsealed and read publicly.

5. Opening of Price Proposals

At the time and date specified in the Final RFP and as amended, the NCTA Chief Engineer or designee will open the Price Proposals and calculate the percentage difference between the Price Proposals submitted and the Engineer's Estimate. Prior to opening the Price Proposals, the NCTA Chief Engineer or designee will provide each DB Team, if present at the opening, a sealed envelope containing that DB Team's total Technical Score.

Should all of the Price Proposals be within an acceptable range or below the Engineer's Estimate, the NCTA Chief Engineer or designee will proceed to calculate the quality.

Should any one or more of the Price Proposals be within an acceptable range or below the Engineer's Estimate and the remaining Price Proposals exceed an acceptable range of the Engineer's Estimate, the NCTA Chief Engineer or

designee will go to a separate location to calculate the quality credit and determine if the DB Team with the lowest adjusted price is within an acceptable range of the Engineer's Estimate. Should the Price Proposal of the DB Team with the lowest adjusted price be within an acceptable range of the Engineer's Estimate or below the Engineer's Estimate, the NCTA Chief Engineer or designee will proceed to publicly read the Price Proposals, Technical Scores, and adjusted prices. Should the Price Proposal of the DB Team with the lowest adjusted price exceed an acceptable range of the Engineer's Estimate, the NCTA Chief Engineer or designee will publicly read the Price Proposals only and the NCTA will then determine whether to proceed to request a Best and Final Offer (BAFO) as outlined below.

Should all Price Proposals submitted exceed an acceptable range of the Engineer's Estimate, the NCTA Chief Engineer or designee will publicly read the Price Proposals only. The NCTA will then determine whether to proceed to request a Best and Final Offer (BAFO) as outlined below.

Provided the NCTA elects to proceed to request a Best and Final Offer (BAFO), at the date and time specified, the NCTA Chief Engineer or designee will open the Best and Final Offer Price Proposals and proceed to publicly read all Price Proposals, Technical Scores and adjusted prices.

Best and Final Offer

In the event Price Proposals exceed an acceptable range of the Engineer's Estimate or if the NCTA feels it is necessary for any reason, the NCTA may choose to make amendments to the details of the RFP and request a Best and Final Offer from all of the previously shortlisted DB Teams. Alternately, the NCTA may choose to redistribute to the shortlisted DB Teams another RFP for the project with no amendments to the RFP scope.

After receipt of the redistributed RFP, the Design-Build Team has the option of changing their Technical Proposal details. If the DB Team changes any component of the Technical Proposal, the TRC will review those amended components of the Technical Proposal and reevaluate the scores accordingly. The DB Team shall highlight the changes to bring them to the NCTA's attention. A revised total score will be calculated, if appropriate, based on these amendments to the Technical Proposal.

Additional oral interviews will not be held. The DB Teams will submit both a revised Price Proposal and a revised Technical Proposal (if applicable) at the time, place, and date specified in the redistributed RFP. A revised Quality Value (if required) and Adjusted Price will be determined elsewhere in the RFP. This will constitute the DB Team's Best and Final Offer. Award of the project may be made to the DB Team with the lowest adjusted price on this Best and Final Offer for the project.

6. Best-Value Determination

The selection of a DB Team will involve both technical quality and price. A maximum Quality Credit Percentage will be assigned for each project as determined by the NCTA prior to advertisement.

The NCTA Chief Engineer or designee shall use a table based on the maximum Quality Credit Percentage to assign a Quality Credit Percentage to each proposal based on the proposal's Technical Score. This percentage will range from 15% to 50% depending on the project.

The example below shows how the table would be formulated based on a maximum quality credit of 15%.

Quality Credit Percentage for Technical Proposals

Technical Score Credit (%)	Quality Credit (%)	Technical Score	Quality
100	15.00	84	7.00
99	14.50	83	6.50
98	14.00	82	6.00
97	13.50	81	5.50
96	13.00	80	5.00
95	12.50	79	4.50
94	12.00	78	4.00
93	11.50	77	3.50
92	11.00	76	3.00
91	10.50	75	2.50
90	10.00	74	2.00
89	9.50	73	1.50
88	9.00	72	1.00
87	8.50	71	0.50
86	8.00	70	0.00
85	7.50		

The NCTA Chief Engineer or designee shall publicly open the sealed Price Proposals and multiply each DB Team's Price Proposal by the Quality Credit Percentage earned by the DB Team's Technical Proposal to obtain the Quality Value.

The Quality Value will then be subtracted from each DB Team's Price Proposal to obtain an Adjusted Price based upon price and quality combined. Unless all proposals are rejected, the NCTA will recommend to the NCTA Board that the DB Team having the lowest Adjusted Price be awarded the contract. The actual cost of the DB contract will be the amount received as the Price Proposal. The following table shows an example of the calculations involved in the process.

Example of Calculating Quality Adjusted Price Ranking

Proposal	Technical Score	Quality Credit (%)	Price Proposal ($)	Quality Value ($)	Adjusted Price ($)
A	95	12.50	3,000,000	375,000	2,625,000
B	90	10.00	2,900,000	290,000	2,610,000
C	90	10.00	2,800,000	280,000	2,520,000*
D	80	5.00	2,700,000	135,000	2,565,000
E	70	0.00	2,600,000	0	2,600,000

*Successful Proposer - Contract Cost $2,800,000

Use of Consulting Engineers

Any consultant engineers under contract, or previously under contract, to the NCTA and/or NCDOT to prepare preliminary plans, planning reports or any RFP for a specific project will not be allowed to participate in any capacity with the DB Team selected to perform the work.

Exceptions to this policy, when requested by a DB Team, may be granted by the NCTA if it is determined that the firm's involvement does not constitute an unfair bid advantage.