

Design-Build Guidance



Table of Contents

List of Acronyms	1
Chapter 1 Introduction	2
1.1 Purpose	2
1.2 Project Selection Best Practices	3
1.3 Procurement Options and Basis for Award	5
1.3.1 Technical/Price Scoring	5
1.3.2 Technical Variable Scope/Fixed Budget Scoring (VSFB)	6
1.3.3 Lowest Price Technically Acceptable Scoring (LPTA)	6
1.4 Stipends for Unsuccessful Proposals	6
1.5 Establishment of Owner's Project Team	8
1.5.1 Project Manager (PM)	8
1.5.2 Owner's Project Team Members	8
1.5.3 Technical Review Committee (TRC)	9
1.6 Notice of Intent (NOI)	9
Chapter 2 Pre-Advertisement	12
2.1 Preliminary Project Development	12
2.1.1 Project Scope	12
2.2 Risk Identification and Allocation	12
2.2.1 Assessing Risk Items	12
2.2.2 Allocating Risk	12
2.3 Project Technical Requirements	15
2.4 Initial Cost Estimate & Schedule	15
2.4.1 Initial Cost Estimate	16
2.4.2 Modified Field Estimates	16
2.4.3 Initial Project Schedule	16
2.5 Reference Information Documents (RIDs)	16
2.6 Industry Forum	17
Chapter 3 Advertisement	18
3.1 KYTC Design-Build Project Information	18
3.2 Technical Review Committee	18
3.3 Establish Disadvantaged Business Enterprise (DBE) Goal and Requirements	18
3.4 Public Advertisements	19
3.5 Request for Qualifications (RFQ)	19
3.5.1 Required Qualifications of DBT Members	20
3.6 Conflict of Interest	22
3.8 Shortlisting Process	22
3.9 Request for Proposals (RFP)	23

3.10 Alternative Technical Concepts (ATC)	27
3.11 One-on-One Meetings	28
Chapter 4 Evaluation, Letting and Award	31
4.1 Evaluation of SOQ and Shortlist Recommendation	31
4.2 Approval of Shortlist by Awards Committee	31
4.3 Evaluation and Scoring of Technical Proposals	32
4.4 Request for Clarification of Technical Proposals	33
4.5 Public Opening of Price (or Variable Scope) Proposal	33
4.6 Non-Responsive Request for Determination	33
4.7 Award	36
4.8 Debriefing	36
4.9 Stipend Acceptance	36
Chapter 5 Post Award	37
5.1 Notice to Begin Work	37
5.2 Document Control and Management	37
5.3 Schedule of Values	40
5.4 Buildable Units	40
5.5 CPM Schedule	41
5.6 Quality Management Plan	41
5.7 Released for Construction Plans	43
5.8 Construction Administration	43
5.9 Progress Payments	45
5.10 As-Built Plans	45
Appendix A — Sample RFP Template	46
Appendix B — Example Scoring Sheets for TRC	125
Appendix C — CPM Note	132
Appendix D — Sample Confidentiality Agreement	149
Appendix F — Document Control Templates	152

List of Figures

Figure 2.1 Risk Allocation Matrix	13
List of Tables	
Table 1.1 Comparing Design Build and Design-Bid-Build	2
Table 1.2 Project Scope Considerations	3
Table 1.3 Contract Conditions	4
Table 1.4 Right of Way, Utilities, and Environmental Issues	4
Table 1.5 Stipend Formulas	7
Table 1.6 Project Manager Responsibilities (In Collaboration with ADPM)	8
Table 1.7 Project Manager Responsibilities (In Collaboration with Division of Construction Procure)	ement)
	9
Table 1.8 Project Manager Responsibilities (In Collaboration with the Owner's Project Team)	9
Table 2.1 Risk Allocation Guidance	13
Table 2.2 Example Technical Requirements (for RFP)	15
Table 5.1 Hierarchy of Contract Documents	38
List of Exhibits	
Exhibit 1.1 Determining DBT Overall Sore	6
Exhibit 1.2 Calculation of Best Value for VSFB Procurement	6
Exhibit 1.3 NOI Template	11
Exhibit 3.1 RFP Outline	24
Exhibit 3.2 Typical Procurement Timeline	29
Exhibit 4.1 Template for Short List Announcement	32
Exhibit 4.2 Example Scoring Criteria for a Technical Proposal	34
Exhibit 4.3 Example Public Announcements of Bid Results	35

List of Acronyms

Acronym Definition

AASHTO American Association of State Highway and Transportation Officials

ADPM Alternative Delivery Program Manager

ATC Alternative Technical Concept

CDE Chief District Engineer
CPM Critical Path Method

CQMP Construction Quality Management Plan

DB Design-Build
DBB Design-Bid-Build

DBE Disadvantaged Business Enterprise

DBT Design-Build Team

DQMP Design Quality Management Plan
FHWA Federal Highway Administration
IJS Interchange Justification Study
IMR Interchange Modification Report

ITP Instructions to Proposers
KRS Kentucky Revised Statutes

KYTC Kentucky Transportation Cabinet

NBW Notice to Begin Work

NEPA National Environmental Policy Act

NOI Notice of Intent

OPT Owner's Project Team
PL&G Preliminary Line and Grade

PM Project Manager

QA/QC Quality Assurance/Quality Control

QCP Quality Control Plan

QMP Quality Management Plan
RFC Released for Construction
RFP Request for Proposals
RFQ Request for Qualifications

RID Reference Information Documents

ROW Right of Way

SHE State Highway Engineer
SOQ Statement of Qualifications

SOV Schedule of Values

TMP Transportation Management Plan
TRC Technical Review Committee

Chapter 1 Introduction

1.1 Purpose

On design-build (DB) projects, a designer and builder work together under a single contract to provide the Kentucky Transportation Cabinet (KYTC) design and construction services. This differs from design-bid-build project delivery, where design and construction services are awarded under separate contracts. Table 1.1 captures how DB projects differ from design-bid-build projects. At minimum, a design-build team (DBT) consists of a highway contractor responsible for project construction and consultant firm(s) which complete final design work. Other contractors, designers, and other entities that will work on a project may also be included on a DBT.

Table 1.1 Comparing Design Build and Design-Bid-Build

		D : D: D :
	Design-Build	Design-Bid-Build
Innovation	 Consultants and contractors may be able to introduce new design and/or construction alternatives that are equal in quality or better than what contract requirements specify while still adhering to the project scope. Contractors can optimize project design using alternative methods best suited to their capabilities and approaches. 	 Contractors are required to submit bids for the project as designed. However, some room exists to introduce alternatives (e.g., value engineering proposal) after being awarded the contract. Because proposals may not be approved, greater uncertainty exists regarding the possibility for innovation.
Project Completion	 Design and/or construction can be fast-tracked. Construction can begin while initial design package submissions are reviewed for acceptance by KYTC. 	Design plans are completed, advertised, and awarded before construction may begin.
Payments	 Lump-sum contracts based on design-complete and construction-complete pay items. Payments based on the percentage of each activity completed as per the approved payment schedule. 	Payment based on individual work items completed and accepted.
Procurement	Reliance on best value procurement.	Low-bid procurement methods.
Contracts	 Bids solicited via a request for proposals (RFP). RFPs specify design, management, and construction requirements. The DBT creates design documents. 	Uses plans and specifications to advertise a project for bids.

KYTC staff should treat this guide as a resource document. It should not be treated as a standard or policy, both of which include step-by-step descriptions of a process that *must be* followed. In contrast, this guide describes at a high-level strategies, methods, and best practices that can serve as the basis for successful DB implementation. Its content is drawn from common KYTC practices and external resources whose

guidance is relevant. Flexibility is emphasized throughout this guide. Encouraging a flexible approach to DB facilitates project delivery that is adapted to individual project contexts. Although much of the guidance has universal applicability, several recommendations may need to be modified to fit specific project contexts. Any decisions that significantly deviate from this document's recommendations should be justified based on operational experience and objective analysis. This guide does not supersede the application of sound engineering principles by experienced professional engineers.

Users should apply DB guidance in conjunction with other KYTC guidance and materials. These include, but are not limited to, manuals issued by Construction, Construction Procurement, Drainage, Environmental Analysis, Geotechnical, Highway Design, Kentucky Methods, List of Approved Materials, Maintenance, Materials, Permits, Professional Services, Right of Way, Standard Drawings, Standard Specifications, Structural Design, Traffic Operations, Utility & Rail, and related Policy Documents or Directives.

Readers should keep in mind that DB project delivery is rapidly evolving in the Kentucky transportation industry. Changes in thought and practice will inevitably occur following publication of this guidance (or its subsequent versions). Therefore, emergent or evolving practices should be incorporated into DB project delivery as warranted.

1.2 Project Selection Best Practices

DB is best suited for projects that need to be accelerated, possess unique opportunities to appropriately transfer risk to the DBT, and/or have opportunities for innovation that may significantly decrease contract time, reduce costs, and/or improve the facility's safety and quality.

Sound engineering judgment and project management principles are essential when evaluating candidate DB projects. The decision to use DB contracting should be based on an assessment of the project's specific goals and risks. Some common features of DB projects are:

- Accelerated for public benefit
- Have up front contractor-design engineer interactions to incorporate value engineering analysis to reduce costs
- Include complex constructability issues
- Require specialty or innovative designs and construction methods or techniques
- Support economic development
- Maximize the use of available funding
- An emergency project where repair or design and construction must be expedited
- Include software development or integration, and/or rapidly changing technologies

When analyzing candidate projects, careful consideration should be given to the project scope, contract conditions, right of way (ROW) issues, utilities, and environmental concerns. Projects which meet one or more of the criteria listed in Tables 1.2 - 1.4 are most likely to succeed using a DB approach.

Table 1.2 Project Scope Considerations

- Project scope is well-defined.
 - A well-defined project scope ensures KYTC and the DBT share a common understanding of the project's goals. Risks and costs increase if the project scope is uncertain.

- Project design is less than 25 percent complete.
 - Once significant design work is finished and many project decisions have been made, paying a
 DBT to re-engineer the project generally does not offer good value to KYTC. Requiring a DBT to
 use completed engineering work prevents it from deploying its creativity, powers of innovation,
 and flexibility.
- Project quality can be defined through minimum design details and construction specifications.
 - With DB, KYTC loses some control over design details and construction specifications. When KYTC designs a project, its engineers decide where to construct elements that exceed normal standards or specifications (where this modification may add significant value). With DB, the DBT exerts significant influence over design and construction quality and has the discretion to incorporate potential enhancements. Minimum acceptable design standards must be well-defined in the scope as DBTs tend to design to minimum standards to decrease costs.
- Project has complex constructability issues that could significantly impact the public (i.e., maintenance of traffic challenges).
- Project type is unique KYTC has limited experience.
 - o If KYTC staff have limited experience on a specific project type, or if few experienced staff are available, DB can bring together a team that has the necessary subject-matter expertise.

Table 1.3 Contract Conditions

- Project risks have been identified, are unlikely to change, and can be effectively mitigated by a DBT.
- Expectation of adequate competition.
 - o The project should not be so specialized or in a location that will limit availability of proposers.
- The project can benefit from a best-value procurement.
- Project construction funding is available within the construction-scheduled timeframe.

Table 1.4 Right of Way, Utilities, and Environmental Issues

- The NEPA document should be completed and approved prior to project award, or
 The project is state-funded and not subject to NEPA requirements except for required permits.

 Note: additional NEPA requirements should be considered for those prospective projects currently on the interstate system (e.g., IMR/IJS).
- The project does not have to address sensitive environmental issues during construction (e.g., stream or wetland impacts), or
 Environmental mitigation measures can be completed under the DBT's direct oversight on the expedited schedule.
- ROW acquisition is often a significant source of risk. A project may succeed when ROW needs are minimal, or
 The RFP can easily define a schedule of individual parcel clearance, allowing the DBT to phase work

accordingly, or

The DBT can mitigate risk by taking direct control of ROW acquisition and phasing the project through the clearance of easily defined buildable units.

The project has minimal utility relocations or railroad coordination, or
 Utility relocation and/or railroad coordination may be included in the DB Contract to provide value
 to KYTC and transfer direct control of these activities to the DBT. These items can then be completed
 under the DBT's direct oversight on the expedited schedule while reducing KYTC risk.

1.3 Procurement Options and Basis for Award

KYTC typically uses a two-phase best value procurement method to award DB projects. First, KYTC releases a Request for Qualifications (RFQ). In some cases the RFQ may be preceded by a Notice of Intent (NOI) to give the industry advance notice of an upcoming DB project. The Technical Review Committee (TRC) evaluates the Statements of Qualifications (SOQ) submitted by DBT proposers in response and shortlists those deemed most qualified. Section 1.5 discusses the TRC in more detail. Once this process is complete, KYTC distributes a Request for Proposals (RFP). On some projects KYTC may combine the RFQ and RFP due to time constraints. This would most commonly be used when the RFQ is a pass/fail requirement and no shortlisting is required. Shortlisted DBT proposers are invited to submit a Technical Proposal and a Price Proposal (see Chapter 3 for more details on these materials). When selecting a winning DBT Proposer, KYTC's decision is not based solely on bid prices. DBT Proposer qualifications, as well as their Technical and Price Proposals, are factored into the decision. RFPs will clearly define scoring criteria for Technical Proposals and the method of contract award. Incentive dates may also be considered to spur completion of key project activities that may provide value to KYTC and/or the traveling public.

KYTC uses the following scoring methods to select winning DBTs:

- Technical/Price Scoring
- Technical Variable Scope/Fixed Budget Scoring
- Technically Acceptable/Low Price Scoring

Each method has advantages and disadvantages. Decisions about which method should be used should be made based on an assessment of project risks, whether KYTC or the DBT is best suited to manage these risks, opportunities for innovation, project complexity, and budgetary constraints. Each method is summarized below. See Section 2.3 for a discussion of developing technical requirements and Section 4.3 on evaluating Technical Proposals.

1.3.1 Technical/Price Scoring

- Best value is determined through weighted scoring of the Technical Proposal and Price Proposal.
- Technical Proposals and Price Proposals are evaluated independently, with Technical Proposals assessed before Price Proposals are opened.
- The RFP contains the formula used to determine the best value. Exhibit 1.1 provides a sample formula.
 Note that the multipliers provided in Exhibit 1.1 are hypothetical. A Project Team will establish multipliers with concurrence from KYTC executive leadership.

Exhibit 1.1 Determining DBT Overall Sore

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SB = 100 [0.30 (TB/TH) + 0.70 (PL/PB)]
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SB = Overall Score

PB = DBT Price Proposal

PL = Lowest Price Proposal (all DBTs)

TB = DBT Technical Proposal Score

TH = Highest Technical Proposal Score (all DBTs)

1.3.2 Technical Variable Scope/Fixed Budget Scoring (VSFB)

- DBT selection made using a base bid with variable options. A maximum budget is specified. This lets KYTC control costs while seeking the maximum scope for a defined budget.
- DBT Proposers develop a variable scope that describes how they will construct the greatest amount of work within the specified budget.
- Proposers submit two proposals: 1) Technical Proposal and 2) Variable Scope Proposal with price.
 Each is evaluated separately and the scores combined. Exhibit 1.2 provides an example formula for determining the best value for VSFB.

Exhibit 1.2 Calculation of Best Value for VSFB Procurement

Best Value = TP + VSP + Price*

TP = Technical Proposal Score (defined maximum)

VSP = Variable Scope Proposal Score (defined maximum)

Price = Price Score (if submitted price is less than specified budget)

* Price score is **only** used if a DBT-submitted price is less than the specified maximum. The calculation of the Price Score is based on how much the DBT-submitted price is below the specified maximum budget. The calculation of the Price Score will de detailed in the RFP.

1.3.3 Lowest Price Technically Acceptable Scoring (LPTA)

- The winning DBT Proposer is selected based on low bid.
- Proposers submit two proposals: 1) Technical Proposal and 2) Price Proposal. Technical Proposals are scored on a pass/fail basis. A Price Proposal is only opened if the Technical Proposal receives a passing grade. The DBT Proposer that submits the lowest bid is awarded the contract.

1.4 Stipends for Unsuccessful Proposals

KYTC typically pays a stipend to unsuccessful DBT Proposers that submit a responsive proposal. The RFP defines what criteria Technical Proposal must meet to be judged responsive. Stipends are not intended to offset all proposal preparation costs, only a portion of proposal development expenses. There are several justifications for providing stipends:

- Offering a stipend encourages firms to apply and therefore increases competition.
- Stipends offset some of the risk incurred by unsuccessful Proposers;
- Stipends incentivize firms to invest the time and resources needed to optimize designs and craft innovative solutions, both of which increase project quality and reduce construction time.
- Finally, stipends compensate firms for the transfer of their intellectual property rights to KYTC.

In return for paying a stipend, KYTC may use — without restriction — concepts or ideas contained in an unsuccessful Technical Proposal. Except for intellectual property developed apart from or prior to a DBT beginning work on a Technical Proposal, KYTC retains an undivided joint interest in all rights and intellectual property submitted with the Technical Proposal. This includes intellectual property contained in all approved Alternative Technical Concepts ATC(s) whether submitted to as part of the Technical Proposal or not. This intellectual property may be used on the project for which the contract is awarded as well as all future procurements. Once a stipend has been paid, KYTC is not obligated to offer unsuccessful Proposers additional compensation, irrespective of how frequently their intellectual property is used. By accepting a stipend, DBTs agree to waive all claims and causes of action against KYTC and FHWA related to the project.

The KYTC Alternative Delivery Program Manager (ADPM) and the Project Manager (PM) work together to calculate the stipend amount. The following variables are taken under consideration:

- Estimated proposal development costs
- Project complexity
- Level of risk associated with the project
- Amount of project-related materials/design files provided by KYTC
- Magnitude of competition anticipated during the procurement process

Table 1.5 presents guidance for calculating the stipend. *However, this guidance should not supersede sound engineering judgment.* Stipend amounts are generally commensurate with nationally accepted values, however, KYTC may deviate from the recommended formulas if there is a legitimate business case for doing so. The method used to calculate the stipend, as well as its justification, must be documented in project files. RFPs include the stipend amount and describe how KYTC plans to remit payment. If the stipend amount and distribution process are known when the RFQ is issued, prospective Proposers benefit from having this information. However, this is not required.

Table 1.5 Stipend Formulas

Estimated Contract Value (ECV)	Complex and/or Rehabilitation Projects	New Construction Projects	Stipend Range
< \$5 million	0.0050 x ECV	0.0040 x ECV	\$15,000 — \$25,000
\$5 million — \$20 million	0.0030 x ECV	0.0025 x ECV	\$15,000 — \$60,000
\$20 million — \$50 million	0.0020 x ECV	0.0018 x ECV	\$36,000 — \$100,000
\$50 million — \$100 million	0.0015 x ECV	0.0012 x ECV	\$60,000 — \$150,000
> \$100 million	0.0012 x ECV	0.0010 x ECV	> \$100,000

By submitting a Technical Proposal, a DBT Proposer acknowledges that it is eligible for a stipend if it is not awarded the Contract. Stipends are paid out after KYTC enters into a contract with the successful DBT. An unsuccessful DBT that submitted a responsive Technical Proposal may elect to waive the stipend payment within 10 days of KYTC's Award decision. By waiving the stipend payment, the Proposer retains sole rights to its Technical Proposal and all intellectual property contained found within it.

If Technical Proposals are submitted but KYTC does not award the Contract, stipends are paid to all responsive DBT Proposers. A DBT may waive this payment. KYTC is not obligated to pay stipends if it withdraws the Contract before Technical Proposals are submitted.

1.5 Establishment of Owner's Project Team

Establishing the Owner's Project Team (OPT) and clearly defining the roles of each member is critical for delivering a successful DB project. Composition of the OPT should be tailored to address the unique project context.

1.5.1 Project Manager (PM)

A PM oversees both project development and delivery. Assigned based on project-specific requirements, their responsibilities include but are not limited to:

- Ensuring the project meets scope, schedule, budget, and quality requirements
- Identifying, monitoring, and mitigating risk
- Reporting project metrics in an accurate and timely manner

The PM directs all project activities, from the initial design to completed construction, and assumes the lead in communicating with all stakeholders (i.e., ADPM and the project team, among others).

1.5.2 Owner's Project Team Members

The PM should collaborate with the ADPM to make programmatic decisions about who will participate on the OPT. The OPT generally consists of the PM, ADPM or their designee, and other members who participate in project work but are not necessarily involved with project management.

The OPT should include diverse individuals who possess either 1) expert knowledge in a particular subject-matter area or 2) a specific skill set needed to carry out project tasks. Potential members include District Office Staff in the district where the project is located, Central Office Staff, staff from District Offices other than the project location, consultants, or any combination of those groups mentioned necessary to assist the PM in overseeing the DB contract. When assembling the OPT, the PM should consult with the State Highway Engineer and Chief District Engineer(s) to properly consider how much time will be required of potential team members. The OPT helps the PM develop the RFP's technical requirements and provides technical expertise when administering the design and construction phases of the DB contract. Tables 1.6 – 1.8 summarize the responsibilities of the PM and specify divisions or groups for collaboration.

Table 1.6 Project Manager Responsibilities (In Collaboration with ADPM)

- Coordinate with Chief District Engineer (CDE) and State Highway Engineer (SHE) to build OPT
- Manage the DB procurement process
- Coordinate with FHWA, as necessary, to obtain authorizations and/or concurrence to advertise the RFP
- Facilitate the procurement process for consultant resource needs, including Program Management
- Manage Consultants who participate on the OPT.
- Facilitate reviews of all DB submittals
- Proactively communicate with other KYTC offices, local governments, and FHWA
- Serve as a resource to the industry and local governments on matters related to DB delivery

Table 1.7 Project Manager Responsibilities (In Collaboration with Division of Construction Procurement)

- Advertise the NOI for all DB projects
- Advertise the RFQ for Best Value selection method
- Receive and facilitate the evaluation of SOQs and issue the shortlist notification
- Advertise the RFP and issue necessary amendments
- Facilitate review of Technical Proposals
- Facilitate the letting, award, and execution of the DB contract
- Facilitate one-on-one meetings and the ATC process
- Facilitate evaluation of Technical Proposals and the opening of Price Proposals
- Provide debriefing information (if requested)

Table 1.8 Project Manager Responsibilities (In Collaboration with the Owner's Project Team)

- Develop and maintain DB procedures, guidelines, template contracts, and related documents
- Facilitate the administration of the design and the construction phase of the DB contract
- Review DBT invoices and supplemental agreements/change orders

1.5.3 Technical Review Committee (TRC)

TRC responsibilities vary based on project complexity, but generally include evaluating SOQs, Technical Proposals, and ATCs. The TRC will include the PM and designees from the OPT and *must be* KYTC employees. **All TRC members** are bound by ethical and confidentiality requirements and are required to sign a mandatory confidentiality agreement. Section 3.2 provides additional information on TRCs.

1.6 Notice of Intent (NOI)

The NOI alerts the Contractor and Consultant communities to an upcoming DB project. KYTC may choose to have the RFQ serve as the NOI. In this case, a separate document is not required. Information that may be incorporated into an NOI includes but is not limited to the following:

- General description of the project and provisional scope
- Tentative procurement schedule
- Anticipated DBT prequalification requirements
- Unique or special contractor or consultant experience requirements
- DBT selection method (refer to Section 1.3)
- Stipend (if known)
- List of Contractors, Consultants, or other entities with known conflicts of interest, and which cannot be a Proposer or participate on a DBT
- Availability of preliminary plans and other project information
- RFQ (if available)

Unless the NOI includes specific instructions regarding communications, interested Contractors and/or Consultants may not contact KYTC staff to obtain information on an upcoming DB project **after** the NOI is published. If a DBT proposer violates this restriction, KYTC reserves the right to disqualify them. If the NOI will include a draft RFQ, refer to Section 3.5 for detailed guidelines and recommendations.

KYTC will conduct a mandatory Pre-Proposal Meeting for DB projects. The NOI should announce the date and location of the meeting if one has been scheduled. Pre-Proposal Meetings give KYTC the chance to

supply all DBT Proposers with critical information about the project and/or procurement process. Section 2.6 discusses Pre-Proposal Meetings and Industry Forums in greater detail.

NOIs are posted as a bulletin on the Cabinet's Division of Construction Procurement website. Procurement documents are also published on this site. Exhibit 1.3 is an NOI template. To ensure uniformity among projects, the Project Manger should use this as guide when preparing the NOI.

Exhibit 1.3 NOI Template

MEMORANDUM

TO: All Prequalified Contractors

All Prequalified Consultants

FROM: <Name>

Director

Division of Construction Procurement

<Name>

Division of Professional Services

DATE: <Month, DD, YYYY>

SUBJECT: Design Build Project **<CID** #>

<Project Route & Description>

<County>

The Kentucky Transportation Cabinet (KYTC) will be seeking teams of Contractors and Consultants for an upcoming Design Build project to **<Brief project description>**. Additional information on this project is expected to be released in early MM/YYYY. The following is a tentative schedule: *(if known at time of NOI)*

Notice to Contractors
 Request for Qualifications
 Draft Request for Proposers
 Final Request for Proposers
 Technical/Price Proposals Due
 Project Award
 Project Completion
 date if known
 date if known
 date if known
 date if known
 date if known

Information will be located on the KYTC Division of Construction Procurement webpage under the Design Build Projects. The link to this project is https://transportation.ky.gov/Construction-Procurement/Pages/Design-Build- Projects.aspx.

If you have questions, please contact the Division of Construction Procurement at (502) 564-3500.

Chapter 2 Pre-Advertisement

This chapter provides a general overview of the project development activities required to prepare: 1) An RFP for a DB initiative, and 2) Reference Information Documents (RID).

2.1 Preliminary Project Development

Preliminary design documentation defines the project scope and project requirements. Planning, preliminary design, and environmental process activities generally follow the traditional DBB process (see *Highway Design Guidance Manual* HD-202 (Pre-Design Activities) and HD-203 (Preliminary Design)). Preliminary engineering on DB projects typically ends with the final approved environmental document and concept solution. However, the level of design varies between projects. Sufficient preliminary design should be completed to adequately develop the project scope, define project requirements, and identify risks (e.g., ROW challenges, utility relocations, railroad coordination, environmental impacts, cost estimate, and permitting requirements). These items are all included in the RFP.

2.1.1 Project Scope

The scope must clearly and consistently define the project's purpose, identify problems the project should remedy, and describe the approved concept solution. A well-defined project scope ensures KYTC and the DBT share a common understanding of the project's goals. Risks mount and costs increase if uncertainty exists in the project scope. At a minimum, the OPT should consider the following preliminary project development activities when preparing the RFP:

- Risk identification and allocation
- Technical requirements
- Initial cost estimate and schedule
- RIDs

2.2 Risk Identification and Allocation

During the early stages of project planning the OPT should conduct a thorough risk assessment. This should be updated and/or refined as the project moves from procurement through implementation. The OPT must identify risks, consider their potential impacts on desired project outcomes, and investigate risk mitigation strategies. Once risks have been identified and analyzed, the OPT will decide how best to allocate risks between KYTC and the DBT. However, allocating more risk to the DBT often results in higher costs for KYTC. In identifying risk, it is recommended that the OPT take into account time for data and information assembly to support such risk identification (i.e. early geotechnical exploration can be beneficial but timely)

2.2.1 Assessing Risk Items

When the OPT identifies each risk item, it should evaluate its potential impact on project outcomes. The OPT must determine if a risk item will result in: 1) An unacceptable project disruption, 2) A disruption that may require project changes, or 3) Minor disruptions that may be easily mitigated. Risk assessment helps the OPT determine what can slow or halt a project and investigate mitigation options.

2.2.2 Allocating Risk

Once project risks have been identified and investigated, the OPT recommends methods for allocating risks between KYTC and the DBT. Each risk item should be reviewed individually to determine whether

KYTC or the DBT is best equipped to implement mitigation strategies. Figure 2.2.1 provides a sample Risk Allocation Matrix, which indicates the balance of risk sharing for identified risk areas. This Matrix is for illustrative purposes only and represents typical risks associated with DB projects. Risk Allocation will be unique for each project and determined by the PM and OPT.

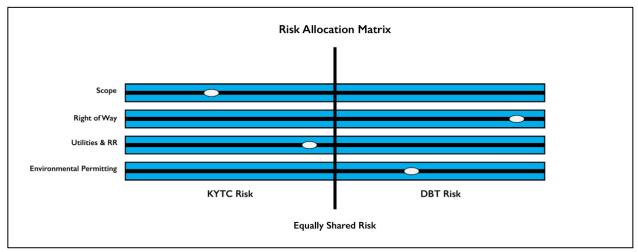


Figure 2.1 Risk Allocation Matrix

Each project carries unique risks. Table 2.1 summarizes risk areas that are present on most DB projects and offers guidance for risk allocation.

Table 2.1 Risk Allocation Guidance

Risk Area	Risk Allocation Guidance
Site Conditions & Investigations	 Site condition responsibilities can be allocated to the DBT if approval processes are well-defined (including third-party approval). Unreasonable allocation of risk may result in high contingency pricing. Whenever practical, minimum site investigations (e.g., basic design surveys, contaminated materials investigations, geotechnical investigations, utility investigations) should be performed by KYTC before issuing the RFP.
Right Of Way (ROW)	 Acquiring ROW is often a significant source of risk. KYTC at a minimum is responsible for ensuring all laws and regulations are followed during the ROW acquisition. KYTC can retain this risk by acquiring the ROW and providing the DBT milestone clearance dates in the RFP. KYTC can transfer the risk of acquiring ROW to the DBT with KYTC oversight. KYTC and the DBT can share the risk by having the DBT carry out ROW acquisition while KYTC responsible for payments to property owners.
Utility Relocations & Railroad Coordination	Utility relocation or railroad coordination should be included in the DB Contract whenever possible to transfer control of these activities to the DBT.

	 Given direct control, the DBT can work with utility companies and/or railroads to resolve issues. Some project sections may be completed while the DBT coordinates utility relocations and/or railroad work. KYTC and the DBT can share this risk by allowing the DBT to coordinate and develop KYTC-approved utility or railroad agreements. If KYTC has the DBT include the cost of utility relocation in its bid, an upset limit should be included to incentivize the DBT to avoid relocating utilities if practical. Adopting a buildable sections approach can expedite project delivery.
Environmental Permitting Requirements	 Obtaining environmental approval and documentation can delay project development. When procurement uses FHWA funds, procurement documents must inform Proposers of a project's NEPA status. Alternatively, projects may require approval or permits from another federal agency that is subject to NEPA requirements. In general, KYTC completes the NEPA process before it awards a DB contract. Environmental mitigation work, including COE permits and associated in-lieu fees, should be allocated to the DBT whenever possible to allow construction of buildable units unaffected by mitigation work. Post-NEPA requirements also need to be identified (e.g., noise analysis, other items).
Drainage & Water Quality	 It is common for project drainage facilities to receive flows from outside the project limits and/or release flows beyond the project limits. Changes to historical flow patterns require negotiation with adjacent owner agencies. Local agencies may have requirements for outflows and/or detention. Often KYTC is better equipped to manage this risk. Due to continually evolving requirements, water quality is a high risk for the DBT as KYTC has ultimate responsibility for any water treated from its ROW. A prescriptive approach to water quality technical requirements helps minimize high-contingency pricing by the DBT.
Third-Party Involvement/Impact	 Many third-party agencies, such as local governments, adjacent state governments, the State Historic Preservation Office (SHPO), and Division of Water, have established relationships with KYTC. These pre-existing arrangements may help KYTC effectively manage third-party involvement. When KYTC can clearly define processes and approval requirements, it can be beneficial to allocate some third-party risks to the DBT so they may be incorporated into the design and project schedule.

2.3 Project Technical Requirements

Technical Requirements are the primary governing design requirements for the project. With DB, KYTC loses some control over design details and construction specifications since the DBT is responsible for the final design. Therefore, it is critical for the RFP to clearly define desired Technical Requirements. All design references such as AASHTO design guides, FHWA references, and KYTC design manuals, should be referenced. Any studies, environmental reports, and supporting references (e.g., water quality standards, regulatory statutes) should be cited when applicable.

The RFP must clearly note when normal design or construction standards must be exceeded. When the use of design variances or exceptions is anticipated, it is desirable for KYTC to obtain approval for them before issuing the RFP. KYTC should be restrictive where needed but flexible where possible when prescribing technical criteria so as not to stifle innovation.

Technical Requirements are unique to each project. However, the general content found in an RFP will be similar between projects. Table 2.2 provides an example of Technical Requirements that are normally included in the RFP for a DB project.

Table 2.2 Example Technical Requirements (for RFP)

Project Area	Mandatory Requirements
Governing Regulations	 Includes, but is not limited to, AASHTO Standards, KYTC Standard Specifications, Standard Drawings, manuals, and guidelines
Environmental	 Approval status of NEPA document and entity responsible for the environmental process Endangered species Archaeological clearance Permits Asbestos clearance
Right of Way (ROW)	 Entity responsible for obtaining ROW clearance Clearance/demolition requirements Procurement of ROW responsibilities
Utilities	Entity responsible for utility relocationDesign and construction requirements
Design & Construction Requirements	 Maintenance of traffic Location and design criteria Structures Permanent traffic control Conceptual Plans, survey information, geotechnical information, traffic studies

Appendix A contains a sample RFP with Technical Requirements.

2.4 Initial Cost Estimate & Schedule

2.4.1 Initial Cost Estimate

Cost estimates should be prepared and updated frequently during project development as the scope is refined. Unless a project is designated as DB in the *Highway Plan*, preliminary estimates are prepared using the DBB methodology. The cost estimate may be separated into different components — design, ROW, utilities, and construction. However, it needs to be evaluated and updated in light of the project using DB delivery. Additional costs specific to DB that may need to be considered include, but are not limited to:

- Management and technical support
- Engineering and inspection
- Stipend
- Third party agency
- Risk contingencies

Development of the cost estimate should follow established procedures and guidelines for a Field Estimate.

2.4.2 Modified Field Estimates

The OPT uses the current project estimate to monitor and revise anticipated project costs. Normally, this estimate — which is called the Field Estimate — is first prepared during the Preliminary Line & Grade (PL&G) phase. As the project moves forward, the OPT must continually modify the Field Estimate based on the latest available information. Modified Field Estimates are used to analyze and justify all DBT price proposals during pre-award activities. Estimates are updated throughout procurement, through letting and final adjustments. They must account for RFP-specified criteria and changes made to project documents via addendums. Preparation of Modified Field Estimates must remain confidential.

2.4.3 Initial Project Schedule

Because the DB delivery schedule is a critical component of project delivery, the OPT should evaluate it early in the development of the RFP. Similar to constructability considerations, a key consideration is whether the DBT can achieve a logical work sequence. DBT work activities that should be accounted for, when applicable, include final design, permitting, ROW and utility coordination/relocation activities, traffic control restrictions, construction activities, and any other project-specific activities.

The OPT may consider adopting A+B contracting if it can facilitate project delivery goals. Incentive /disincentive clauses may also be entertained by the OPT when developing the RFP. The use of A+B contracting and incentive/disincentive clauses should be discussed with the Division of Construction, and the State Highway Engineer must approve their inclusion in the RFP.

2.5 Reference Information Documents (RIDs)

The RFP should include access to all available project RIDs. These may include environmental documents and decisions, old contract plans or As-Built Plans, reports, condition surveys, field surveys and/or mapping, agreements, other contracts, photographs, old geotech information, correspondence, anticipated local economic initiatives, and meeting minutes. The availability of RIDs and directions for obtaining them will be specified on the Division of Construction Procurement web page in the Design Build Projects section. RIDs contain information that DBT Proposers may find useful or be of interest when developing their Proposals and executing the Contract. RIDs are provided for information only and must not be confused with RFP technical requirements, which are mandatory. DBT Proposers use RIDs at their own risk as they come without KYTC warranties unless stated otherwise in the RFP.

2.6 Industry Forum

KYTC may periodically use an industry forum to engage industry groups and potential DBTs on a specific project. These are generally reserved for complex projects with unique challenges and/or conditions and are typically conducted after the NOI is issued but before the RFQ is released. The forum provides a venue in which to discuss a project's anticipated scope, schedule, and risks, and receive industry feedback. Interested Proposers are encouraged to participate but attendance is not mandatory to submit an SOQ. All topics of discussion at the industry forum are provided for information only. Announcements for industry forums are posted on the KYTC Construction Procurement webpage.

Chapter 3 Advertisement

This chapter describes KYTC's processes for advertising DB projects. Key topics covered include the location of DB materials, composition and organization of Technical Review Committees (TRC), Request for Qualifications (RFQ), the shortlisting process, Request for Proposals (RFP), and Alternative Technical Concepts (ATC).

3.1 KYTC Design-Build Project Information

The Division of Construction Procurement website houses materials relevant to the DB process, advertises all upcoming projects, and provides all available project information. Documents posted on the site include a catalogue of ongoing DB projects and associated documentation (project descriptions; NOIs, RFQs, and RFPs; pre-proposal meeting minutes; questions and answers; shortlist announcements; and bid results), and templates and forms required of DBTs. The website is located at:

https://transportation.ky.gov/Construction-Procurement/Pages/default.aspx

3.2 Technical Review Committee

A TRC typically consists of three to five members and helps the Project Team evaluate SOQs, ATCs, and DBT Technical Proposals. TRC responsibilities vary between projects and are assigned based on the complexity of the procurement process. The TRC includes the PM and designees from the OPT and must be KYTC employees. To increase the project knowledge of the TRC members, the committee should be formed as early as possible during the project development process. Procurement documents should identify members of the TRC and discuss their responsibilities as well as the content of DBT proposals the committee will evaluate.

The PM recommends potential TRC members to the Alternative Delivery Program Manager (ADPM). Candidates are evaluated based on their qualifications and their potential contributions to the project. **All TRC members** are bound by ethical and confidentiality requirements and must sign a confidentiality agreement. To avoid future tied votes, the TRC should have an odd number of members. If warranted, it can include more than five members.

3.3 Establish Disadvantaged Business Enterprise (DBE) Goal and Requirements

DBE participation is required on all Federal-aid projects and strongly encouraged for all other projects. KYTC's *Professional Services Guidance Manual* (PS-15-06) lists steps the Cabinet can take to foster DBE participation. Some of these are applicable to DB projects and are summarized in Table 3.1. Scoring criteria for Technical Proposals may include DBE participation. However, in no case may it constitute more than **10%** of the total evaluation criteria.

Table 3.1 Methods for Encouraging DBE Participation

- Place qualified DBEs on solicitation lists.
- Ensure small businesses and DBEs are solicited by lead firms whenever they are potential sources.
- If economically feasible, request that lead firms divide project components into smaller tasks or quantities to foster DBE participation.
- Advocate for the use of delivery schedules that encourage participation by DBEs.

The Project Team will establish a DBE Goal for all Federal-aid projects. The Project Team should enlist help from KYTC's DBE Goal Setting Committee when developing project-specific DBE goals. Having a high-level

knowledge of the work types included in a project, as well as the capabilities of DBE firms, is critical for setting realistic, yet properly aggressive, goals.

3.4 Public Advertisements

KYTC may publicly advertise DB projects by releasing a NOI in advance of the RFQ. The NOI should include the following materials if they are available: the project scope, a tentative schedule, specialized prequalifications or experience required of DB Proposers, and a list of Consultants and/or Contractors with known conflicts of interest that are ineligible to participate on a DBT. Section 1.6 contains more information on NOIs.

3.5 Request for Qualifications (RFQ)

An RFQ solicits a SOQ from DBT Proposers and may also serve as the NOI if the Cabinet elects to not issue one separately. The PM is responsible for developing an RFQ, although they can request assistance from the OPT. The RFQ outlines minimum and desired qualifications for DBT Proposers. Qualifications must be tailored to delivery goals, project risks, and specialized aspects of the project. Before a DB project is advertised, sufficient preliminary engineering must be done to identify a clear scope, schedule, and reasonable cost estimate. The scale of preliminary engineering varies based on project size, scope, and complexity. The State Highway Engineer must approve the RFQ before its release.

Information in the RFQ may include, but is not limited to:

- Up-to-date project and procurement information. Content from the NOI should be included as well:
 - Project description and scope
 - Anticipated procurement and project schedules
 - Required DBT Contractor prequalifications
 - Special requirements for Contractor or Consultant experience
 - Risk analysis
 - List of Contractors, Consultants, and entities with known conflicts of interest which are ineligible to participate on a DBT as a Proposer or team member
- Response protocols for questions submitted to KYTC
- SOQ submission requirements, including mandatory format and elements (i.e., sections) the TRC will
 evaluate
- Date and location of the Pre-Proposal Meeting. In most cases this meeting is held soon after Draft RFP publication.
- Disciplines in which the DBT's Lead Design Consultant must have KYTC prequalification
- Criteria used to shortlist DBTs

If possible, the RFQ should contain a draft RFP, preliminary plans, and any other germane project-related information not listed above. Incorporating a draft RFP into the RFQ gives DBT Proposers the opportunity to develop a fuller picture of project requirements and the demands which will be placed on their teams. Releasing a draft RFP can also increase the level of competition and attract only the most highly qualified Proposers.

The RFQ should be published at least four weeks before the SOQ submission date. More complex projects may require additional lead time. Projects must be assessed individually to determine how much time should elapse between the RFQ publication and SOQ submission date. After the RFQ is published, KYTC will respond to questions submitted to the Division of Construction Procurement pursuant to

requirements stipulated in the RFQ. Responses must be posted on the Division's webpage before the SOQ submission deadline. All responses should be carefully drafted to ensure consistency and fair competition. While the main purpose of these responses is to clarify aspects of the RFQ, they may also be used to substantively adjust the RFQ via the addendum process. RFQ addendums are posted on the Division of Construction Procurement's webpage.

Unless the RFQ states otherwise, Proposers may only request information through the formal Question and Answer process. Proposers may not contact KYTC staff for additional project-related information outside of this process. KYTC reserves the right to disqualify DBT Proposers that violate this restriction.

The TRC evaluates all SOQs and shortlists the most highly qualified DBT Proposers. Shortlisted DBTs receive an RFP for the project.

3.5.1 Required Qualifications of DBT Members

The TRC evaluates SOQs to determine if DBTs meet the minimum requirements outlined in the RFQ. Although the qualifications expected of Proposers varies between projects, KYTC requires DBT Proposers to hold some qualifications regardless of project size or scope. These are discussed in Section 4.1.

3.5.1.1 Business Registration

All DBT Proposers must be:

- Legally authorized to conduct business in the Commonwealth of Kentucky;
- Duly registered with the Kentucky Secretary of State to the extent required by Kentucky law;
- In good standing to do business in the Commonwealth of Kentucky for the duration of a contract awarded; and
- If headquartered in another state, in good standing to do business in its home state.

3.5.1.2 Major Participant

The term *Major Participant* refers to any of the following entities:

- The DBT
 - If the DBT is a partnership, joint venture, limited liability company, or other form of association, this encompasses general partners, joint venture members, or DBT members;
- All individuals, proprietorships, partnerships, limited liability partnerships, corporations, professional
 corporations, limited liability companies, business associations, or other legal holding (however
 organized) with a 15 percent or greater interest in the DBT;
- The lead engineering and/or design firm;
- Each engineering and/or design subconsultant expected to perform 30 percent or more of the design work; and/or
- Each subcontractor expected to perform 30 percent or more of the construction work.

The DBT Proposer must provide DBT Organization Information in its SOQ.

3.5.1.3 Legal Considerations

All SOQs must describe the legal entity proposed as the DBT. When a DBT Proposer is a joint venture or partnership of different firms, they must include the following information in their SOQ:

- The entity's lead Major Participant (if any);
- Percent equity share held by each member ('Lead participant % equity share');
- If the entity is an LLC, a statement signed by the DBT's authorized representative acknowledging it is required to guarantee the DBT's obligations under the Contract.
- If the entity is a joint venture, a statement signed by the DBT's authorized representative acknowledging that such entities must provide evidence of liability for the DBT's obligations under the Contract.

If a DBT is a joint venture or partnership of different firms, the information that must be furnished in the SOQ varies based on whether it has been legally constituted.

For a DBT **that is** legally constituted:

• Full details of the entity's organizational structure, its supporting organization, and/or formation documents. The latter includes a copy, as applicable, of the joint venture agreement, limited liability company operating agreement, or partnership agreement.

For a DBT that **has not been** legally constituted:

- A description of the entity's proposed legal structure and draft copies of the underlying documents, including:
 - All significant terms of the joint venture or partnership, including the rules that will be used to administer the joint venture, limited liability company, or partnership, including procedures for dispute resolutions;
 - A description of how the joint venture, limited liability company, or partnership will operate at administrative and technical levels; and
 - A teaming agreement or comparable document that contains the equity members' agreement to form the organization.

3.5.1.4 Contractor Prequalification

Pursuant to Section 102.01 of Kentucky's *Standard Specifications for Road and Bridge Construction*, all DBT Proposers and subcontractors must be prequalified by KYTC *and* hold a Certificate of Eligibility as described KYTC's regulations (in accordance with KRS Section 176.140). A DBT construction team member classified as a *Major Participant* must be prequalified as a Contractor by KYTC to perform the type of work required to bid as the Prime Contractor. The PM should limit the number of prequalified required work items to only those absolutely necessary to bid the project as a Prime Contractor. Subsequent required work items will be verified through the subcontracting process as the project progresses. The Division of Construction Procurement can help establish required work items.

The DBT Proposer must be a KYTC prequalified Contractor that has teamed with a KYTC prequalified Design Consultant(s) to perform all design and construction work. KYTC may reject an SOQ if the Design Consultant's submission does not meet all qualifications. All subconsultants and subcontractors used by the DBT must be prequalified to perform work for KYTC. Entities which have not been prequalified are not eligible to work on a project.

3.5.1.5 Professional Services Prequalification

The DBT furnishes all services required to design and construct all permanent and temporary project components. Work must conform to current KYTC, federal, and AASHTO standards, practices, policies, guidelines, and specifications (unless stated otherwise in the RFQ). If conflicts arise, KYTC standards,

practices, policies, guidelines, and specifications must provide controlling guidance. A DBT must include registered professional engineers and surveyors to oversee engineering and surveying activities.

Prequalified design Consultants may only perform tasks for which they been certified. Multiple design Consultants can work on a DBT, however, one must be designated as Lead Designer.

DBT Proposers cannot submit a Technical Proposal until they meet KYTC's prequalification requirements related to licensure. Services requiring prequalification may only be executed by firms prequalified to perform those services. For non-engineering services (e.g., title and closing attorney services, landscaping, transportation planning, or architectural applications), professionally licensed personnel must be assigned to lead the work.

3.6 Conflict of Interest

DBT Proposers must identify potential conflicts of interest and real or perceived competitive advantages they enjoy related to procurement. These may arise from prior or existing contractual obligations between a company and a federal, state, or local agency relative to the project or KYTC's design-build program. Proposers must disclose all relevant facts concerning any past, present, or currently planned interests which may result in an organizational conflict of interest upon Contract Award. If a potential conflict of interest or competitive advantage is identified, the Proposer must submit relevant information to KYTC's Director, Division of Construction Procurement.

KYTC is solely responsible for deciding if conflicts of interest or a real or perceived competitive advantage exist and whether a DBT Proposer can mitigate their effects. When KYTC finds a participating entity has a conflict of interest or holds competitive advantage that cannot be mitigated, it must be excluded from the DBT. In their SOQ, Proposers must outline a contingency plan if KYTC finds a conflict of interest is present. Failure to abide by this decision may result in a proposal being judged non-responsive. See 23 CFR 636.116 for more information on conflicts of interest.

3.7 Ex Parte Communication

During procurement (which begins when either the NOI or RFQ is issued and continues until a Contract is executed or the procurement is cancelled), no employee, member, agent, advisor, or consultant of a DBT Proposer can have any ex parte communications — directly or indirectly — with any KYTC representative regarding the procurement. This includes their staff, advisors, contractors, or consultants working on the procurement. This provision also applies to FHWA representatives on Federal-aid projects. The only exception to this rule is for communications explicitly permitted by the NOI, RFQ, or RFP.

3.8 Shortlisting Process

Upon their receipt, the Division of Professional Services and Division of Construction Procurement evaluates SOQs to confirm Proposers meet the minimum requirements outlined in Section 4.1. TRC members receive the SOQs of all Proposers meeting these requirements.

When reviewing SOQs, TRC members may request technical clarifications from a DBT Proposer or KYTC subject-matter experts. Requests should be submitted through the PM. Only general questions may be posed (e.g., what knowledge or expertise is necessary to execute some aspect of a project). TRC members can submit comprehensive questions and communicate with other OPT members, as well as KYTC staff who are not members of the OPT, through the PM to resolve uncertainties. But they may never engage in discussions related to specific DBT Proposers, their SOQs, or scoring.

After TRC members independently evaluate SOQs, the TRC meets. At this meeting, the PM serves as the TRC chair and acts as a facilitator. All committee members must attend the meeting. The PM is encouraged to include a representative from the Division of Professional Services and the Division of Construction Procurement to provide oversight and ensure the scoring process is fair (these representatives do not vote). At the meeting, TRC members discuss their assessments and revise individual scores — if warranted. Following deliberations, the TRC finalizes SOQ scores and ranks DBT Proposers against criteria published in the RFQ. Once scoring is complete, the Division of Professional Services and Division of Construction Procurement representatives certify the scores and that the necessary revisions have been made and documented. SOQ rankings are used to shortlist Proposers.

While the shortlist generally includes the top three Proposers, it remains at the discretion of the State Highway Engineer, ADPM, and PM to determine how many DBTs will be shortlisted based on an evaluation of the project scope. Once the shortlist is finalized, the Division of Construction Procurement notifies DBT Proposers of the results and posts an *Approved Design Build Teams* list on the DB website.

3.9 Request for Proposals (RFP)

The RFP defines the required project and DB services. Project characteristics dictate the content and complexity of the RFP. Irrespective of project type, all RFPs should have three components: 1) Project definition and a description of KYTC's needs, 2) Instructions to guide Proposers through the proposal process, and 3) Criteria that will be used to evaluate proposals.

During the RFP phase, KYTC solicits proposals from shortlisted DBTs: a Technical Proposal and a Price Proposal. Awards are made based on TRC evaluations of these proposals. After contract procurement is complete, a DBT team is selected. The successful Technical and Price Proposals submitted by the DBT in response to the RFP are integrated into the contract between KYTC and the DBT. The contract establishes a project baseline — mutually agreed to by all parties — against which to measure the work performed.

3.9.1 RFP Process

DB procurement adheres to a four-step process: 1) Define project goals, 2) Allocate risks, 3) Plan Proposal evaluations, and 4) Assemble procurement and contract documents. An RFP must precisely define project needs — this increases the likelihood of the DBT delivering a successful project.

To facilitate RFP development, the process may be divided into two steps, with a draft RFP issued, followed by a final RFP. The RFP does not have to be finalized until 21 days before Technical Proposals are to be submitted. On federally funded projects the RFP and field estimate serve as the PS&E submittal package for FHWA approval. The RFP may be published in draft form more than 21 days before the proposal submittal date pending FHWA approval. However, the final RFP (with FHWA approval, if applicable) must be advertised a minimum of 21 days before the proposal submittal date.

3.9.2 RFP Document

As it is important for staff to be knowledgeable about project development and contracting requirements to generate design and construction criteria for DB projects, it is critical for experienced subject matter experts and PM's to develop the RFP. The State Highway Engineer is responsible for approving the RFP.

Exhibit 3.1 shows the typical outline for an RFP and **Appendix A** provides a sample RFP template. Addendums placed in the RFP during the procurement phase are posted on KYTC's Construction Procurement Website, and notifications are distributed to DBTs.

Exhibit 3.1 RFP Outline

1. Project Identification

• Provides high-level information on the project, including its location, a preliminary project schedule, and the location of data that can be used to facilitate proposal development.

2. Pre-Proposal Meeting

• Specifies date and location of the Pre-Proposal Meeting and indicates mandatory attendance for DBT Proposers which intend to compete for the contract.

3. Addenda Process

 Describes the process for issuing additions to or amending the RFP. It must specify the cutoff date for submitting questions to KYTC, the person who should receive questions, and note a date when responses will be posted by.

4. Design-Build Team (DBT)

• Discusses prequalification requirements, content and formatting requirements DBT Proposers must adhere to per their SOQ, and the scoring and shortlisting processes.

5. Restrictions on Participation in Design-Build Contracts

Defines conflicts of interests, lists which types of communication with KYTC staff are permissible
after the RFP has been released, provides details related on stipend payments and the transfer of
intellectual property, outlines DBE requirements and goals, discusses methods for resolving
protests, and reviews KRS that DBT Proposers must abide by.

6. Project Description, Mandatory Requirements and Alternative Technical Concepts (ATCs)

 Describes project-specific objectives and procedures for submitting and evaluating ATCs, including the possible determinations KYTC may issue in response to an ATC.

7. Proposal Submission and Selection Criteria

 Outlines procedures DBT Proposers must follow when submitting a Technical and Price Proposals, discusses the organization and content of the Proposals, and reviews the criteria KYTC will use to evaluate the Technical Proposal.

8. General Provisions for the Scope of Work

Catalogues DBT responsibilities, design and construction standards which guide the performance
of work, lump sum bid items to be included in Proposals, requirements to be paid for work, gives
contact information for the KYTC Project Manager the DBT will coordinate with, and offers
guidance on maintaining a field office.

9. Buildable Units

• Defines buildable units and provides instructions the DBT must follow when developing buildable units and submitting plans to KYTC.

10. Design and Construction Requirements

Describes KYTC's expectations for DBTs during design and construction processes.

10.1 Location and Design

 Reviews location and design provisions including project survey requirements, roadway functional classification, design speed and geometric criteria, pavement characteristics, typical sections, procedures for using design exceptions, and special work

10.2 Structures and Geotechnical

 Describes prequalification requirements (per SOQ) related to structures and geotechnical work, provides structure plans (if available), discusses available geotechnical data and provides guidelines for geotechnical investigations as needed, and specifies design criteria.

10.3 Permanent Traffic Control

Directs DBTs to abide by MUTCD and KYTC standards for pavement markings and delineators.
 Describes provisions related to signage, traffic signals, and lighting.

10.4 Maintenance of Traffic (MOT)

 Contains MOT restrictions, lists pavement maintenance activities the DBT is responsible for throughout the project, and identifies where the DBT is responsible for maintaining lighting systems.

10.5 Potential Additional Subjects (Project-Specific)

 Discusses other topics or provisions the DBT will need to address in response to specific project needs, including but not limited to ITS requirements, public information and communication, and aesthetics and enhancements.

11. Environmental (includes Hazardous Materials)

• Identifies threatened and endangered species in the project area, notes outstanding issues related to archaeology, directs the DBT to comply with all provisions laid out in surface water and stormwater permits, and reports out information related to onsite hazardous materials.

12. Right of Way (ROW)

 Assigns responsibility to the DBT for acquiring necessary ROW, handling conflicts of interest, and performing demolitions or clearances within ROW limits. Specifies protocols for managing ROW activities and the appraisal process.

13. Utilities (Including Railroads)

 Outlines procedures and requirements related to the utility process, including methods for coordinating with utility owners, designing and planning utility adjustment work, recordkeeping, and utility agreements.

14. Plan Submittals and Review Requirements

• Outlines DBT responsibilities with respect to plan submission, major design decisions, and the development of construction plans.

15. Index of Attachments

 Includes supplemental material to assist DBT Proposers when developing their submissions (e.g., DBE conditions, typical sections, environmental documents, special notes, reports, contact information, traffic data, documents for bid)

While being conscious of needs and preferences, the RFP should minimize prescriptive requirements. Doing so affords DBT Proposers the flexibility to adopt creative and innovative design, construction, and delivery methods. It should describe:

- 1) The project conceptually and in an open-ended manner (i.e., basic needs the final product must fulfill);
- 2) Performance specifications, standards, technical criteria, and design concepts
- 3) Prescriptive requirements, if any. Prescriptive requirements should be chosen judiciously so as to not limit a DBT Proposer's ability to formulate innovative project delivery methods. KYTC must strike a balance between adequately defining project requirements and giving DBTs the freedom to implement design and construction methods that will deliver the most value. Because assembling proposals demands significant effort, KYTC should only request deliverables needed to differentiate between DBTs during the selection process.

Table 3.2 lists elements that may be included in an RFP. While not every RFP will contain each item, this guidance offers PMs a useful starting point. This information can be used to provide further context to the RFP beyond items listed in Exhibit 3.1.

Table 3.2 RFP Elements

Project Description

 General project scope, project location and limits, location map, project goals, risk analysis, and basic configuration/ concept plans

Procedures for Submitting Proposals

Proposal Evaluation Criteria

Include the weight assigned to each criterion

Instructions to Proposers

Addenda process, DBT prequalification requirements, proposal preparation, technical and price
proposal submission process, schedule and requirements, instructions on buildable units, awards
procedure, campaign finance law statement, conflict of interest, restrictions on communications
with KYTC staff, payment and conditions of stipend, and disposition of proposals

Requests for Clarification

Description of process for formally requesting clarification on one or more aspects of the RFP

General Provisions, Special Notes, and Provisions for the Scope of Work

• Design and construction requirements, governing regulations (including applicable KYTC policies, procedures, and standards), control of work, control of materials, applicable laws specific to the project work, responsibility to the public, warranties, and quality control/quality assurance

Roadway Information

 Project datum, survey, mapping, roadway locations and design concepts, performance requirements, design exception process, design criteria, roadway drainage requirements, and pavement design guidance

Environmental Information

• Environmental approvals, documents, and studies; mitigation plans and commitments; permits; and certifications

Right of Way, Utilities, and Railroad

Project needs and responsibilities assigned to KYTC and the DBT

Structures and Geotechnical

• Structure locations and design concept criteria; requirements and standards for bridges, foundations, slopes, and walls

Construction Requirements

• Temporary traffic control measures, temporary erosion and sediment control

Permanent Traffic Control

Signals, signs, lighting, and pavement markings

Proposed Terms and Conditions for Design-Build Contract

- Project submittals (e.g., plans and shop drawings) and approval process; provisions for contracts; requirements for performance bonds, payment bonds, and insurance
- Description of drawings, specifications, or other materials to be submitted with the proposal, including guidance on the acceptable form and level of completeness of drawings, specifications, or submittals
- Schedule for planned commencement and completion of the contract
- Project schedule detailing all milestone dates
- Contract budget limits (if any)

KYTC may provide other information (e.g., surveys, soils reports, drawings or models of existing structures, environmental studies, photographs, or references to public records). Decisions about what to include in the RFP should be made on a case-by-case basis.

3.10 Alternative Technical Concepts (ATC)

An ATC is a potential change to the project scope proposed by the DBT that provides a solution equal to or better than what the scope requires. On more complex DB projects, KYTC may let shortlisted Proposers recommend ATCs to encourage innovation, offer increased flexibility, and potentially reduce project duration. On projects where the use of ATCs is permitted, DBT Proposers submit ATC documents to the TRC for consideration. The RFP specifies submission requirements and establishes a timeline for the ATC process. ATCs received after the submission period ends will not be accepted. The submission period's length varies based on project complexity and is identified in the NOI schedule.

In an ATC proposal, DBT Proposers must clearly identify each element which represents a suggested change to the project scope. The TRC evaluates and approves or rejects ATCs. While the TRC will strive to promptly assess all ATCs and ATC reconsiderations, no firm timeline can be guaranteed, especially for complex or unusual concepts. Members of the TRC may consult with the OPT and other KYTC subject-matter experts through the PM for technical clarifications during its ATC review. Certain ATCs may also require that the TRC consult with outside agencies (e.g., utilities and railroads) to verify the proposal meets all relevant technical and policy guidelines. To ensure DBT Proposers have sufficient time to develop Technical Proposals, KYTC should issue its decision(s) on proposed ATCs at least 21 calendar days before

full proposals are due. TRCs have an obligation to review all ATCs. After evaluation, one of five responses will be issued via email (Table 3.3).

Table 3.3 Possible Responses to Proposed ATCs

- 1. The ATC is approved and may be included in the DBT's Technical Proposal.
- 2. The ATC is not approved in its present form but may be resubmitted for reconsideration.
- A reconsideration request must address all of the TRC's comments, questions, and concerns. Reconsideration requests must comply with ATC submission and content requirements.
- 3. The ATC is not approved.
- If a rejected ATC is included in the Technical Proposal, the TRC will judge the Proposal non-responsive.
- 4. The proposal is not an ATC.
- 5. The ATC is approved subject to conditions.

The TRC may ask for a DBT Proposer to supply additional information on an ATC, clarify its content, and/or request a follow-up one-on-one meeting. Conversations related to ATC proposals that take place between the TRC and DBT Proposers must remain confidential during the bidding process. A Proposer may incorporate approved ATCs into a Technical Proposal. All ATCs (or portions thereof) included in the Technical Proposal must be clearly highlighted. The Price Proposal must account for all ATCs found in the Technical Proposal.

3.11 One-on-One Meetings

On some projects, the RFP will stipulate that DBT Proposers can request a one-on-one meeting with TRC members so they can deepen their understanding of the RFP and its requirements. On projects where ATCs may be implemented, the RFP should describe how Proposers can request a one-on-one meeting with KYTC to discuss prospective ATCs. The RFP must specify the process for requesting a meeting and contain guidelines on what may be discussed. No conversations at these meetings can attend to project clarifications that may afford Proposers additional insights into the RFP process. The RFP can limit the duration of one-on-one meetings and identify potential meeting dates. At one-on-one meetings, KYTC should be represented by the TRC, the PM, relevant members of the OPT, and other technical experts. When requesting a one-on-one meeting, the DBT Proposer must summarize the issues they want to discuss and/or provide a general description of draft ATCs if applicable, far enough in advance and in enough detail for KYTC to select appropriate meeting attendees. If members of the TRC believe a point of discussion should be put in writing and flow through the question/answer clarification process, they will duly advise the DBT Proposer. Similarly, if a discussion item identifies a deficiency in the project scope that would materially impact the DBT Proposer's ability to make a best value offer, KYTC may issue an addendum to correct the deficiency. All matters discussed at one-on-one meetings remain strictly confidential and non-binding. All meeting attendees will be required to sign a mandatory confidentiality agreement. Exhibit 3.2 provides a Procurement Timeline for a typical DB project.

Exhibit 3.2 Typical Procurement Timeline

Procurement Action	Duration (weeks)	Comments
Notice of Intent (NOI), Request for Qualifications (RFQ), & draft Request for Proposals (RFP)		These may be separate actions or the issuance of the RFQ may also serve as the NOI and include the draft RFP.
	2	
Mandatory Pre-Proposal Meeting		It is strongly recommend that a draft RFP be available at meeting if it has not been issued previously.
	2	
Statement of Qualifications due		
	2	
Shortlist Announcement		
	1	
Alternative Technical Concepts (ATC) process begins		
	8-12	The draft RFP may contain additional deadlines within the ATC process for each project. These deadlines may address items such as submittal of individual ATCs or last possible date for one-on-one meetings.
ATC process ends		
	2	
Approval/Rejection of ATCs		
	1	
Issuance of final RFP		Final RFP MUST be issued a minimum of 21 calendar prior to date Technical Proposals are due.
	3	
Technical Proposal Due		
	2	
Price Proposal Due		

y from project to pr			

Chapter 4 Evaluation, Letting and Award

4.1 Evaluation of SOQ and Shortlist Recommendation

KYTC examines each SOQ that is submitted to determine if Proposers meet requirements specified in the published RFQ. Proposers failing to meet these requirements are sent a notification which states they cannot submit a proposal for the advertised DB project.

The published RFQ describes the process and criteria used to evaluate SOQs. Evaluation criteria should align with the requested qualifications. At a minimum, SOQs should be evaluated based on the following attributes:

- Understanding of the project, management approach, and organizational structure
- Demonstration of applicable experience, human resources, and available equipment
- DB project experience
- Financial wherewithal to complete the project

Section 3.7 describes how SOQ's are evaluated for responsiveness as well as the shortlisting process.

4.2 Approval of Shortlist by Awards Committee

The Division of Construction Procurement presents the recommended shortlist of qualified proposers to the Awards Committee for approval. If approved, the Division of Construction Procurement notifies DBT Proposers of the results and posts an *Approved Design-Build Teams* list on its website. Consult **Exhibit 4.1** for a template of this notice.

Exhibit 4.1 Template for Short List Announcement

MEMORANDUM

TO: All Prequalified Contractors

All Prequalified Consultants

FROM: <Name>

Director

Division of Construction Procurement

DATE: <Month DD, YYYY>

SUBJECT: Announcement of Short-Listed Proposers

<Project Route & Description>

Three teams of bridge and road building professionals have been selected by the Kentucky Transportation Cabinet (KYTC) as finalists for a contract to construct **<Brief project description>** in **<County>**.

A team of transportation professionals from KYTC evaluated each of the contending Design-Build Teams (DBTs) in detail and selected the following three finalists:

- <DBT #1>
- <DBT #2>
- <DBT #3>

The selected teams will begin developing specific proposals that will include innovative concepts, technical designs, and cost details. The project schedules calls for the winning team to be selected on <**Month DD**, YYYY> and the project to be completed by <**Month DD**, YYYY>.

If you have questions, please contact the Division of Construction Procurement at (502) 564-3500

4.3 Evaluation and Scoring of Technical Proposals

Each member of the TRC uses the RFP's evaluation criteria to score responsive Technical Proposals. TRC members must score Technical Proposals independently and not discuss with anyone the specifics of Technical Proposals or their scores. **Appendix B** shows an example score sheet.

For complex projects and/or technically complex issues, the TRC may ask Project Team members or other KYTC subject-matter experts to clarify technical matters during the review process. Subject-matter experts must sign and abide by the same confidentiality agreement as TRC members. Questions submitted by the TRC should only pertain to a specific, technical issue and be directed through the PM, who will maintain a record of all discussions. Discussions about specific DBT Proposers or their Technical Proposals are not allowed. Consult **Appendix D** for a template of the confidentiality agreement.

Once all TRC members have scored the Technical Proposals, the Division of Construction Procurement schedules a Technical Proposal scoring meeting. During this meeting TRC members can offer additional

justifications for their scores. The TRC assigns a consensus score to each factor according to the weights specified in the RFP. Consensus scores for each factor are summed to generate the total Technical Score. This consensus score is not adjusted.

Technical Proposal scores remain confidential until they are announced immediately before the public opening of Price Proposals. The Division of Construction Procurement summarizes and organizes Technical Proposal evaluations. The following items are submitted to the KYTC Awards Committee: 1) A summary of the Technical Proposal scores and 2) All Price Proposals. **Exhibit 4.2** provides typical scoring criteria for a Technical Proposal. Each project will have unique scoring criteria.

4.4 Request for Clarification of Technical Proposals

If the TRC needs a Proposer to clarify an element of their submittal, the PM prepares a written request that is delivered through the Division of Construction Procurement. The letter should clearly state the date by which a written response is needed. The Proposer's written response is directed to the Division of Construction Procurement and then forwarded to the TRC. The TRC reviews responses to determine if they are adequate, whether additional clarification is needed, or if an in-person meeting is necessary. Changes or modifications to the SOQ, Technical Proposal, or Price Proposal are not permitted.

4.5 Public Opening of Price (or Variable Scope) Proposal

KYTC publicly announces all Technical Proposal scores and Price Proposals at the time indicated in the RFP. The Division of Construction Procurement's website will post — for all Proposers — the DBT Overall Score, Technical Score, and Price Proposal. **Exhibit 4.3** provides example public announcements of bid results for each of the scoring methods used to select DBTs: Technical/Price Scoring, Technical Variable Scope/Fixed Budget Scoring, Technically Acceptable/Low Price Scoring.

4.6 Non-Responsive Request for Determination

If the TRC deems a Technical Proposal non-responsive, the DBT Proposer should be notified in writing within two (2) business days of the judgement being made. The written notification must explain why the Technical Proposal was found non-responsive. It may be delivered via email. The PM and/or TRC helps draft the notification, however, the Division of Construction Procurement is responsible for transmitting the correspondence to the DBT Proposer.

After receiving this notification, a Proposer has five (5) business days to submit a written request to KYTC asking the agency to reconsider its non-responsive determination. The notification sent to a non-responsive Proposer should provide clear instructions for submitting a request for reconsideration. The Proposer must submit their request in writing to Division of Construction Procurement. It should clearly enumerate reasons why the Proposer believes the KYTC has made an error in its determination. Any supporting documentation must be submitted with the request. Before making a final determination, the PM should obtain concurrence from the SHE. The Proposer should be notified in writing of the final determination within three (3) business days. If additional time is needed to make a final determination, the Proposer should be notified in writing (through the Division of Construction Procurement) of the estimated response time.

Exhibit 4.2 Example Scoring Criteria for a Technical Proposal

Part	Evaluation Criteria	Maximum Points
Α	Project Schedule, Organization & Management	20
В	Right of Way Acquisition Plan	15
С	Roadway Design Concepts	15
D	Bridges, Structures, & Geotechnical Concepts	15
E	Construction (includes Construction Management Plan, Quality Plan, & Safety Plan	20
F	Utility Coordination & Relocation Plan	15
G	DBE Plan	Pass/Fail
	Total	100

Scoring Criteria for Components of Technical Proposal

	Components of Project Schedule, Organization & Management	Percentage of Total Points
A.1	Project Schedule, Completion Date & Organization	60
A.2	Project Management Plan	20
A.3	DBT Experience on projects of similar complexity	20

	Components of Right of Way Acquisition Plan	Percentage of Total Points
B.1	ROW Acquisition Strategy	50
B.2	Project Report Information	50

	Components of Roadway Design Concepts	Percentage of Total Points
C.1	Interchange Design	50
C.2	Main Road Design	50

	Components of Bridges, Structures & Geotechnical Concepts	Percentage of Total Points
D.1	Main Bridge Crossing	30
D.2	Miscellaneous Structures & Retaining Walls	30
D.3	Geotechnical Challenges	40

	Components of Construction	
E.1 Construction Sequencing &	Logistics	40
E.2 Approach to Achieving Qu	ality	20
E.3 Coordination with Utilities	Permitting & Maintenance of Traffic	20
E.\$4 Safety		20

	Components of Project Schedule, Organization & Management	Percentage of Total Points	
F.1	Utility Coordination/Relocation Plan	100	

Exhibit 4.3 Example Public Announcements of Bid Results

CDI # XX-9001 Design Build Road Project Scenario 1 – Basic DB

	Technical Proposal Score (TB)	Technical Proposal Points 30 x (TB/TH) Max 30 pts	Price Proposal (PB)	Price Proposal Points 70 x (PL/PB) Max 70 pts.	Overall Score (SB)
DBT #1*	85.5	30.0	\$56,349.145.00	70.0	100.00
DBT #2	77.2	27.1	\$76,623,835.02	51.5	78.6
DBT #3	78.1	27.4	\$74,000,000.00	53.3	80.7

Highest Technical Proposal Score (TH)	85.5	Lowest Price Proposal (PL)	\$56,349.145.00
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^{*} Apparent Best Value Submittal

CDI # XX-9001 Design Build Road Project Scenario 2 - Variable Scope

	Technical Proposal Score (A)	Technical Proposal Points (A)/100 x 20	Variable Scope Package Points Max 80 pts	Price Score Points**	Time Score Points***	Overall Score
DBT #1	87.88	17.58	35	1	0	53.58
DBT #2*	89.47	17.89	50	1	1	69.89
DBT #3	83.5	16.70	25	0	0	41.7

^{*} Apparent Best Value Submittal

CDI # XX-9001 Design Build Road Project Scenario 3 – Pass/Fail Technical Proposal

	Technical Proposal Score	Price Proposal
DBT #1	Pass	\$63,275,870.00
DBT #2	Pass	\$51,350,254.00
DBT #3*	Pass	\$45,157,775.00

Apparent Best Value Submittal

^{**} Price Score determined as detailed in RFP

^{***}Time Score determined as detailed in RFP

4.7 Award

Unless all proposals are rejected, KYTC awards the Contract to the DBT Proposer whose proposal offers the best value as described in Section 1.3. The Technical Proposal and Price Proposal judged as providing the best value (according to RFP evaluation criteria) are reviewed by the Awards Committee. The Committee either recommends issuing or rejecting an award as per *The Construction Procurement Guidance Manual CP 404 Award & Execution of Contracts*. Pursuant to 49 CFR Part 21, KYTC must adhere to all federal statutes related to nondiscrimination when selecting a winning proposal. The selected DBT's Technical Proposal and Price Proposal must comply with the requirements prescribed in law, regulations, and by the contract.

Typically, KYTC awards the Contract within 10 working days of receiving Price Proposals. However, KYTC reserves the right to hold the Price Proposal of any or all DBTs for a period not exceeding 60 calendar days for final disposition of the Award. KYTC may hold the Price Proposal of the best-value DBT for longer than 60 days with concurrence from the DBT. If KYTC anticipates needing a longer hold period, the RFP should specify the hold duration.

KYTC reserves the right to cancel the Award at any time *before* the Contract is executed — by all parties — without incurring any liability except for payment of the stipend to responsive Proposers.

4.8 Debriefing

Unsuccessful Proposers can receive feedback on their Technical Proposals at a debriefing. Debriefings may take the form of a written exchange or face-to-face meeting. Debriefings offer Proposers a chance to receive comments on the merits and deficiencies of their SOQs and/or Technical Proposals. KYTC will schedule debriefings after the short-listing process (SOQ) or after contract award (Technical Proposal), depending on when a Proposer was eliminated from consideration. The Cabinet should use debriefings to obtain feedback from DBT Proposers on the procurement process.

All unsuccessful DBTs should be offered a debriefing. However, if any team protests or takes legal action against the procurement, debriefings should be delayed until the protest or legal process is resolved.

The PM should attend all debriefing meetings. TRC members are encouraged to attend, but their presence is not mandatory. Unless specific debriefing instructions are included in the Project's RFQ and RFP, follow the guidelines provided in *Section PS-15-04.0700* in the Division of Professional Services for scheduling and conducting debriefings.

4.9 Stipend Acceptance

An unsuccessful DBT Proposer whose submitted Proposal is deemed responsive has the option to accept or reject the stipend defined in the RFP. See Section 1.4 for detailed information on stipends.

Chapter 5 Post Award

5.1 Notice to Begin Work

Once the DB contract is executed pursuant to Section 404 of the *Division of Construction Procurement Guidance Manual,* KYTC issues a written Notice to Begin Work (NBW) to the DBT. An official copy of the NBW is sent by the Division of Construction Procurement to the address listed on the DBT's Certificate of Eligibility. Receipt of the NBW authorizes the DBT to begin project work. Typically, DB Contracts specify a completion date, however in some cases Contracts are tied to number of working days. In the latter case, the PM begins counting Contract time (i.e., working days) on the date the NBW is issued.

KYTC has the discretion to issue multiple Released for Construction (RFC) Plans at different stages of the project (see Section 5.7). When this occurs, each RFC serves as a hold point in the DBT's construction schedule. To clarify, KYTC will issue a NBW after it has executed the Contract, releasing the DBT to perform final design activities. Later, KYTC may issue subsequent RFCs authorizing the DBT to perform either all construction-related activities or work on selected portions (i.e., buildable units) as approved by KYTC.

The Cabinet may specify requirements that must be fulfilled before it will issue another RFC. For example, it can require the DBT to have completed specific tasks described in the RFP, such as:

- Basis of Design acceptance;
- Quality Control Plan (QCP) acceptance;
- All environmental document approvals/permit(s);
- Utility agreements (if necessary), encroachment permits, utility relocation plans, and/or *no conflict* letters;
- Environmental certification;
- ROW certification;
- Transportation Management Plan (TMP);
- Erosion Control Plan and Notice of Intent (NOI);
- Traffic Control Plan acceptance; or
- RFC Plans

If KYTC issues RFCs in stages, the RFP must clearly describe the conditions under which the agency plans to issue successive RFCs for buildable units. If the RFP does not define a staged approach but the Cabinet decides its use is appropriate, the manner in which RFCs will be issued must be discussed and agreed to by KYTC and the DBT at the Project Kickoff Meeting.

5.2 Document Control and Management

KYTC and the DBT are responsible for jointly implementing a document management system for all project submittals. Developing a consistent and well-defined process for managing documents ensures that reviews occur in a timely manner, that comments are adequately addressed, and that responses are provided within an agreed upon timeframe. The document control process is presented and discussed at the Project Kickoff Meeting. In most cases, the DBT will advocate for a document control process based on its previous experience on DB projects. The Project Team can mandate in the RFP that DBT Proposers outline a document control process in their proposal. The PM, with concurrence from the Project Team, approves the document control process.

The approved document control process must: 1) Be capable of notifying all parties when a document package is submitted for review, and 2) Grant all parties access to submittal documents. The system must be able to track iterative versions of submittal documents and clearly denote the most up-to-date version. KYTC and the DBT should each assign one person to manage the system and serve as points of contact. All documents included in a DB are integral components of the project. If a requirement is specified in one document it is treated as binding and is assumed to occur in every document. The hierarchical ranking of contract documents in Table 5.1 should be invoked if discrepancies occur and should be included in the RFP.

Table 5.1 Hierarchy of Contract Documents

- Approved Design Changes and Construction Revisions
- Accepted DBT Price Proposal
- Elements of the Accepted Technical Proposal that exceed requirements of other Contract Documents
- Any DBT ATC proposals accepted by KYTC
- Questions and Answers from the Division of Construction Procurement website
- Request for Proposal and any Addendums
- Special Notes
- Special Provisions
- Approved Released for Construction Plans
- Standard Drawings (current edition)
- DBT's Accepted Technical Proposal

Typically, DBTs will have a preferred method for document control. If a method of document control has not been established, the worksheets in Appendix E offer an Excel-based template which may be used to facilitate document control. For each submittal, it is a good idea to keep a record of submission format, the KYTC reviewer, significant dates (e.g., receipt date, forward date, review due date, submission date), any comments pertaining to the submittal, and the submittal's current status. The Excel workbook is available for download on the Division of Construction Procurement website.

5.2.1 Design Document Control and Management

Design documents and records must be preserved because they serve as evidence that completed work meets the requirements of the RFP and approved Quality Management Plan. Management of these materials must allow for easy identification, collection, indexing, access, filing, storage, maintenance, and disposition of project records. Documents and records must be stored in an environment that inhibits damage, deterioration, or loss.

The PM or their designee is to regularly audit work products generated by the DBT, designer, and design-reviewer to verify compliance with the RFP and approved Quality Plan. The Cabinet expects the DBT to cooperate in full during the audit process and provide requested assistance. Before completing work, the DBT must turn over all final project records to KYTC.

5.2.1.1 Plan Submittals and Review Requirements

Design plan submittals are made in accordance with the procedure stipulated in the document control process. If the DBT identifies discrepancies between the RFP and KYTC policy manuals, it must immediately notify the PM. The PM should confirm that construction personnel are included when design submittals are reviewed. Their participation is critical for identifying and mitigating potential constructability,

maintenance, and operational issues prior to issuance of RFC plans. If KYTC deems any submission is incomplete, contains inaccuracies which preclude meaningful review, or does not adhere to project requirements listed in the RFP, the PM must notify the DBT and provide instructions for revising and resubmitting it. No time extension is granted in these circumstances. The PM schedules a review meeting or issues review comments as appropriate.

Unless explicitly stated otherwise, review comments are not used to revise the scope or intent of the project. Nor do they constitute a request for changes beyond the contracted Scope of Services. If the DBT believes any review comments or requested revisions will alter the project scope, it needs to submit a request for clarification in writing to the PM along with an explanation of the changes in scope. The approved document control process must describe methods for resolving issues in this area.

5.2.1.2 Working Drawings

Design documents contain detailed information on:

- All dimensions of planned work
- Material specifications
- A summary of quantities

If plans lack detailed dimensions, they must depict general features and sufficient details to provide a comprehensive idea of the structure. When this requires additional drawings, detailed shop or working drawings are submitted to the Engineer of Record for review.

Working Drawings encompass drawings or computations submitted by the DBT to the Engineer of Record for review and approval. They are *separate* from Design Documents. Working drawings include the following:

- Stress sheets
- Shop drawings
- Erection plans
- Falsework plans
- Framework plans
- Cofferdam plans
- · Bending diagrams for reinforcing steel
- Other supplementary plans or similar data

Unless the RFP states otherwise, the DBT provides working drawings to KYTC for review and concurrence only. Working drawings are approved by the Engineer of Record. Accordingly, the DBT assumes *all risk* for work done on the project or for materials ordered.

For steel structures, the DBT must submit working drawings to KYTC that consist of shop detail, erection, and other working plans. The drawings must indicate material details, dimensions, sizes, and other information necessary to completely fabricate and erect the work and be approved by the Engineer of Record.

For concrete structures, the DBT must submit working drawings to KYTC. These drawings consist of plans with sufficient detail to successfully execute work and which are not specified in the Design Documents.

Working drawings include plans for falsework, bracing, centering and formwork, cofferdams, caissons, erection, and a layout diagram. The Engineer of Record must approve all falsework and other necessary structural construction that will be in temporary use and which can impact the safety of the public and construction staff.

Once approved by the Engineer of Record, the DBT must submit to KYTC electrical shop drawings, design data, and descriptive literature for materials in an electronic format. Drawings and literature are also submitted for lighting and signal components. Work may not begin until KYTC reviews and comments on shop drawings.

All working drawings and calculations must be signed by and bear the seal of a Registered Professional Engineer who is licensed in the State of Kentucky. All working drawings and design calculations must include the Contract number, the contractor/fabricator's name, and a point of contact.

The DBT furnishes working drawings and/or commercially available patented devices. The latter must be on an approved list published by the appropriate state agency. Drawings must be signed by and bear the seal of a Registered Professional Engineer. However, this Professional Engineer may be licensed in any state. Manufacturer installation manuals must be provided alongside the working drawings. They will remain the property of the appropriate state agency.

5.2.2 Construction Document Control & Management

On DB projects, construction inspectors document progress as they would on any other KYTC project. Compared to DBB projects, DB projects use different documentation for 1) Progress payments (the DBT applies for monthly progress payments; documentation should determine accuracy of applications), and 2) Quality assurance testing. Construction inspectors enter documentation in SiteManager. Unlike DBB, individual pay items are not processed because payment is based on a submittal request from the DBT and agreement by the PM.

However, documentation is needed to affirm DBT reporting, verify material testing, and confirm that the DBT's work conforms to specifications, standards, and plans. Section 5.8 discusses construction administration and documentation in greater detail.

5.3 Schedule of Values

DB projects typically include Design Complete and Construction Complete pay items. Once the NBW is issued, the DBT must provide a Schedule of Values (SOV) to KYTC for review, preferably at or before the Project Kickoff Meeting. The SOV provides a cost breakdown for major work elements normally used on a traditional DBB project. It must be broken out into enough detail for KYTC to verify the level of progress based on field inspection so that an estimate of the percentage complete can be established for any item.

KYTC uses the SOV to validate requests for progress payments submitted by the DBT. Progress payments are made each month unless noted otherwise in the RFP. RFC Plans (see Section 5.7) must include a detailed estimate of quantities for designated work units and items. The DBT and PM review and update the SOV as RFC Plans are developed and progress payments made.

5.4 Buildable Units

Buildable units are project sections which can be designed, reviewed, and constructed independently, or with minimal controls and design assumptions (which depend on other portions of the project). Examples

of buildable units are distinct geographic areas, logically divided construction stages, or the phases of a similar type work.

When the DBT uses buildable units, the PM should request a project summary of buildable units for KYTC's review. The summary should describe 1) Each unit in detail and 2) Each unit's impact on overall project schedule. The PM and OPT comment on proposed buildable units and identify revisions which need to be made before proceeding. Proposed buildable units are formally approved once they satisfy the Cabinet's requirements. For each buildable unit, the DBT must package all designs, drawings, and other related documents so individual units can be reviewed and approved as a self-contained package. The DBT is responsible for all assumptions pertaining to subsequent work and their impact on the overall final design. Each buildable unit requires that the SOV be updated (see Section 5.3) in sufficient detail for the purposes of construction and material inspection.

The submission, review, and approval of a buildable unit's documents must adhere to guidelines laid out in the document control process. Information required from related or adjacent buildable units must be cited, or the DBT must provide an estimated value of the data needed for review.

In some cases, the assumptions, calculations, or design data for one buildable unit are used as inputs to inform the design and/or construction of another buildable unit. If assumptions do not match subsequent calculated values, the DBT must re-analyze impacted components and determine appropriate changes. For example, suppose the calculations for Buildable Unit #1 rely on calculations for Buildable Unit #2, which is scheduled for construction at a later date. If the calculations for Buildable Unit #2 prove incorrect, the DBT will need to revisit Buildable Unit #1 and correct resulting issues. The DBT must recommend repairs, adjustments, modifications, or replacement of the existing work — it incurs all costs related to redesign, re-submission, modifications, repairs, removals, disposal of materials, remedial work, additional work, new work, and other changes needed. No time extensions should be granted.

The DBT should carefully identify assumptions, calculations, or design data used as input into another buildable unit.

5.5 CPM Schedule

The DBT is responsible for developing and managing the schedule. On most projects, the DBT is required to submit a Critical Path Method (CPM) schedule. Because most DB projects are characterized by multiple moving parts, a detailed schedule is necessary for determining the baseline schedule, submittal schedule, and for monitoring progress. The CPM schedule helps the PM manage required staffing levels, resources, and to estimate monthly payments.

The CPM schedule is submitted immediately after KYTC issues the NBW (preferably at the Kickoff Meeting). The PM reviews the CPM schedule and provide comments as needed. If KYTC is satisfied with how the DBT addresses these comments, the CPM schedule is accepted and the baseline schedule for the project established. The DBT should set aside time at each regularly scheduled project meeting to discuss ongoing critical path activities.

Appendix C provides a template to use as a Special Note on DB projects.

5.6 Quality Management Plan

The DBT must submit a Quality Management Plan (QMP) to KYTC for review and approval. This plan contains two major sections: 1) Design QMP and 2) Construction QMP. The QMP lays out a clear plan for

achieving high-quality design and construction. It should address all elements such as working drawings, shop drawings, falsework design, and other related materials. Additionally, it needs to discuss the DBT's plans for working with lower-tier subcontractors/sub-consultants. The DBT must adhere to the approved QMP throughout the Project.

Construction activities cannot begin until KYTC approves the QMP. KYTC will not authorize payment for construction until the QMP is approved. Work activities may proceed after KYTC offers its concurrence with and written approval of the QMP. The PM must periodically audit the DBT's work to ensure that it conforms to the RFP, document control plan, and QMP. The full cooperation and assistance of the DBT is expected during these audits.

The QMP should be updated as work proceeds to ensure it reflects current project conditions. The DBT and/or KYTC may identify the need for revisions. KYTC must review and accept any modifications to the QMP before they are enacted.

5.6.1 Design Quality Management Plan

The Design Quality Management Plan (DQMP) defines the specifications, qualifications, and procedures for preparing a quality design. It includes procedures for a system of independent design checks. The DBT is responsible for preparing and submitting this document as it ensures that the design meets the intended scope and adheres to the highest quality standards. A sound DQMP will also reduce the need for re-work. The DQMP should include, but is not limited to, the following items:

- Quality Assurance/Quality Control (QA/QC) plan for preparing and checking all plans, calculations, and specifications
- A statement acknowledging that design checks will be performed independently of the original design preparation
- Qualifications of the design engineers (developers) and reviewers:
 - Professional licenses
 - Level of experience
- DBT staff assigned to Design Administration
- Staff qualifications
- Development and approval of design plans
- Document control system
- Reviews and the concurrence of KYTC for each buildable unit

The DQMP should also address the DBT's responsibilities for managing the following:

- Verifying at each stage and milestone that design plan development complies with the Contract requirements
- Reviewing, approving, and releasing various components of the buildable units for KYTC's review
- Confirming that the conditions encountered are consistent with the design and design-related documents
- Reviewing and corroborating the quality of significant project changes required during the construction phase

5.6.2 Construction Quality Management Plan

The DBT must also prepare and submit a Construction Quality Management Plan (CQMP). The CQMP elaborates the detailed procedures, specifications, KYTC standards of practices, and inspection frequencies for construction quality verification checks. This plan should be discussed at the Project Kickoff Meeting unless a separate Preconstruction Conference is scheduled.

The PM, in conjunction with construction personnel, review the CQMP. They should only approve it once they are satisfied that it meets or exceeds requirements laid out in the RFP. At minimum, the CQMP must:

- Demonstrate that the DBT thoroughly understands KYTC's QA/QC requirements
- Describe the DBT's QA/QC program
- Provide a method for managing material quality and conformance with the plans
- Present an overview of materials testing frequencies in accordance KYTC requirements
- Contain a plan to ensure construction communication, coordination, and collaboration with KYTC
- Indicate quality reporting documentation
- Describe a plan for material reporting and certifications
- Provide an escalation ladder for construction decisions and resolving issues

5.7 Released for Construction Plans

The DBT's Engineer of Record prepares and endorses the Released for Construction (RFC) plans. Once the design documents, project specifications, and internal QC review for a buildable unit are 100 percent complete, the DBT schedules and conducts the RFC review. No buildable unit may be submitted to KYTC before the Engineer of Record has approved it.

The DBT must highlight, check, and bring to KYTC's attention where information presented at previous design reviews has been modified. The DBT presents the final design for review and KYTC's written concurrence. The Cabinet must review and accept each RFC submittal before any construction work can begin.

For each buildable unit the DBT must submit detailed design plans for review (as per KYTC's *Highway Design Guidance Manual* or as otherwise defined in the RFP). How much review time is allocated to KYTC should be specified in either the RFP, approved document control plan, or DQMP. KYTC should strive to complete reviews as quickly as possible to keep the project on schedule. Final plan submittals for each buildable unit must be submitted as separate files from associated reports. Plan sheets should be numbered as sheet X of XX.

Once the RFC design review is complete for a buildable unit, the PM issues written authorization (including the date of authorization) to the DBT certifying the RFC plans as *Ready for Construction*. This plan set must be used to build the project. There are no exceptions to this rule.

5.8 Construction Administration

DB projects are designed and constructed in a manner similar to traditional DBB projects. Unless the RFP notes otherwise, all specifications, guidance, and policies normally followed by KYTC for construction, inspection, and acceptance remain in effect. Nonetheless there may be procedural differences in how certain requirements are implemented by construction inspection staff. Specific areas where construction administration may differ slightly from DBB include:

- Progress Schedule Requirements (Section 5.5)
- Materials Quality Control
- Progress Payments (Section 5.9)
- Contract Changes
- Project Documentation (Section 5.2)
- Use of SiteManager & SiteManager LIMS

5.8.1 Preconstruction Conference

KYTC may request that the DBT hold a Preconstruction Conference before construction begins. If buildable units are used, KYTC may request a Preconstruction Conference before construction begins on each buildable unit. The DBT is responsible for facilitating this meeting, however, the PM should provide input on the agenda and items to be discussed.

The Cabinet has an established procedure and items for discussion at Preconstruction Conferences on DBB projects. This procedure should be followed as closely as practical for DB projects. Items that may warrant more in-depth discussion include, but are not limited to:

- Utilities
- Permitting
- ROW
- Buildable units
- Submittals
- Documentation for progress payments
- Material testing and quality control
- Quality assurance interactions with KYTC
- Issue resolution procedure

5.8.2 Project Documentation and Inspection

Construction inspectors must follow the same inspection procedures and project documentation process used on other KYTC projects. Section 5.2.2 details construction documentation management and the use of SiteManager for DB project inspection.

The RFP and approved CQMP summarize QA/QC requirements. KYTC inspectors or their designees may independently verify the DBT's QA procedures throughout the project. These roles should be clearly defined and thoroughly discussed during the CQMP approval process and at the Preconstruction Conference. Regardless of what levels of inspection are defined in the CQMP, Cabinet construction inspectors or their designee have the authority to determine if work meets specifications and quality requirements.

KYTC inspects offsite work on DB projects (e.g., structural steel welding, precast girder casting, precast pipe fabrication). The PM should coordinate with the appropriate KYTC divisions to ensure shop drawings and fabrication plans are provided so offsite inspection staff can review the work.

5.8.3 Control of Materials

The PM works with the Division of Materials to ensure project materials meet or exceed specification requirements and to thoroughly review the approved SOV and CQMP to determine necessary testing frequencies and applicable testing guidelines for KYTC staff (or third-party construction management).

The PM should develop and maintain a spreadsheet or similar document which tracks material installation and required testing. The preferred option is to use a program that is capable of storing testing protocol and results (e.g., tracking, sampling, testing requirements, frequencies).

The DBT must submit monthly reports describing the materials installed and QC results. This report is then reviewed by the PM and District Materials Engineer and reconciled with KYTC's tracking document to ensure timely acceptance of materials.

5.8.4 Design Changes & Construction Revisions

As the Engineer of Record, the DBT is responsible for design changes or errors. If the DBT proposes plan changes after the original plans are certified as RFC, the PM and Engineer of Record must review and approve proposed changes before the DBT may incorporate them into the RFC plan set as a revision.

DB Contract changes should generally be limited to areas in which requirements included in the RFP cannot be easily met. This generally occurs when a preliminary design is advanced and conflicts with the proposed solution. When this situation arises following the Contract's execution, a change order is necessary. Standard change order procedures need to be followed. Change orders must be approved by the Engineer of Record and PM.

5.9 Progress Payments

The DBT prepares payment requests according to procedures defined in the RFP. Payment requests must detail individual work items completed and give estimated completion percentages for buildable unit components. Work items included in the payment request should be consistent with the approved SOV. The PM must verify the DBT's reported progress and request for payment before processing them in SiteManager. Disputes over requested payments should be discussed and resolved prior to processing.

5.10 As-Built Plans

RFPs should require the DBT to deliver as-built plans. Upon delivery, they are approved by the PM. RFC plans and alterations should be clearly identified in as-built drawings and verified by field measurements. As-built plans should be submitted for each buildable unit with approved modifications or design changes highlighted. The format of the as-built plans should be discussed and agreed to by the DBT and KYTC at the Preconstruction Conference.

Appendix A — Sample RFP Template

One of the most time-consuming activities of any design-build project is putting together a request for proposals (RFP). Regardless of project type, KYTC staff typically draws material from older RFPs to speed up the process of assembling new RFPs. And yet deciding what material can be incorporated into a new RFP from older RFPs in an unaltered state and what material requires significant revisions is challenging. This appendix presents a sample RFP template for design-build projects which can be used as the foundation when developing RFPs in the future. The RFP comes from the Cabinet's Graves Road project CID 19-9001 in Boone County and is divided into 15 sections:

- 1. Project Identification
- 2. Pre-Proposal Meeting
- 3. Addenda Process
- 4. Design-Build Team (DBT)
- 5. Restrictions on Participation in Design-Build Contracts
- 6. Project Description, Mandatory Requirements and Alternative Technical Concepts (ATCs)
- 7. Proposal Submission and Selection Criteria
- 8. General Provisions for the Scope of Work
- 9. Buildable Units
- 10. Design and Construction Requirements
- 11. Environmental and Hazardous Materials
- 12. Right of Way (ROW)
- 13. Utilities (Including Railroads)
- 14. Plan Submittals and Review Requirements
- 15. Index of Attachments

The template color codes section headings to distinguish between language that is standardized (and therefore can be used in a new proposal without modification) and language which is project-contingent. Green headers (e.g., **4.2.1.1 Part A – Introduction**) indicate that material in a section can be incorporated into a new proposal without changes. Orange headers (e.g., **4.2.1.2 Part B – Project Understanding and Approach**) denote material that can be used in a new proposal with minimal modifications, such as adjusting dates, locations, schedules, or tables — meaning these sections do not have to undergo thorough rewrites. Finally, headers shaded red (e.g., **7.1.2.4 Part D – Bridges, Structures, and Geotechnical Concepts**) indicate that a section contains information that is tied to the specific project. While staff can take a cue from these sections when preparing a new RFP, they must be careful to only use language or data relevant to the project at hand. The template should be used as guidance for what type of information should be included and how it needs to be structured. It is also possible that some language can be borrowed directly from these sections. Staff must be extremely careful when deciding to go this route. Note that in a few cases section headers are not shaded (i.e., they are black). This is reserved for section headers which jump immediately to another (sub) section header without intervening text — as in the picture below.

10. DESIGN AND CONSTRUCTION REQUIREMENTS

10.1 LOCATION & DESIGN

Location & Design Special Provisions in addition to the Governing Regulations listed in Section 8.1 of this document.

When staff put together a new RFP, it is imperative to closely read all material and verify it is applicable to the project. Otherwise you may create confusion for Proposers.

1. PROJECT IDENTIFICATION

Contract No.	19-9001
State Project #	FD52 008 0275 006-010
County	Boone
Route	I-275
Local Route Name	Graves Road

1.1 PROJECT SCHEDULE

The submittal process shall involve a 3-step process (Statements of Qualifications, Technical Proposal, and Price Proposal). Below is a schedule of dates for the submittal:

Date	Submittal
Early March, 2019	Advertisement
March 14, 2019	Pre-Proposal Meeting (Mandatory)
March 29, 2019	Statements of Qualifications Due
April 12, 2019	Short-list
April 15, 2019 thru June 14, 2019	Alternate Technical Concept Process
June 28, 2019	Alternate Technical Concept Approvals
July 26, 2019	Last Day for Questions
August 2, 2019	Technical Proposals Due
August 16, 2019	Price Proposals Due
September 2019	Project Award
August 1, 2022	Project Completion Date

1.2 PROJECT-RELATED INFORMATION

The following information is available for review and use by the Design-Build Team (DBT) in the online archive at the following location:

https://transportation.ky.gov/Construction-Procurement/Pages/Design-Build-Projects.aspx

- A. Construction plans for the existing Graves Road overpass (Drawing #: 16930)
- B. Geotechnical Engineering Report R14-04 KY 237 Widening (N. Bend Rd toward KY 8)
- C. Geotechnical Engineering Report L11-01 I-275 Slide #8 Beginning @ MP8.62
- D. A preliminary design executive summary for reference information only.

The following information is available for review and use by the Design-Build Team (DBT) at the Pre-Proposal Meeting:

- A. Preliminary design files including the currently proposed alignment for the project
- B. Additional preliminary survey and utility location information, gathered in 2019.
- C. Mapping and Ortho-photography for the project

complete or	None of the information provided herewith or at the Pre-Proposal meeting should be considered complete or as-built information. The Design-Build Teams (DBT(s)) are advised to verify the preceding information to determine if it accurately depicts existing field conditions.				

2. PRE-PROPOSAL MEETING

This pre-proposal meeting is to discuss and clarify any issues that the project may have.

Location	Boone County Court House	
	2950 Washington Street, Burlington, KY 41005	
Date	March 14, 2019	
Time:	10:00 am Eastern Time	

The meeting is mandatory for contractors and consultants who intend to be leads on a DBT.

3. ADDENDA PROCESS

Addenda to this solicitation may be necessary prior to the closing date and will be furnished by mail, email, or the web to all prospective DBTs if prior to receipt date and to all DBTs determined to be eligible for award if after receipt date. The KYTC will respond to questions that are received by 4:00 pm (EST) 7 days prior to the bid submittal. The responses will be posted 3 days prior to the submittal deadline.

All questions prior to the award shall be directed to:

Name: <Current Director>,

Director, Division of Construction Procurement

Phone: 502-564-3500

Email: < Current Director's email>

Or see the website at: http://transportation.ky.gov/Construction-Procurement/Pages/default.aspx

4. DESIGN-BUILD TEAM

4.1 PREQUALIFICATION

It is required that the Design Build Team (DBT) consist of a KYTC pre-qualified Contractor who has engaged the services of KYTC pre-qualified Design Consultant(s) to perform all work required in this RFP. If the Design Consultant(s) submitted does not meet all the required qualifications, KYTC may reject the DBT's proposal. All subconsultants and subcontractors utilized by the DBT on this project shall be pre-qualified to perform work for KYTC or their services shall not be allowed.

To respond to a project listed in this RFP the project team must be prequalified in the specified areas by the response due date of the advertisement. If there are questions concerning prequalification, contact Division of Professional Services at (502) 564-4555. Responses that do not have all areas of prequalification fulfilled will be returned.

4.1.1 CONTRACTOR PREQUALIFICATION

Consistent with Section 102.01 of Kentucky's 2020 Standard Specifications for Road and Bridge Construction ("Standard Specifications") all organizations and individuals bidding on Department projects and accepting subcontracts on Department of Highways ("Department") projects shall apply for and receive Department prequalification and possess a Certificate of Eligibility as provided in regulations published by the Department according to KRS 176.140.

The DBT must be prequalified in at least one of the following work items to be registered as an eligible bidder for the project. Since the project is an alternate bid project, the company shall need only to be prequalified in a work item corresponding with its bid type:

Alternate Pavement Type Qualifications for Bidder

Asphalt Pavement A, C2 Concrete Pavement A, B

The bidding company for the DBT shall be prequalified prior to submission of the Statements of Qualifications. Organizations and individuals providing other services shall be prequalified and possess a Certificate of Eligibility prior to performing the work.

4.1.2 PROFESSIONAL SERVICES PREQUALIFICATION

The DBT shall provide all necessary services to design and construct all permanent and temporary portions of the project, inclusive of acquiring all rights of way/easements and relocating all affected utilities. Work shall conform to current KYTC, federal, and AASHTO standards, practices, policies, guidelines and specifications where applicable. Additional documents identified within the scope of work shall be provided under separate cover as part of the contract documents. KYTC standards, practices, policies, guidelines and specifications shall control in case of a conflict. The standard of care for all such services performed or furnished under this Agreement shall be the care and skill ordinarily used by members of the engineering profession practicing under similar conditions at the same time and locality.

Design firms prequalified shall perform only those tasks which they are prequalified to complete. The DBT shall need to have KYTC prequalifications in a variety of disciplines in order to perform. KYTC prequalifications shall include but not be limited to:

Geotechnical Laboratory Testing Services

Geotechnical Drilling Services
Geotechnical Engineering Services

Highway DesignRural Roadway Design Highway DesignUrban Roadway Design

Highway DesignSurveying

Utility DesignCommunicationUtility DesignElectrical Level 1Utility DesignGas Level 1

Utility Design Water & Sewer Level 1
Utility Design Water & Sewer Level 2

Utility Design Utility Preconstruction Coordination
Utility Design Utility Construction Inspection

Right-of-Way Acquisition Services
Right-of-Way Relocation Services

Legal Services Titles (According to statewide contract list)

Legal Services Condemnations (According to statewide contract list)

Structure Design Spans Under 500 Ft

Traffic Operations Traffic Engineering Services

Traffic Operations Electrical Engineering Traffic Signal Services
Traffic Operations Electrical Engineering Roadway Lighting Services

Environmental Hazmat (for ROW acquisition)

The DBT shall be aware that changes to the preliminary design documents may require the DBT to be prequalified in additional areas.

Design firms shall be sufficiently staffed and capable of performing the required work on this contract. These design firms may be subcontractors responsible for the design and engineering of the project.

There may be multiple consultants working on the DBT. However, one consultant shall be designated as the Lead Designer. The DBT shall include qualified engineers and surveyors to be in direct responsible charge of engineering and surveying endeavors and who are professionally registered in the state of Kentucky. Designs prepared for the project shall be signed and stamped by a licensed Kentucky Professional Engineer. To qualify for selection, interested DBTs shall be prequalified through KYTC for the performance of the work. Licensure shall be acquired prior to performing any work when prequalification requires work be performed by a licensed individual. Services requiring prequalification may only be performed by firms prequalified for those services at the time of performance of the services.

4.2 STATEMENTS OF QUALIFICATIONS (SOQ)

A DBT shall submit one (1) unbound version of the SOQ, and one (1) CD/DVD or one (1) USB "thumb" drive containing two (2) electronic files of the SOQ as follows:

- A. One electronic searchable single file PDF which does not restrict printing of copying text, images, and other content.
- B. One electronic password-protected single file PDF which restricts copying of text, images, and other content.

The SOQ shall be received no later than 4:00 p.m. Eastern Time on March 29, 2019. The KYTC shall reject any proposal received after aforementioned time and date and return it unopened to the DBT. In order to be considered, the original SOQ shall be signed in blue ink by an authorized representative of the DBT.

The submittal shall either be mailed or hand-delivered to: <*Name of Current Director>*, P.E., Director Division of Construction Procurement 200 Mero Street, 3rd Floor Frankfort, KY 40622

The outside cover of the package containing the proposal shall be marked:

Statement of Qualifications for

Boone County Graves Road Interchange Item No. 6-78

CID No. 19-9001

Design-Build: FY 2019 Design Build #1

4.2.1 FORMAT

To ensure a timely and consistent review, the format of the SOQ must adhere to the requirements of this section. The following table lists the maximum number of pages which may be used by the Proposer in the SOQ. Content should be organized by parts as indicated.

Part	Content	Maximum Pages	
Α	Introduction	2	
В	Project Understanding and Approach	18	
С	Design-Build Project Team and Resumes		
D	Capabilities and Experiences – Including Form A (Appendix A)	15	
Total		35	

The SOQ must conform to the following format:

- A. Each page must be 8.5" x 11" with single-space type no smaller that 11- point font. Pages may contain graphics and photographs where applicable.
- B. All pages shall be numbered with a footer depicting, at a minimum, Proposer's name and page number (Proposer Page X of XX). Margins shall be at least 1" all around. Deviations from formatting requirements may result in rejection of the LOQ.
 - 1. Printing should be double-sided. If single-sided printing is used, the backs of pages must be left blank.
 - 2. A single 11" x 17" page may be substituted for two 8.5" x 11" pages.
- C. Binding covers front and back are allowed as well as a transmittal letter; however, information on the outside covers and transmittal letter may not be used for evaluating the LOQ. The insides of the front and back covers must be left blank. No writing, photos, graphs, etc., will be allowed on the inside of covers.
- D. Tabs between pages may be used; however, other than identification on the tab, the tab page must be blank. No writing, photos, graphs, tec., will be allowed on the tab pages other than section identification.
- E. This response will be a "standalone" document. No additional information may be attached to made reference to via webpage or other means.

4.2.1.1 Part A – Introduction

The introduction shall contain the following information:

- A. The Introduction page(s) shall be on the Lead Contractor's letterhead and identify the full legal name and address. (Font, font size, and page margin requirements may be disregarded as it pertains to the Lead Contractor's letterhead if the Lead Contractor's standard blank letterhead would violate the formatting limitations.) Proposers who are joint ventures may submit on any letterhead of the joint venture's members, or submit on a new letterhead depicting the joint venture. The Introduction shall be signed by an authorized representative of the Proposer's organization. All signatures in the Introduction submitted with the unbound version of the SOQ shall be original and signed in ink.
- B. The OPT will need to work with Construction Procurement on format of electronic submittals. The electronic submittal process continues to evolve and requirements will change based on guidance from Construction Procurement and Professional Services.
- C. Identify the name, title, address, phone and fax numbers, and e-mail address of an individual who will serve as the Point of Contact for the Proposer.
- D. Identify whether the Lead Contractor will be structured as a corporation, Limited Liability Company, general partnership, joint venture, limited partnership or other form of legal organization. Note: The Department recommends that Lead Contractors who are joint ventures register their company or fictitious name with the Kentucky Secretary of State.
- E. Identify the full legal name of the Lead Contractor and the Lead Designer for this Project. The Lead Contractor is defined as the prime/general contractor responsible for overall construction of the Project and will serve as the legal entity who will execute the Contract with the Department.
- F. Provide the name of the principal(s) or officer(s) of the Lead Designer. Provide the firm's registration number of the Lead Designer confirming that the firm is properly registered with the Kentucky State Board of Licensure for Professional Engineers and Land Surveyors at the time of submittal, who will be responsible for the design work included in this contract. The Lead Designer should be the firm that employs the DBT Design Project Manager.
- G. A statement that the Proposer's Lead Contractor and Lead Designer are prequalified with the Department in accordance with the requirements of the Department.
- H. A statement confirming the commitment of the Key Personnel identified in the submittal to the extent necessary to meet the Department's quality and project duration expectations.
- I. A statement warranting that no members of the Proposer have a personal conflict of interest or an organizational conflict of interest. (See Section 5.2)
- J. A statement that the Proposer will comply with the Department's DBE goals for this Contract, and will comply with the Department's Nondiscrimination policy.
- K. A Certification of authorized submitter that information contained within is correct. Include typed name and title, the clause "I certify that the information included within this document is, to the best of my knowledge, correct as of the date indicated", the signature (one copy must have original signature, and the date)
- L. A Certification that the Lead Consulting firm is currently registered with the Commonwealth of Kentucky in accordance with KRS 322.060 to perform the engineering services needed for this project, and the firm's Kentucky Registration Number. This includes subconsultant firms. Additional pages are allowed to provide subconsultant certification of firm registration and Kentucky Registration Number.
- M. In accordance with Federal Acquisition Regulation 52.209-5, the Vendor shall certify with bid response, that to the best of its knowledge and belief, the Vendor and/or its Principals is (are) not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any State or Federal agency.

N. In response to a legal opinion concerning the application of Official Order No. 102295, "Conflict of Interest", consultants responding to this advertisement are required to identify any potential conflicts of interest in regards to any financial or other personal interest in a project and/or any financial or other personal interest in any real property that may be acquired for a project. In the case that a potential conflict is identified, the consultant will be asked to recommend a solution in dealing with this conflict.

4.2.1.2 Part B – Project Understanding and Approach

Describe the Proposer's project understanding and anticipated approach to the project; specifically addressing:

- A. Managing bid and procurement risks specific to the Project during procurement,
- B. Monitoring the quality of the Work to ensure high quality for the duration of the Project, and
- C. Ensuring timely initiation of Roadway design and physical project construction.

The Department has also identified the following as significant tasks with considerable risks involved with the project. Identify the highest risks for each and describe the Proposer's approach to mitigate and manage the risks to the significant tasks:

- A. Right-of-Way acquisitions
- B. Utility relocations
- C. One additional significant task, as identified by the Proposer, specific to the Proposer's anticipated approach to the Project.

4.2.1.3 Part C - Design-Build Project Team

For the DBT to be eligible for selection, the Lead Contractor must be prequalified as stated previously in the instructions.

For the DBT to be eligible for selection, either the prime or a subconsultant must be prequalified in each service area listed within the advertisement.

- A. List the services (from the KYTC prequalification categories) that the lead design consultant and any subconsultant(s) will be performing for this project, and the status of prequalification (Prequalified, Submitted and Pending, or Prequalification not required).
- B. For services to be performed by the lead consultant, list the name(s) of the employee(s) intended to perform the work. For subconsultant services, list the firm name.
- C. List the services not applicable for prequalification categories but which may be performed, and the name of the prime employee(s) or subconsultant firm name who intend to perform the work.

The Proposer shall provide sufficient information to enable the Department to understand and evaluate the Proposer's Team. Include the following:

A. The Proposer shall provide an organizational chart showing the "chain of command" of the anticipated roles proposed for the Proposer's organization regarding the Project. The organizational chart shall show Key Personnel, key subconsultants, all named firms that will be performing work (including those firms identified in association with Section 4.1.2 of the ITP regarding prequalification), and other anticipated personnel integral to the success of the Project. Note: Font requirements will not be enforced, but Proposers are to ensure the Organization Chart

- is legible and clear. One $11" \times 17"$ sheet, folded to $8.5" \times 11"$ size, will be allowed for the Organization Chart. This sheet will count as a single sheet for the purposes of page count. The content of the 11"x17" sheet will be limited to the organizational structure and relationships among the Proposer's team.
- B. Describe the general experience of the firms that are part of the DBT. Focus on specific firm experience that relates to carrying out the proposed project and how the experience will ensure success of the Proposer's general approach to the Project. Describe any notable expertise or other special capabilities of members of the DBT (Persons or Firms) that are critical to your project approach. Firms listed on Form A shall be specifically addressed as to their role on the Proposer's team.
- C. Identify the Key Personnel as described in Sections 4.2.1.3.1 4.2.1.3.7 below. Provide information within the SOQ to demonstrate the abilities of all identified personnel through a description of qualifications, experiences, and performance of similar tasks on previous similar recent relevant projects, background, and education. These qualifications and experience should provide confidence to the Department that the Project will be effectively managed through personal competence and accountability. This information shall be expounded through resumes provided in Part D (Section 4.2.1.4). Resumes for individuals who are not identified in the SOQ as Key Personnel shall not be included. For all Key Personnel, provide the following information:
 - a. The individual's position and authority within the Proposer.
 - b. Previous projects, similar in nature to the proposed project or other significant efforts for which the individual has performed a similar function.
 - c. Identify percentage of time that the individual will be dedicated to the Project during the following:
 - i. Design phase
 - ii. Construction phase
 - d. Relevant experience, professional registrations, education and other components of qualifications applicable to this project.
- D. Any unique qualifications.
- E. A statement indicating that the individual is currently employed by a member of the Proposer at the time of the SOQ submittal.

Duties may be performed by more than one person. If this is the case, provide information for each person and clarify individual duties. (Note: Part C page count will not be increased.)

Any person proposed as Key Personnel position requiring a Professional Engineering license who is not a Kentucky P.E. at SOQ submission may be proposed if 1) the person is licensed in another state and 2) submits a commitment in the SOQ to becoming licensed in Kentucky prior to Award.

4.2.1.3.1 DBT Project Manager

The DBT Project Manager shall be ultimately responsible for the Proposer's performance. Ensures that personnel and other resources are made available. Responsible for contractual matters. This position is required for the duration of all design and construction-related activities on the Project.

4.2.1.3.2 DBT Design Project Manager

The DBT Design Project Manager shall be responsible for actively managing the overall design of the project. Should be an employee of the Lead Designer. Responsible for overall design of the project inclusive of all structures and structural elements (bridge substructures and superstructures, retaining walls) and roadway/highway items (alignment, drainage, pavement, signing, lighting, traffic signals,

maintenance of traffic, etc.) Must be a KY P.E. at the time of Award. The DBT Design Project Manager shall have ten years of experience on major highway projects.

4.2.1.3.3 DBT Structural Lead (Design)

The DBT Structural Lead shall be responsible for overall design of structures and structural elements. Responsible to ensure that all requirements of the design for all structural elements on the Project, including bridges, box culverts, walls, and foundations are met. Shall have no less than 10 years of experience in design of complex structures. Must be a KY P.E. at time of award. This position is required for the duration of all structure design-related activities on the Project.

4.2.1.3.4 DBT Roadway and Maintenance of Traffic Lead (Design)

The DBT Roadway and Maintenance of Traffic (MOT) Lead shall be responsible for meeting the design requirements of the Contract Documents for all roadway and MOT elements on the Project, including railroad coordination. The DBT Roadway/MOT Lead shall have 10 years of experience working in a similar capacity on major highway projects with complex roadway design. Must be a KY P.E. at the time of Award. This position is required for the duration of the roadway design- related activities on the Project.

4.2.1.3.5 DBT Right-of-Way Acquisition Manager

The DBT Right-of-Way Acquisition Manager shall be ultimately responsible for the acquisition and management of all Rights of Way and easements necessary to complete the roadway project and utility relocations. The DBT Right-of-Way Acquisition Manager shall be responsible for coordination and communication with applicable KYTC personnel and shall ultimately be responsible to acquire property within a timetable that allows completion of the project within the provided schedule. The DBT Right-of-Way Acquisition Manager shall have 10 years of experience (under the laws of eminent domain) in highway rights-of-way appraisal, negotiation, property management and/or relocation assistance and possess any licenses or certifications required for the same.

4.2.1.3.6 DBT Utility Relocation Manager

The DBT Utility Relocation Manager shall be ultimately responsible for the coordination of design and construction of any utility relocations necessary to complete the project. The DBT Utility Relocation Manager shall have 10 years of relevant experience in utility relocation and possess any licenses or certifications required for the same

4.2.1.3.7 DBT Construction Manager

The DBT Construction Project Manager actively manages the overall construction of the project. Must be an employee of the Lead Contractor. Responsible for overall construction inclusive of all structures and structural elements (bridge substructure and superstructure, retaining walls) and roadway items (alignment, drainage, pavement, lighting, traffic signals, signage maintenance of traffic, etc.). The DBT Construction Manager shall have ten years of experience working in a similar capacity on major highway projects. The DBT Construction Project Manager shall be located in the field office on a full-time basis for the construction duration of the Project unless modification is requested by the DBT and approved by KYTC in its sole discretion.

4.2.1.4 Part D – Capabilities and Relevant Experience

Provide specific information as it relates to previous project experience, available resources, and anticipated design/construction methods. Include submission of Form A.

4.2.1.4.1 Project Management Methodologies

This section should include details describing the following:

- A. How the Proposer will coordinate with stakeholders (Boone County, Distribution Companies, and Utility Companies, etc.).
- B. How the Proposer will coordinate with KYTC to ensure Proposer sharing of information & reporting to ensure a high-quality project
- C. The Proposer's internal procedures for planning and monitoring the Project to ensure timely completion and achievement of critical project milestones while considering project risks, available resources, and production levels.
- D. The Proposer's procedures to ensure a cost-effective design and subsequent cost-effective construction while meeting or exceeding the project requirements

4.2.1.4.2 Past Projects/Technical Experience – Design and Construction

The section shall include past projects and technical experience attachments (not exceed 10 pages total) that provide narrative descriptions of the ten relevant experiences (5 Design Projects, 5 Construction Projects) listed on Form A. Technical experience attachments shall be on distinct pages and not continue across multiple pages, limited to 1 page per experience listed on Form A. The narratives should demonstrate experiences in each of the following areas:

- A. Construction of projects of similar scope and complexity, as applicable to the Contractor.
- B. Design of projects of similar scope and complexity, as applicable to the Designer.
- C. Timely completion of projects of similar scope and complexity.
- D. Proposed Key Personnel members' roles with the project, if applicable.
- E. Ability to meet or exceed DBE commitments and to properly manage DBEs.

Each technical experience attachment must include the following information:

- A. A narrative describing the project.
- B. Bid construction costs.
- C. Name of the project, the owner's contract information (project manager name, phone number, e-mail address), and project number. If the owner's project manager is no longer with the owner, provide an alternate contact at the agency that is familiar with the project. The alternate contact must have played a leadership role for the owner during the project.
- D. Dates of design (if applicable) and construction (if applicable).
- E. Detailed description of the work or services provided and percentage of the overall project actually performed.
- F. Description of original scheduled completion deadlines and actual completion dates, as applicable to the Designer and/or Contractor. Describe reasons for completing the project in advance of the contract completion deadline. Describe reasons for completing the projects later than the contract completion deadline specified within the original contract. Describe any reasons for assessed liquidated damages and/or penalties, if applicable.
- G. Description of project challenges and subsequent mitigation efforts by the Proposer to overcome those project challenges and how these challenges and mitigation efforts may relate to this project.
- H. Description of OJT and DBE efforts, if applicable.
- I. An Owner's reference shall be included for each project listed. As a minimum, the reference shall include an individual's name and current telephone number.

Provide an attachment (to be only included in Part D) listing all projects designed and/or constructed by the Lead Designer and/or Lead Contractor that have resulted in the assessment of liquidated damages and/or penalties exceeding \$50,000 in the last five years if applicable to the respective role.

4.3 SOQ REVIEW AND SHORT-LISTING PROCESS

SOQs will be evaluated by a SOQ Technical Review Committee to consist of Department representatives from KYTC District 6 and KYTC Central Office.

The Department's SOQ Technical Evaluation Team will rank (at their sole discretion) the Proposer's Statements of Qualifications based upon the evaluation criteria below and in accordance with the Department's internal SOQ Evaluation Guidelines.

The SOQ shall be evaluated and scored based on the following point distribution:

Part	Evaluation Criteria	Maximum Points
В	Project Understanding and Approach	30
С	Design-Build Project Team and Resumes	30
D	Capabilities and Experiences – Including Form A (Appendix A)	40
Total		100

Failure to meet all requirements may render a SOQ non-responsive. The extent to which a Proposer meets or exceeds evaluation criteria will be comparatively ranked by the Department SOQ Technical Evaluation Team and will be reflective of the Department SOQ Technical Evaluation Team's rankings (in their sole discretion) of the Statements of Qualifications submitted by Proposers. The Department reserves the right to find clerical errors de minimis.

The Technical Evaluation Team may be assisted by any number of Technical subgroups and/or subject matter experts within the Department, FHWA, County, other involved agencies, and/or contracted by the Department.

For each of the ranking topics, the SOQ Technical Evaluation Team will determine the highest ranked Proposer within each ranking topic, with the highest ranked Proposer receiving the maximum number of points. Lower ranked Proposers will receive commensurately lower rankings based on a relative comparison to the highest ranked Proposer. Evaluations and rankings will consider Department identified strengths, weaknesses, and committed betterments found within the SOQ.

The Department may request the Proposer to affirm an identified committed betterment found within the SOQ. This affirmation request will be made in writing to the Proposer prior to final rankings. If an affirmation request is made by the Department, the Proposer shall respond in writing within 48hrs either confirming the Department's understanding or clarifying the intent. Any response to the affirmation request may not expound upon the information within the SOQ.

The rankings will be based on the information provided by the Proposer within the SOQ, independent investigation of any information, prior experiences with the Proposer by the Department, existing public information, and evaluation information obtained from the owners of previous projects.

The Technical Review Committee will present the findings, rankings, and shall make a recommendation to the Executive Level Evaluation Team. This Executive Level Evaluation Team will consist of designees of:

- A. KYTC Secretary
- B. KYTC State Highway Engineer
- C. KYTC Alternative Delivery Program Manager
- D. KYTC Assistant State Highway Engineer (Project Development)
- E. KYTC Assistant State Highway Engineer (Project Delivery & Preservation)
- F. KYTC District 6 Chief District Engineer

The Executive Level Evaluation Team will examine the Technical Level Evaluation Team's findings and will render ultimate selection of the Short-listed Proposers with concurrence from the Technical SOQ Evaluation Team. The Executive Level Evaluation Team may Short-list up to 5 DBTs.

The Secretary has final authority to determine the best interests of the Department in selection of the Short-listed Proposers.

5. RESTRICTIONS ON PARTICIPATION IN DESIGN-BUILD CONTRACTS

To facilitate this procurement, various rules have been established and are described in the following paragraphs.

5.1 CAMPAIGN FINANCE LAW STATEMENT PURSUANT TO KRS 45A.110 AND KRS 45A.115

Each member of the DBT shall certify that neither he/she nor any member of his/her immediate family having an interest of ten percent (10%) or more in any business entity involved in the performance of this project, has contributed more than the amount specified in KRS 121.056 (2), to the campaign of the gubernatorial candidate elected at the last election preceding the date of this solicitation. Each member of the DBT further swears under the penalty of perjury, as provided by KRS 523.020, that neither he/she nor the company which he/she represents, has knowingly violated any provisions of the campaign finance laws of the Commonwealth, and that the award of a contract to him/her or the company which he/she represents shall not violate any provisions of the campaign finance laws of the Commonwealth.

A Commonwealth of Kentucky sworn statement regarding campaign financing laws shall be completed and signed by an authorized agent of the DBT and submitted with the Price Proposal by August 16, 2019.

5.2 CONFLICT OF INTEREST

The DBTs certify, by the signatures of duly authorized representatives that they are legally entitled to enter into this solicitation and contract and that they shall not be violating, either directly or indirectly, any conflict of interest statute under KRS Chapters 45A or 11A or ethical provisions under KRS Chapter 11A. Forms shall be signed and submitted by an authorized agent of the DBT with the Price Proposal on August 16, 2019.

5.3 NO CONTINGENT FEES

No person or selling agency shall be employed or retained or given anything of monetary value to solicit or secure this contract, excepting bona fide employees of the DBT or bona fide established commercial or selling agencies maintained by the DBT for the purpose of securing business. For breach or violation of this provision, the KYTC shall have the right to reject the proposal, annul the contract without liability, or, at its discretion, deduct from the contract price or otherwise recover the full amount of such commission, percentage, brokerage or contingent fee or other benefit.

5.4 RESTRICTIONS ON COMMUNICATION WITH KYTC STAFF

From the date of advertisement of the RFP until a contract is awarded, Proposers are not allowed to communicate with any KYTC staff concerning this project except:

- A. During the Pre-Proposal Conference with KYTC staff present.
- B. Via written questions to those specified in Section 3.
- C. As outlined in the Alternate Technical Concept process in Section 6.1.

For violations of this provision, the KYTC may reject the proposal.

5.5 PROPOSAL PREPARATION

The DBT shall follow any pertinent sections of this RFP, in the preparation of the proposal. Failure to provide any of the data required may result in the proposal being excluded from further evaluation.

5.6 PAYMENT AND CONDITIONS OF STIPEND

Subject to the conditions of the RFP, KYTC will provide a payment of \$50,000 to each non-selected, responsive, DBT. The term "payment" as used in this section shall mean \$50,000.

By submitting its Technical Proposal for this project, the DBT forms a contract and agreement with KYTC for its technical proposal, conceptual design, and any approved Alternate Technical Concepts, whether submitted with the technical proposal or not. Furthermore, by submitting its Technical Proposal for this project, the DBT acknowledges that it is eligible for payment if the DBT's proposal is not selected. The payment shall be payable by the KYTC to the DBT after KYTC enters into contract with the successful DBT, unless payment is waived by the unsuccessful DBT.

The payment shall be due only if the DBT submits a Technical Proposal that is responsive to the RFP as defined herein. The payment shall be full and final consideration for all documents submitted in the Technical Proposal or Approved Technical Concepts. Except for that intellectual property developed apart from or prior to DBT commencing work on the Technical Proposal for this project, KYTC shall retain an undivided joint interest in all rights and intellectual property submitted with the Technical Proposal.

If Technical Proposals have been submitted, but the KYTC does not Award the contract, all responsive DBTs shall receive a payment, unless payment is waived by the DBT. If the KYTC withdraws the contract prior to Technical Proposal submission, no payment shall be made.

An unsuccessful DBT, who otherwise qualifies for the payment, may elect to waive the payment within 10 days of the KYTC's Award decision and retain its rights to its Technical Proposal and approved Alternate Technical Concepts. By accepting payment of the Stipend, DBTs agree to waive all claims and causes of action against the KYTC related to the project in any way.

5.7 DISPOSITION OF PROPOSALS

All proposals, approved concepts, and preliminary plans become the property of the Commonwealth of Kentucky unless an unsuccessful DBT waives the stipend payment to retain its rights to its technical proposal and Alternate Technical Concepts as identified in Section 5.6. The successful proposal shall be incorporated by reference into the resulting contract.

5.8 BONDING REQUIREMENTS

A 5% bid proposal guaranty per Section 102.09 of the Standard Specifications shall be required to bid this project.

5.9 DBT RESPONSE AND PROPRIETARY INFORMATION

The KYTC shall not disclose any portion of any proposal prior to contract award to anyone outside the KYTC, other than representatives of the federal government, if required, and the members of the Awards Committee or their designates. After a contract is awarded in whole or in part, the KYTC shall have the right to duplicate, use, or disclose all proposal data, except proprietary data as described below, submitted by DBTs in response to this solicitation as a matter of public record. Although the KYTC recognizes the DBT's possible interest in preserving selected data which may be part of a proposal, the KYTC shall treat such information as provided by the DBT pursuant to Kentucky's Open Records Act, KRS 61.870 et seq.

Information areas which normally might be considered proprietary shall be limited to: individual personnel data, customer references, selected financial data, formulae, and financial audits, which if disclosed would permit an unfair advantage to competitors. If a proposal contains information in these areas that a DBT declares proprietary in nature, each sheet containing such information shall be clearly

designated as proprietary at the top and bottom of the page and shall be submitted under separate cover marked "PROPRIETARY DATA". Proposals containing information declared by a DBT to be proprietary, either in whole or in part, outside the areas listed above, may be deemed unresponsive to the solicitation and may be rejected.

Except as provided in Section 5.6 the KYTC shall have the right to use all ideas, or adaptations of those ideas, contained in any proposal received in response to the solicitation. Selection or rejection of the proposal shall not affect this right.

5.10 PROPOSAL ADDENDA AND RULES FOR WITHDRAWAL

Prior to the date specified for receipt of offers, a submitted proposal may be withdrawn by submitting a written request for its withdrawal to the Director of the Division of Contract Procurement. Withdrawal of the proposal by the DBT shall forfeit any payment of the stipend that the DBT may have been entitled to receive.

The KYTC shall accept addenda, revisions, or alterations to its proposal from any DBT until close of business (c/o/b) on the due date. The KYTC shall not accept any unsolicited addenda, revisions, or alterations to any proposal after the c/o/b on the due date. If the KYTC issues an addendum to the solicitation after c/o/b on the due date, then any DBT may respond. A DBT's response shall precisely respond to the contents of the Commonwealth's addendum.

The KYTC reserves the right to request clarification or additional information.

5.11 DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM

It is the policy of the Kentucky Transportation Cabinet ("the Cabinet") that Disadvantaged Business Enterprises ("DBE") shall have the opportunity to participate in the development and performance of highway construction projects financed in whole or in part by Federal Funds in order to create a level playing field for all businesses who wish to contract with the Cabinet. To that end, the Cabinet will comply with the regulations found in 49 CFR Part 26, and the definitions and requirements contained therein shall be adopted as if set out verbatim herein.

The Cabinet, consultants, contractors, subcontractors, and sub-recipients shall not discriminate on the basis of race, color, national origin, or sex in the performance of work performed pursuant to Cabinet contracts. The contractor shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted highway construction projects. The DBT will include this provision in all its subcontracts and supply agreements pertaining to contracts with the Cabinet.

Failure by the DBT to carry out these requirements is a material breach of its contract with the Cabinet, which may result in the termination of the contract or such other remedy as the Cabinet deems necessary.

5.11.1 DBE GOAL

The DBE goal established for this contract is 9% of the total value of the contract.

The DBT shall exercise all necessary and reasonable steps to ensure that DBEs participate in at least the percent of the contract as set forth about as goals for this contract.

5.11.2 OBLIGATION OF THE DBT

Each member of the DBT shall designate and make known to the KYTC a liaison officer who is assigned the responsibility of effectively administering and promoting an active program for utilization of DBEs.

Contractors are encouraged to use the services of banks owned and controlled by minorities and women.

Further conditions for DBE participation are outlined in Appendix B.

5.12 PROTESTS

The Secretary of the Kentucky Transportation Cabinet, or his designee, shall have authority to determine and resolve protests and other controversies of actual or prospective DBTs in connection with the solicitations or selection for award of a contract.

Any actual or prospective DBT, who is aggrieved in connection with solicitation or selection for award of a contract, may file a protest with the Secretary of the Transportation Cabinet. A protest or notice of other controversy shall be filed promptly, and in any event within two calendar weeks after such aggrieved person knows or should have known of the facts giving rise thereto. All protests or notices of other controversies shall be in writing to:

Secretary, Transportation Cabinet c/o State Highway Engineer 200 Mero Street; 6th Floor Frankfort, KY 40622

The Secretary of the Kentucky Transportation Cabinet shall promptly issue a decision in writing. A copy of that decision shall be mailed or otherwise furnished to the aggrieved party and shall state the reason for the decision. The decision by the Secretary of the Kentucky Transportation Cabinet shall be final.

5.13 EQUAL EMPLOYMENT OPPORTUNITY ACT

The Equal Employment Opportunity Act of 1978 applies to all State government projects with an estimated value exceeding \$250,000.

The consultants for the selected DBT must submit the following documents in accordance with the requirements of the RFP—EEO-1: Employer Information Report, Affidavit of Intent to Comply, Employee Data Sheet and Subcontractor Report or a copy of the Kentucky EEO Approval Letter issued by the Finance and Administration Cabinet, Office of EEO and Contract Compliance.

- A. The consultants for the selected DBT may obtain copies of the required EEO documents from the Finance and Administration Cabinet's Office of Equal Employment Opportunity Contract Compliance website at the following address:
 - https://finance.ky.gov/offices/Pages/equalOpportunity.aspx
- B. The consultants for the selected DBT must advise each subconsultant with a subcontract of more than \$500,000 of the subconsultant's obligation to comply with the KY EEO Act. Further, the selected consultant is responsible for compiling EEO documentation from their subconsultants and submitting the documentation to the Finance and Administration Cabinet, Office of EEO and Contract Compliance.
- C. Failure to complete, sign and submit all required documents will delay the award/ contract modification process as incomplete submissions will not be processed.
- D. Pursuant to KRS 45.610(2), the Finance and Administration Cabinet, Office of EEO and Contract

Compliance reserves the right to request additional information and/or documentation and to conduct on-site monitoring reviews of project sites and/ or business facilities at any point for the duration of any contract which exceeds \$500,000 to ascertain compliance with the Act and such rules, regulations and orders issued pursuant thereto.

E. All questions regarding EEO forms or contract compliance issues must be directed to the Finance and Administration Cabinet, Office of EEO and Contract Compliance via e-mail: Finance.ContractCompliance@ky.gov or via telephone: (502) 564-2874.

KYTC will notify the Finance and Administration Cabinet, Office of EEO and Contract Compliance about any change order that increases the value of a contract above \$500,000. At a minimum, this notice should include the contract number, contract amount and contact information for the selected consultant. The Office of EEO and Contract Compliance will contact the selected consultant for required information.

The Finance and Administration Cabinet will maintain a list of approved vendors. This Web-based list will be available to State agencies and the general public. The Finance and Administration Cabinet will not accept compliance certifications from the federal government or other states. Only forms developed by the Finance and Administration Cabinet, Office of EEO and Contract Compliance will be accepted and processed. The Finance and Administration Cabinet will not pre-approve vendors. Unsolicited submittals will not be processed nor will unsolicited submittals be returned to the vendor. The Finance and Administration Cabinet, Office of General Counsel will contact KYTC General Counsel about any selected consultant that fails to comply with the Act. Finance and KYTC will determine the appropriate course of action for noncompliant selected consultants.

The requirements of 41 CFR Part 60 shall apply to this Contract and the DBT shall submit EEO Certification with its Proposal. In addition, within 30 days of Award of Contract, the DBT shall file Standard Form 100 (EEO-1) with KYTC's Division of Construction Procurement, unless the DBT has submitted the form within 12 months preceding the date of the Award.

Further conditions regarding the Equal Employment Opportunity act are outlined in Appendix C.

5.14 EMPLOYMENT WAGE, RECORD, AND INSURANCE REQUIREMENTS

See Appendix C for applicable requirements. It is understood and agreed to by the DBT that the Prevailing Wage Schedule for compensation to employees for the work categories and occupations for the county for which this project is located shall be strictly adhered to.

5.15 VIOLATION OF TAX AND EMPLOYMENT LAWS

KRS 45A.485 requires the DBT to reveal to the KYTC, prior to the award of a contract, any final determination of a violation by the DBT within the previous five (5) year period of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341, and 342. These statutes relate to the state sales and use tax, corporate and utility tax, income tax, wages and hours laws, occupational safety and health laws, unemployment insurance laws, and workers compensation insurance laws, respectively.

To comply with the provisions of KRS 45A.485, the DBT shall report any such final determination(s) of violation(s) to the KYTC by providing the following information regarding the final determination(s): the KRS violated, the date of the final determination, and the state agency which issued the final determination.

KRS 45A.485 also provides that, for the duration of any contract, the contractor shall be in continuous compliance with the provisions of those statutes which apply to the contractor's operations, and that the contractor's failure to reveal a final determination as described above or failure to comply with the above statutes for the duration of the contract, shall be grounds for the KYTC's

DBT shall identify one of the following in its Price Proposal submitted on August 16, 2019:

- A. The DBT has not violated any of the provisions of the above statutes within the previous five (5) year period.
- B. The DBT has violated the provisions of one or more of the above statutes within the previous five (5) year period and has revealed such final determination(s) of violation(s). A list of such determination(s) is attached.

5.16 FHWA 1273

This Highway Improvement Project shall be under the laws and regulations of the Commonwealth. This is a Federal-aid highway contract and all federal laws and regulations, including FHWA-1273 and Civil Rights.

WHEREAS, the DBT shall outline, undertake and complete the work as described in the Contract Documents in a manner consistent with FHWA Form 1273 (Appendix C of this Advertisement) and all applicable State and Federal laws and regulations.

5.17 ACCESS TO RECORDS

The contractor, as defined in KRS 45A.030 (9) agrees that the contracting agency, the Finance and Administration Cabinet, the Auditor of Public accounts, and the Legislative Research Commission, or their duly authorized representatives, shall have access to any books, documents, papers, records, or other evidence, which are directly pertinent to this contract for the purpose of financial audit or program review. Records and other prequalification information confidentially disclosed as part of the bid process shall not be deemed as directly pertinent to the contract and shall be exempt from disclosure as provided in KRS 61.878(1)(c). The contractor also recognizes that any books, documents, papers, records, or other evidence, received during a financial audit or program review shall be subject to the Kentucky Open Records Act, KRS 61.870 to 61.884. In the event of a dispute between the contractor and the contracting agency, Attorney General, or the Auditor of Public Accounts over documents that are eligible for production and review, the Finance and Administration Cabinet shall review the dispute and issue a determination, in accordance with Secretary's Order 11-004.

5.18 RECIPROCAL PREFERENCE (NOT APPLICABLE)

5.19 REGISTRATION WITH THE SECRETARY OF STATE BY A FOREIGN ENTITY

Pursuant to KRS 45A.480(1)(b), an agency, department, office, or political subdivision of the Commonwealth of Kentucky shall not award a state contract to a person that is a foreign entity required by KRS 14A.9-00 to obtain a certificate of authority to transact business in the Commonwealth ("certificate") from the Secretary of State under KRS 14A.9-030 unless the person produces the certificate within fourteen (14) days of the bid or proposal opening. Therefore, foreign entities should submit a copy of their certificate with their solicitation response. If the foreign entity is not required to obtain a certificate as provided in KRS 14A.9-010, the foreign entity should identify the applicable exception in its solicitation response. Foreign entity is defined within KRS 14A.1-070.

For all foreign entities required to obtain a certificate of authority to transact business in the Commonwealth, if a copy of the certificate is not received by the contracting agency within the time frame identified above, the foreign entity's solicitation response shall be deemed non-responsive or the awarded contract shall be cancelled.

Businesses can visit https://www.sos.ky.gov/Pages/default.aspx to register with the Secretary of State.

5.20 EXECUTIVE BRANCH CODE OF ETHICS

See Appendix C for restrictions relating to former KYTC employees.

5.21 CERTIFICATION REGARDINGRESPONSIBILITY MATTERS

If Federal Funds are used, in accordance with Federal Acquisition Regulation 52.209-5, the Vendor shall certify with bid response, that to the best of its knowledge and belief, the Vendor and/or its Principals is (are) not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any State or Federal agency. "Principals", for the purposes of this certification, means officers, directors, owners, partners, and persons having primary management or supervisory responsibilities within a business entity (e.g., general manager, plant manager, head of subsidiary, division, or business segment, and similar positions).

5.22 REQUIRED AFFIDAVIT FOR BIDDERS OR PROPOSERS

In accordance with <u>KRS 45A.110</u> and <u>KRS 45A.115</u>, neither the bidder or proposer as defined in <u>KRS 45A.070(6)</u>, nor the entity which he/she represents, has knowingly violated any provisions of the campaign finance laws of the Commonwealth of Kentucky, and the award of a contract to the bidder or Proposer or the entity which he/she represents will not violate any provisions of the campaign finance laws of the Commonwealth. The Proposer must adhere to the following:

- A. The bidder or Proposer swears and affirms under penalty of perjury that, to the extent required by Kentucky law, the entity bidding, and all subcontractors therein, are aware of the requirements and penalties outlined in KRS 45A.485; is properly authorized under the laws of the Commonwealth of Kentucky to conduct business in this state; is duly registered with the Kentucky Secretary of State to the extent required by Kentucky law; and will remain in good standing to do business in the Commonwealth of Kentucky for the duration of any contract awarded.
- B. The bidder or Proposer swears and affirms under penalty of perjury that, to the extent required by Kentucky law, the entity bidding, and its affiliates, are duly registered with the Kentucky Department of Revenue to collect and remit the sales and use tax imposed by KRS Chapter 139, and will remain registered for the duration of any contract awarded.
- C. The bidder or Proposer swears and affirms under penalty of perjury that the entity bidding is not delinquent on any state taxes or fees owed to the Commonwealth of Kentucky and will remain in good standing for the duration of any contract awarded.
- D. The bidder or Proposer swears and affirms under penalty of perjury that the entity bidding, is not currently engaged in, and will not for the duration of the contract engage in, the boycott of a person or an entity based in or doing business with a jurisdiction with which Kentucky can enjoy open trade, as defined in Executive Order No. 2018- 905.
- E. The bidder or Proposer swears and affirms that the entity bidding, and all subcontractors therein, have not violated any of the prohibitions set forth in KRS 11A.236 during the previous ten (10) years, and further pledge to abide by the restrictions set forth in such statute for the duration of the contract awarded.

6. PROJECT DESCRIPTION, MANDATORY REQUIREMENTS, AND ALTERNATIVE TECHNICAL CONCEPTS

The purpose of this project is to improve mobility and safety in a rapidly growing area adjacent to I-275 between Interstate Exits 8 and 11 in northern Boone County.

The mandatory requirements for the project as identified in the Recommended Alternative of the Interchange Justification Study (IJS) included in Appendix D, are as follows:

- A. A new interchange at I-275 and Graves Road as proposed in the recommended alternative of the IJS:
- B. The widening of the Graves Road corridor as identified in the typical sections included in Appendix E. The widening shall extend from KY 20 and Bullittsville Road northward to KY 237, and including signalized intersections at KY 20, both exit ramp termini and Worldwide Boulevard. In addition Graves Road / KY 237 roundabout shall be widened from a single lane to two lanes;
- C. A modified tie-in of Williams road to Graves Road;
- D. The extension of the westbound I-275 mainline, three-lane typical section from just west of the KY 237 Interchange to just west of the proposed Graves Road Interchange with concrete pavement;
- E. The addition of an eastbound auxiliary lane along I-275 between the Graves Road and KY 237 Interchanges with concrete pavement;
- F. Minor adjustments to the I-275/KY 237 interchange ramps as described in Section 3.2 of Interchange Justification Study;
- G. The addition of a dual left turning movement from northbound KY 237 to westbound I- 275.

In addition to the mandatory requirements identified above, KYTC has determined the last acceptable completion date for the project shall be August 1, 2022. There will be a lump sum \$1,000,000.00 incentive to the DBT if the new interchange with a connection to Worldwide Blvd. and the relocated Williams Road are completely finished, with the exception of final surfacing, before October 31, 2020. Under no circumstances will an extension to the October 31, 2020, milestone incentive date be given; except that, if KYTC issues an extension to contract time according to section 10.4.18 of the RFP, then KYTC will also consider if an extension should be applied to the milestone incentive date. Early substantial completion date of the project is preferred. If the project is not completed by the completion date identified in the DBT's proposal, per Section 108.09 of the Standard Specifications, liquidated damages shall be applied for each calendar day including weekends and holidays. Contrary to current specifications, the liquidated damage rate shall be \$5,000.00 per day, and will be assessed through the winter months and during any times when a work item cannot be pursued due to seasonal limitations.

6.1 ALTERNATIVE TECHNICAL CONCEPT (ATC)

6.1.1DEFINITION

An Alternative Technical Concept (ATC) is a change to the Project Scope that provides a solution that is equal to or better than the required scope as determined by KYTC. The ATC process allows for innovation, increased flexibility, time reductions, and cost savings to deliver the best value for the public. Where the Contract Documents reference specific patented, proprietary material; or semi- finished or finished article, product, or item for incorporation into the work, the DBT may submit an ATC for approval of an alternative material, article, product, or item that meets or exceeds the requirements and intent of the Contract work, provided that the material, article, product, or item is equal or better in quality, performance, and function, based upon documented engineering analysis. ATCs are not intended to replace pre-bid questions.

6.1.2 SUBMISSION REQUIREMENTS

DBTs may submit ATC documents for consideration by the KYTC beginning April 15, 2019. KYTC will review all ATCs through June 14th, 2019. Each ATC may include multiple issues to be considered by KYTC. The DBTs shall clearly identify each individual portion of the ATC proposal that is a proposed change to the Project Scope.

A DBT shall submit one (1) unbound version of the ATC, and one (1) CD/DVD or one (1) USB "thumb" drive containing two (2) electronic files of the ATC as follows:

- A. One (1) electronic searchable singe file PDF which does not restrict printing or copying text, images, and other content.
- B. One (1) electronic password protected single file PDF which restricts copying of text, images, and other content

Alternative Technical Concepts shall be received no later than 4:00 p.m., Eastern Time, on June 14, 2019. The KYTC shall reject any proposal received after aforementioned date and time and return it unopened to the DBT. In order to be considered, the original ATC shall be signed in blue ink by an authorized representative of the DBT.

The submittal shall either be mailed or hand delivered to:

<Current Director>, PE, Director
Division of Construction Procurement 200 Mero Street
Frankfort, KY 40622

The outside cover of the package shall be marked: Alternate Technical Concept for Boone County Graves Road Interchange Item No. 6-78 CID No. 19-9001 Design-Build: FY 2019 Design-Build #1

6.1.3 EVALUATION OF ATCs

ATCs are approved by the KYTC at its discretion and the KYTC reserves the right to reject any ATC submitted. KYTC shall attempt to evaluate all ATCs and ATC reconsiderations within 14 calendar days of receipt. However, this timeframe cannot be guaranteed, particularly for complex or unusual concepts. KYTC will either accept or deny all ATCs no later than 30 days before proposals are due. KYTC shall not consider any change that would require excessive time or cost for review, evaluation, or investigation.

6.1.4 CONTENTS

ATCs shall contain the following information detailed below. Incomplete ATC submittal packages shall be returned by KYTC without review or comment. They may be resubmitted before the deadline for ATC submittals.

6.1.4.1 Description

A detailed description of the ATC including specifications and conceptual drawings.

6.1.4.2 Usage

A description of where and how the ATC would be used on the project.

6.1.4.3 Deviations

References to all requirements in the Project Scope that are inconsistent with the proposed ATC, an explanation of the nature of these deviations, and a request for approval of such deviations.

6.1.4.4 Analysis

An analysis justifying the ATC and demonstrating why modifications or revisions to requirements of the Project Scope should be allowed. Include information on how the ATC meets or exceeds the project goals.

6.1.4.5 Traffic and Safety Impacts

A discussion of the impacts the ATC will have on vehicular traffic and safety, including an operational analysis, if relevant.

6.1.4.6 Maintenance of Traffic Impacts

A discussion of the impacts the ATC will have on maintenance of traffic during construction including any impacts on other roadways due to diversion of traffic on proposed or potential detour.

6.1.4.7 Environmental Impacts

A discussion of how the ATC is in accordance with the approved Environmental Documents and permits.

6.1.4.8 Right-of-Way

A discussion of decreased or additional right-of-way acquisition needed to implement the proposed ATC.

6.1.4.9 Utilities

A discussion of decreased or additional utility (public and private) impacts as a result of ATC implementation.

6.1.4.10 Maintenance

A discussion of the long-term maintenance of the proposed ATC.

6.1.4.11 History

When applicable, a detailed description of other projects on which the proposed ATC has been used, including contact information (name, title, phone number, address, and email) for project owners that can confirm ATC implementation.

6.1.4.12 Inspection

Any additional testing and inspection requirements.

6.1.4.13 Schedule

A discussion of project schedule impacts, including design, construction, right-of-way acquisition, utility relocation, and permitting issues.

6.1.5 ONE-ON-ONE MEETINGS

Each short-listed DBT shall be permitted to request one-on-one pre-ATC meetings with KYTC to discuss potential ATCs. Meetings will last no more than two hours. The location of the meetings will be determined by the nature of the ATC. The meetings will be held once every two weeks on Wednesdays beginning April 17, 2019 through June 12, 2019. Short-listed DBTs shall submit a request for a meeting by the Friday in advance of the proposed meeting date. The request must include the issues that the DBT wishes to discuss and/or a general description of the involved ATC concepts in enough detail for the KYTC

to select appropriate individuals to attend the meeting. KYTC attendees may participate by teleconference or videoconference. One purpose of one-on-one meetings is to provide DBTs with a general overview of the KYTC's assessment of a proposed ATC's viability. No final decisions will be made. Verbal communications, including one-on-one meetings, will be considered non-binding. Discussions during one-on-one meetings shall be confidential.

6.1.6 KYTC RESPONSE

KYTC shall review all ATCs and respond with one of the following determinations:

- A. The ATC is approved and may be included in the DBT's Technical Proposal.
- B. The ATC is approved subject to conditions. The ATC may be included in the DBT's Technical Proposal provided that all approval conditions have been met. Failure to clearly demonstrate that all conditions have been met may render the DBT's Technical Proposal non-responsive.
- C. The ATC is not approved in its present form, but may be resubmitted for reconsideration. The reconsideration request must address all KYTC comments, questions, and concerns. Reconsideration requests must meet all ATC submission and content requirements.
- D. The ATC is not approved. Inclusion of the ATC in the Technical Proposal will render the Technical Proposal non-responsive.
- E. The proposal is not an ATC.

The KYTC may, at its discretion, request additional information or clarification regarding a proposed ATC and/or conduct one-on-one meetings with DBTs to discuss their ATC. Verbal communications regarding ATC proposals shall be considered non-binding.

6.1.7 INCORPORATION INTO TECHNICAL PROPOSAL

The DBT may incorporate zero, one, or more approved ATCs (or conditionally approved ATCs, if all conditions are met) into their Technical Proposal. The Technical Proposal must clearly state which ATCs have been incorporated and indicate what, if any, conditions are met. Approved ATCs should be clearly shown on the Technical Proposal plans. The Price Proposal shall reflect all incorporated ATCs.

6.1.8 DISCLOSURE

If, during evaluation of an ATC proposal, the KYTC becomes aware of a deficiency in the Project Scope that would have an impact on the ability of DBTs to make a best value offer, KYTC may, at its discretion, issue an addenda to correct this deficiency.

Other than as listed in the above paragraph, all conversations related to ATC proposals between the KYTC and DBTs shall be kept confidential during the bidding process. ATC proposals may be made public after the payment of the stipend has been tendered and/or upon Contract Execution or as required by Kentucky's Open Records Act. All documents received by the KYTC are subject to KRS 61.870 to 61.884, also known as the Open Records Act, and are subject to release unless a statutory exception exists that exempts the documents from public release. If any information in an ATC or Technical Proposal is to be treated as "confidential or proprietary," the DBT must identify each and every occurrence of the information within the Proposal by:

- A. Listing the page numbers of every occurrence of the "confidential or proprietary" information on the cover sheet submitted with the ATC or Technical Proposal; and
- B. Placing an asterisk before and after each line of the ATC or Technical Proposal that contains "confidential or proprietary" information. "Confidential or proprietary" may include trade secrets.

Prior to Award, KYTC shall not share with, or convey to, any person the information provided by the DBT, unless disclosure is required by law or the DBT gives prior written approval for such disclosure. In the event the KYTC is required to disclose any information the DBT considers confidential or proprietary, pursuant to applicable law, KYTC shall notify the DBT in writing prior to disclosing such information. KYTC shall use reasonable efforts to give notice of disclosure at least three days in advance of release. However, upon Award, all information provided to KYTC that was used in the evaluation of the Bids will be considered a public record unless the DBT refuses to accept a Stipend (non-selected DBTs) or contract Award (selected DBT). KYTC shall not be obligated to maintain in confidence any information that is not confidential or proprietary including information that: (1) is already known by the state, (2) is or comes into the public domain through no fault of the state, (3) is independently developed by the state, or (4) comes to the state from a third party in a manner not in violation of any obligation of confidentiality by such third party to the DBT. Kentucky law generally requires that documents that contain both confidential and non-confidential information be disclosed with confidential information redacted.

7. PROPOSAL SUBMISSION AND SELECTION CRITERIA

For determination of the successful bidder, the DBT shall be required to provide the KYTC two separate bidding submittals for the project. The first submittal shall be a technical proposal and the second submittal shall be a price proposal. The Scoring Committee will evaluate the technical proposal and provide a score to the awards committee. The price proposal shall be submitted after the scoring committee has completed scoring the proposals and the awards committee will establish an overall score. The KYTC's Project Awards Committee will select the winning Design Build Team for this project and the award will be made accordingly. The price proposals will be opened on August 16, 2019 and the award will be made In September 2019.

All properly submitted proposals from proposers allowed to submit a proposal shall be accepted by the KYTC. However, the KYTC reserves the right to request necessary amendments which may become part of the DBT's proposal; reject all proposals; reject any proposal that does not meet mandatory requirements; or cancel this solicitation, in the best interest of the KYTC. For comparison purposes, the Awards Committee shall prepare a cost estimate based upon information provided by the DBT in the proposal submittal. For acceptance purposes, the KYTC may use this estimate to accept or reject any or all proposals.

The KYTC also reserves the right to waive minor irregularities in proposals providing such action is in the best interest of the KYTC.

If the KYTC waives minor irregularities, such waiver shall in no way modify the solicitation requirements or excuse the DBT from full compliance with the specifications and other contract requirements if the DBT is awarded the contract.

The Scoring Committee members shall evaluate and score the technical proposal. This evaluation shall be based on the information contained in the DBT's technical proposal concerning the information outlined below.

7.1 TECHNICAL PROPOSAL (30%)

A DBT shall submit one (1) unbound version of the Technical Proposal, and one (1) CD/DVD or one (1) USB "thumb" drive containing two (2) electronic files of the Technical Proposal as follows:

- A. One electronic searchable single file PDF which does not restrict printing or copying text, images and other content.
- B. One electronic password protected single file PDF which restricts copying of text, images and other content.

The Technical Proposal shall be received no later than 4:00 p.m., Eastern Time, on August 2, 2019. The KYTC shall reject any proposal received after aforementioned time and date and return it unopened to the DBT. In order to be considered, the original Proposal shall be signed in blue ink by an authorized representative of the DBT.

The submittal shall either be mailed or hand-delivered to: <Current Director>, P.E., Director Division of Construction Procurement 200 Mero Street, 3rd Floor Frankfort, KY 40622

The outside cover of the package shall be marked: Technical Proposal for

Boone County Graves Road Interchange Item No. 6-78

CID No. 19-9001

Design-Build: FY 2019 Design Build #1

7.1.1 INCORPORATION OF TECHNICAL PROPOSAL

All Technical Proposal elements that exceed the requirements of the Bid Documents (i.e., can reasonably be interpreted as offers to provide higher quality items or additional services) shall be incorporated by reference into the awarded DBT's Contract requirements.

7.1.2 TECHNICAL PROPOSAL EVALUATION

The Technical Proposal shall be developed using narratives, tables, charts, plots, drawings, and sketches as appropriate. The purpose of the Technical Proposal is to document the proposed DBT's understanding of the Project; its selection of appropriate design criteria; and its approach for completing all design, right of way acquisition, utility relocation, quality management, and construction activities.

A DBT may submit only one proposal. The format and content are as specified. Alternate proposals shall not be allowed. Each proposal shall be prepared simply and economically, providing a straightforward, concise description of the DBT's ability to meet the requirements of this solicitation. Fancy bindings, colored displays or promotional materials shall receive no evaluation credit. Emphasis shall be on completeness and clarity of content. The KYTC retains the right to request, receive and consider additional information and clarifications throughout the evaluation process.

The Technical Proposal shall be evaluated on how well each of the following items is addressed:

Part	Evaluation Criteria	Maximum Points
Α	Project Schedule, Organization and Management	20
В	Right of Way Acquisition Plan	15
С	Roadway Design Concepts	15
D	Bridges, Structures, and Geotechnical Concepts	15
E	Construction (includes Construction Management Plan, Quality Plan, and Safety Plan)	20
F	Utility Coordination and Relocation Plan	15
G	DBE Plan	Pass/Fail
Total		100

The Technical Proposal shall be organized in Parts as indicated

Technical Proposal content requirements are found in the following sections as well as within the Project Scope.

7.1.2.1 Part A – Project Schedule, Organization, and Management

Include a detailed general schedule to clearly demonstrate the DBT approach for completing the project, with the following specific dates (at a minimum):

- A. Begin R/W Acquisition Date (Include specific dates for any parcel(s) deemed critical)
- B. Begin Utility Relocation Dates (include all overhead and underground, including dates for critical shutdowns or "switchovers")
- C. Final Plans-in-Hand and Drainage Inspection Date
- D. Maintenance of Traffic Plan Submittal Date
- E. Submittal of Review Plans Date
- F. Final Plan Submittal Date (see also "Buildable Units" Section 9)
- G. Construction Start Date
- H. Date of Completed ROW Acquisition
- I. Date of Completed Utility Relocation
- J. Proposed Completion Date

The proposed schedule shall carry forward and be integrated to each section of the technical proposal.

The Proposed Completion Date of the successful Proposer shall become the Fixed Completion Date for the contract. The latest acceptable Completion Date shall be August 1, 2022.

Demonstrate an integrated team approach between the team members including the contractors, designers, subcontractors, DBE firms, and KYTC. Describe the team's experience on delivering major projects. Describe the qualifications and experience of the Key Personnel assigned to the project, specifically how they have performed these tasks on previous projects and how they will collaborate for the Graves Road Interchange.

Demonstrate that the DBT has the capability to effectively communicate and coordinate with the KYTC public information team.

Provide a project organization chart for the Project, showing the relationships between DBT Management and Key Personnel shown on the chart and the functional relationships with other critical participants on the DBT.

Describe the DBT's concept of design management, right of way acquisition, utility relocation and construction management and how they interrelate with the other elements of the DBT's organization for the Project. Identify a staffing plan including specific responsible personnel and organizational units. Provide a design and construction organization chart, as a subset of the project organization chart, for the Project showing the relationships between functions shown on the chart and the functional relationships with subconsultants and subcontractors. The chart shall also indicate how the DBT intends to divide the Project into work segments to enable optimum construction performance.

At a minimum, the Technical Proposal should address personnel assigned to manage project development in the following areas:

- A. Project Manager*
- B. Design Manager*
- C. Roadway / MOT Design Lead Engineer*
- D. Structural Design Lead Engineer*
- E. Right of Way Acquisition Manager*
- F. Utility Project Manager*

- G. Geotechnical Engineering
- H. Drainage Engineering
- I. Traffic Engineering
- J. Lighting Engineering
- K. Environmental Compliance Manager
- L. Signage Engineer
- M. Constructability
- N. Schedule Representative (Project Development & Construction)
- O. DBE/EEO Project Plan Coordinator

At a minimum, the Technical Proposal should address personnel assigned to manage the construction for the following areas:

- A. Project Manager
- B. Construction Manager *
- C. Quality Control Manager for Construction Materials
- D. Roadway Construction
- E. Bridge Construction
- F. Drainage and Environmental Construction
- G. Maintenance of Traffic
- H. Public Safety
- I. Project Safety
- J. Utility Coordination
- K. Environmental/Permits/Erosion Control**
- * Must be the same as the previously submitted with the statements of qualifications (SOQ). Key Personnel may not at any time be removed, replaced, or added without written approval of KYTC. Requests for removal, replacements, and additions shall be submitted in writing. To qualify for approval, the written request shall document that the qualifications of the proposed replacement or addition will be equal to or better than those of the Key Personnel submitted in the SOQ.
- **Can be the same as the Environmental Compliance Manager assigned to manage design development.

Describe the qualifications and experience of the individuals assigned to these tasks and describe the specific management tasks they will perform. Include information relative to each individual's familiarity with the proposed project and similar projects.

Provide a detailed report of all current projects being worked on by members of the DBT and identify all areas where individuals will have significant responsibilities outside of the Graves Road Interchange project.

Individuals must be currently employed by a member of the DBT.

KYTC shall use the following criteria to distribute Project Organization and Management points:

	Component of Project Organization and Management	Percentage of Proposed Project Organization and Management Points
A.1	Project Schedule, Completion Date & Organization	60
A.2	Project Management Plan	20
A.3	DBT Experience on projects of similar complexity	20

7.1.2.2 Part B – Right of Way Concepts

Describe the team's universal strategy for acquiring project right of way, including:

- A. The team's experiences in acquiring R/W for major projects and in acquiring R/W within tight time frames;
- B. The team's schedule and approach for systematically acquiring parcels that allows utility relocation and road construction to begin as soon as possible;
- C. The team's strategy for dealing with condemnation lawsuits in a manner that does not delay the project schedule.

Summarize the information required to complete the project report identified in Section 12.4.3 of the RFP The information shall include:

- A. Total number of acquisitions required;
- B. Total number of entire and partial acquisition;
- C. Total number of each type of relocation;
- D. Estimated number of parcels in each category (Major, Minor, MAR)
- E. Estimated number of condemnations required.

KYTC will use the following criteria to distribute ROW Concepts points:

	Component of Right of Way Concepts	Percentage of Proposed Right of Way Concepts Points
B.1	ROW Acquisition Strategy	50
B.2	Project Report Information	50

7.1.2.3 Part C – Roadway Design Concepts

The design approach indicated in the Technical Proposal shall reflect a single unified design concept for the Project and shall demonstrate:

- A. An understanding of the Project criteria, Basic Configuration, and mandatory elements for the project;
- B. That the proposed design meets KYTC's general and project specific criteria;
- C. That the proposed design meets project goals; and
- D. How the DBT will perform design checking and deliver quality plans.

KYTC will use the following criteria to distribute Roadway Design Concepts points:

	Component of Roadway Design Concepts	Percentage of Proposed Roadway Design Concepts Points
C.1	Interchange Design	50
C.2	Graves Road Design	50

7.1.2.4 Part D – Bridges, Structures, and Geotechnical Concepts

Structures, and geotechnical concepts are critical components of the Graves Road Interchange. The Project includes an Interstate overpass and the potential for various retaining wall structures. As a minimum, the Technical Proposal shall address the following issues:

- A. Describe any specific design features that would reduce the need for maintenance or would make inspection/maintenance procedures more efficient, safer, and/or less costly.
- B. Discuss solutions to manage the risks associated with proposals based on limited design information.
- C. How the proposed structures will minimize the long-term maintenance cost to KYTC.
- D. Describe how the proposed structures will accommodate the future maintenance functions, including but not limited to, control of drainage, replacement of the deck joints and seals, replacement of the bearings, and future deck replacements.
- E. Describe how the DBT will perform and manage the geotechnical challenges associated with the project.
- F. Discuss settlement of embankments and ways the DBT intends to address.
- G. List expected geotechnical issues anticipated and the anticipated approach that will be used to resolve those issues. Indicate if any of the proposed solutions will require additional maintenance or monitoring during the life of the facility. Indicate if the proposed solution(s) will restrict future construction adjacent to the structures, including installation and repair of utilities.
- H. Indicate the experience of the geotechnical engineer and the contractor in designing and installing the proposed geotechnical solutions and foundation systems identified above. State if geotechnical specialty subcontractors are proposed for design and/or installation of the geotechnical solutions or foundation systems.

KYTC will use the following criteria to distribute Bridges, Structures, and Geotechnical Concepts points:

	Component of Bridges, Structures, and Geotechnical Concepts	Percentage of Proposed Points
D.1	I-275 Bridge Crossing	30
D.2	Miscellaneous Structures and Retaining Walls	30
D.3	Geotechnical Challenges	40

7.1.2.5 Part E - Construction

The Technical proposal shall address the following construction issues:

- A. Provide a brief narrative description of the DBT's overall plan for constructing the Project. Describe the construction concept that will be used for each construction phase. Specifically describe how traffic will be maintained. Describe in general the anticipated construction work for each phase.
- B. Provide a narrative description of the DBT's proposed major buildable units (Section 9) and how

- these will be constructed in the phasing described above. Provide a schedule showing when the major buildable units will be constructed. Discuss project risks and approach to address risks.
- C. Describe the DBT's approach to achieve quality expectations. Describe the relationship between the construction, inspection, materials sampling testing, and acceptance functions.
- D. Describe the safety considerations specific to this Project. Discuss the firm's overall approach to safety.
- E. Demonstrate that the DBT has considered right of way acquisitions, utility relocations, permitting, constructability, and maintenance of traffic activities in determining the proposed construction schedule.
- F. Describe the DBT's plans and procedures to ensure timely deliveries of materials to achieve the project schedule. Include information with respect to anticipated fabrication times. Also describe anticipated staging areas needed.

KYTC shall use the following criteria to distribute construction points:

	Component of Construction	Percentage of Construction Points
E.1	Construction Sequencing and Logistics	40
E.2	Approach to Achieving Quality	20
E.3	Coordination with Utilities, Permitting, and	20
	Maintenance of Traffic	
E.4	Safety	20

7.1.2.6 Part F – Utility Coordination and Relocation Plan

Both public and private utilities are present throughout the footprint of the Graves Road Interchange project. The DBT shall be required to coordinate with the utility companies and arrange for any utility relocations necessary.

The Technical Proposal shall address the following utility issues:

- A. Describe the proposed coordination with utility owners.
- B. Demonstrate that the DBT has considered utilities in determining the proposed construction schedule.

KYTC shall use the following criteria to distribute Utilities points:

	Component of Utility Coordination and Relocation Concepts	Percentage of Proposed Utilities Points
F.1	Utility Coordination/Relocation Plan	100

7.1.2.7 Part G – Disadvantaged Business Enterprise (DBE) Plan

Contractors shall include the following certification in the technical proposal. PROPOSALS SUBMITTED WHICH DO NOT INCLUDE CERTIFICATION OF DBE PARTICIPATION WILL NOT BE ACCEPTED. These bids will not be considered for award by the Cabinet and they will be returned to the bidder.

"The proposer certifies that it will secure participation by Disadvantaged Business Enterprises ("DBE") in the amount of 9% percent of the total value of this contract and that the DBE participation will consist of both a project development component and a construction component and that the DBE participation will be in compliance with the requirements of 49 CFR."

	Component of DBE Plan	Percentage of Proposed DBE Plan Points
G.1	DBE Statement	Pass / Fail

7.1.3 TECHNICAL PROPOSAL SCORING

The following table provides a general indication of anticipated scoring of each evaluation criteria.

Definition	Scoring Range (percentage)
The Technical Proposal component demonstrates an approach that is considered to significantly exceed the RFP requirements and objectives in a beneficial way (providing advantages, benefits, or added value to the Project) and that provides a consistently outstanding level of quality. Must have a significant strength or number of strengths and no weaknesses.	90-100
The Technical Proposal component demonstrates an approach that is considered to exceed the RFP requirements and objectives in a beneficial way (providing advantages, benefits, or added value to the Project) and offers a generally better than acceptable quality. Must have strengths and no significant weaknesses.	80-89
The Technical Proposal component demonstrates an approach that is considered to meet the RFP requirements and objectives and offers an acceptable level of quality. It has strengths even though minor or moderate weaknesses exist.	70-79
The Technical Proposal component demonstrates an approach that is marginally acceptable.	60-69
The Technical Proposal component demonstrates an approach that contains no strengths and contains minor or significant weaknesses.	0-59

7.1.4 FORMAT OF TECHNICAL PROPOSAL

The technical proposal is limited to 35 pages 8.5" by 11" which shall include the information requested in this solicitation. The DBT may provide unlimited 11" by 17" pages for supporting details and graphics (i.e., plan sheets, profiles). An 11" by 17" sheet shall not contain only text but shall contain pictures, graphs, charts, plans, or other graphics. Preliminary plans shall be completed with a readable scale on 11" by 17" sheets. The DBTs are encouraged to be as concise as possible. The technical proposal shall include preliminary plans in accordance with the following:

Roadway plans shall be at an approximate 30 percent level of completion and shall at a minimum include the following:

A. Layout Sheet – includes index of sheets

- B. Typical Sections (typical sections shall be provided that reflect the provided options for either asphalt and/or concrete)
- C. Geometric Detail Sheets (As applicable)
- D. Plan and Profile Sheets (Project limits, alignments and profiles, major drainage features, roadside barrier locations, right-of-way)
- E. Construction Detail Sheets as needed
- F. Conceptual Maintenance of Traffic Plans (typical sections, plans, profiles, construction phasing details, traffic control devices)
- G. Critical Cross Sections: Cross Sections shall be provided electronically. Paper copies are not required.

Bridge plans shall include:

- A. Layout Sheet, showing plan and profile and including pier type, abutment type, wingwall type and expected foundation types and depths
- B. Typical Section
- C. Construction Phasing details(as applicable)

Retaining Wall plans shall include:

A. Preliminary retaining wall layout with summary of wall types and expected foundation types

Major Drainage Structure plans shall include:

A. Master plan showing type, size and location

7.2 PRICE PROPOSAL (70%)

The total price offered by the DBT for its Proposal for all work specified in the Contract is referred to herein as the "Price Proposal". The Price Proposal shall be organized to correspond to the items listed in this section.

7.2.1 PRICE PROPOSAL

Provide a hardcopy of Form PP (Price Proposal) included in Appendix O. The price proposal shall bear original signature(s) by an authorized employee of the Proposer. All other methods of submitting the Price Proposal shall be considered non- responsive and ineligible for Award.

Price Proposals are qualified based on Sections 7.1 and 7.2 and evaluated on the basis of Section 7.3. The final Price Proposal shall be a Lump Sum Bid dollar amount.

In addition, to the price proposal the DBT shall be required to furnish the Department with an initial Schedule of Values showing a complete breakdown of the lump sum bid item established for this project. In order to document how the lump sum bid price was determined, the DBT shall supply, using standard KYTC bid item codes whenever possible, all work items, quantities, units, and prices to support the lump sum bid submitted. Any non-standard bid items used shall be thoroughly explained in the bid proposal. The breakdown shall include all materials to be used in the work, and shall be in sufficient detail to provide KYTC with a means to check partial payment requests. The Schedule of Values shall be shall be developed using the current version of Estimator software by Info Tech Inc., Gainesville, FL, 32608, or an equivalent

program approved by the Engineer. The DBT shall provide any necessary training and license needed for KYTC to use the software. Submit the Estimator file in the Version required by KYTC.

The DBT shall also provide a separate estimated cost of the right-of-way acquisition and relocation costs that KYTC will pay to the property owners disturbed by the project. This estimate should not include services for right-of-way acquisition as these services as described in Section 12 are to be included in the lump sum bid as described above.

7.2.2 BID BOND

Provide a Bid Bond. The KYTC Bid Bond form is available on-line at:

http://transportation.ky.gov/Organizational-Resources/Forms/TC%2014-14.pdf

or by contacting the KYTC at 502-564-3500. Each Proposer shall submit a Bid Bond with its Proposal in the amount of at least five percent of the Proposal Price, issued by a surety meeting the requirements of the Contract. Alternatively, DBTs may submit cash, a certified check, or a cashier's check payable to KYTC in this amount. A Bid Bond shall not be conditioned in any way to modify the minimum five percent required. Proposals that fail to include a Bid Bond or cash deposit in compliance with this subsection shall be deemed non-responsive and shall be rejected by KYTC.

This bond shall be submitted with the Price Proposal in the same sealed envelope and will not be opened until completion of the review of the Technical Proposals.

7.2.3 DOCUMENTS REQUIRED FOR KYTC BID

The DBT shall take note and review the following documents and provide the necessary affidavits and certifications required. These documents can be found in the General Conditions Appendix P.

- A. Required Affidavit for Bidders, Proposers, and Contractors
- B. Secretary's Order 11-004, Vendor Document Disclosure
- C. Provisions Relative to KRS 45A.485
- D. Documents Required for Federal Projects. The documents include:
 - 1. Employment Requirements Relating to Nondiscrimination of Employees
 - 2. Executive Branch Code of Ethics
 - 3. Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity

7.2.4 SUBMITTAL REQUIREMENTS

KYTC shall not accept Price Proposals by facsimile or electronic transmission. Any Price Proposal that fails to meet the deadline or delivery requirement shall be rejected and returned to the DBT without having been opened, considered, or evaluated. The KYTC shall not be responsible for a late Bid due to failure of the DBT to allow sufficient time for delivery of the Price Proposal.

The Price Proposal, Bid Bond, an updated Acknowledgement of Receipt of proposal addenda, form AOR (see Appendix Q) and above required documents shall be placed into a sealed envelope.

Sealed Price Proposals shall be submitted by mail or hand by 2:00 PM (EST) August 16, 2019 to: <Current Director>, P.E.,
Director Division of Construction Procurement
200 Mero Street, 3rd Floor
Frankfort, KY 40622 The outside cover of the package containing the proposal shall be marked:

Price Proposal for

Boone County Graves Road Interchange

Item No. 6-78.00 CID No. 19-9001

Design-Build: FY 2019 Design Build #1

KYTC shall not open the Price Proposal until the completion of the evaluation of the Technical Proposals.

7.3 VALUE-BASED FORMULA USED FOR SELECTION

Scoring of the Technical Proposal and Price Proposal plan shall be combined using a normalized weighted formula as follows:

SB = 100 [0.30 (TB/TH) + 0.70 (PL/PB)]

Where:

PB = DBT's Price Proposal

PL = Lowest Price Proposal (all DBTs) TB = DBT's Technical Proposal Score

TH = Highest Technical Proposal Score (all DBTs)

The DBT's Overall Score (SB) shall be rounded to a tenth of a point. Rounding of Scores to the nearest tenth of a point shall be accomplished by the round-up method: e.g., 75.45, 75.46, 75.47, 75.48, and 75.49 would be rounded up to 75.5; and 75.41, 75.42, 75.43, and 75.44 shall be rounded to 75.4. The DBT with the highest overall score shall be recommended to the KYTC Awards Committee for Contract Award. In the event that two or more DBTs achieve the same rounded final score (SB), the "tied" DBT with the lowest Price Proposal (PB) shall be recommended to the KYTC Awards Committee for Contract Award. The KYTC Awards Committee has final authority to determine the best interests of the KYTC in awarding (or not awarding) the Contract.

8. GENERAL PROVISIONS FOR THE SCOPE OF THE WORK

The DBT shall provide for the engineering services, design, and preparation of detailed construction plans for the construction of the proposed project. The DBT shall also provide services as described in Section 10 for the acquisition of right-of-way necessary to construct the proposed project and shall provide for the relocation of utilities impacted by the proposed project as described in Section 13. Further, the DBT shall provide for the furnishing of materials, construction and completion in every detail of all the work described in this RFP in order to fulfill the intent of the contract.

8.1 GOVERNING REGULATIONS

All services, including but not limited to survey, design and construction work, performed by the DBT and all subcontractors, shall be in compliance with all applicable AASHTO Design Standards, KYTC Department of Highway's Standard Specifications for Road and Bridge Construction, Standard Drawings, Manuals and Guidelines. As a part of the DBT's technical proposal submittal, a detailed general schedule outlining the items listed in Section 7.1.2.1 of the RFP shall be submitted. A comprehensive schedule detailing all project milestone dates shall be prepared for Department review and approval within 30 days of the award of the contract. This schedule shall show all major design, right-of-way, utility and construction activities and the critical path to completion. The comprehensive Progress Schedule required for this Project is the CPM schedule. The CPM schedule format shall be as described in the CPM Special Note in Appendix F. The DBT shall designate a Schedule Representative who shall be responsible for coordinating with the Engineer during the preparation and maintenance of the schedule and throughout execution of the entire contract.

The fact that the bid items for this Design-Build project are general rather than specific shall not relieve the DBT of the requirement that all work performed and all materials furnished shall be in reasonable conformity with the specifications. The DBT's Consultant shall reference in the plans the appropriate Construction and Material Specifications Item Number for all work to be performed and all materials to be furnished.

It shall be the responsibility of the DBT to acquire and utilize the necessary KYTC manuals that apply to the design, right-of-way, utility, and construction work required to complete this project.

8.2 LUMP SUM BID ITEMS

For this project, a single "all-inclusive" Lump Sum bid item is to be utilized. The components that are to be incorporated in this bid item are described throughout the RFP and shall include but are not limited to:

- A. Project Development Services
- B. Right of Way Acquisition Services
- C. Utility Relocation
- D. Grade & Drain
- E. Asphalt Paving
- F. Concrete Paving
- G. Traffic Signals
- H. Signing
- I. Lighting
- J. Structures

The DBT shall provide supplemental cost information and supporting documentation of those costs for each of the components listed. The sum of the individual component costs shall equal the value of the "all-inclusive" single lump sum bid item for the project. Certain aspects and requirements for each of these

items are discussed in the following sections. Some components are discussed in multiple sections due to the nature of the work involved. As stated previously, the intent of this "all-inclusive" single lump sum bid item is to incorporate all features of the project into this bid item. Please be advised that three percent (3%) of the total lump sum bid price shall be used as the Demobilization cost for this project.

In addition, the DBT shall be required to furnish the Department with a Schedule of Values showing a complete breakdown of the lump sum bid item established for this project at the time of submittal of the DBT price proposal. In order to document how the lump sum bid price was determined, the DBT shall supply, using standard KYTC bid item codes whenever possible, all work items, quantities, units, and prices to support the lump sum bid submitted. Any non-standard bid items used shall be thoroughly explained in the bid proposal. The breakdown shall include all materials to be used in the work, and shall be in sufficient detail to provide KYTC with a means to check partial payment requests. The Schedule of Values shall be shall be developed using the current version of Estimator software by Info Tech Inc., Gainesville, FL, 32608, or an equivalent program approved by the Engineer. The DBT shall provide any necessary training and license needed for KYTC to use the software. Submit the Estimator file in the Version required by KYTC. The successful DBT shall be required to update the schedule of values when final designs, or portions of the design, are approved.

The DBT shall also provide a separate estimated cost of the right-of-way acquisition and relocation costs that KYTC will pay to the property owners disturbed by the project. (This estimate will not be utilized in determining overall cost of the project but it will be used for KYTC budgeting purposes). This estimate should not include services for right-of-way acquisition as these services as described in Section 10 are to be included in the lump sum bid as described above.

8.3 BASIS OF PAYMENT

All items covered by Construction and Material Specifications, Supplemental Specifications, Proposal and Special Provision notes with unit price as a basis of payment shall be included in the Lump Sum bid item established for the project. All costs for work and services shall be included in the lump sum item for the Project.

"In progress" payments for the project shall be made utilizing the supplemental cost information included in the schedule of values supplied for each of the components identified as parts of the "all inclusive" single Lump Sum bid item. KYTC personnel shall track and measure the completed individual items within the schedule of values to determine the amounts of the actual "in progress" payments.

8.4 FINAL PAYMENT

In addition to the normal requirements in Sections 105.12 and 109 of the Standard Specifications, the DBT shall prepare and submit the following prior to the request for final payment:

- A. All original project files and notes utilized in the preparation of the survey, design and construction of the project.
- B. As-Built Plans in PDF and ArcGIS format previously approved by an engineer.

8.5 PRE-DESIGN-PRECONSTRUCTION CONFERENCE

The DBT shall attend a mandatory Pre-Design-Preconstruction Conference to be scheduled upon award and name a Project Manager who shall act as a liaison between the DBT and KYTC.

8.6 KYTC CONTACTS

All communication during design and construction and construction shall be with KYTC's Project Manager. All submittals identified elsewhere in this document shall be simultaneously sent to the KYTC's Project Manager and to the other KYTC personnel if designated by the KYTC Project Manager.

District Project Manager: < Project Manager>

Phone Number: (859) 341-2700

Email Address: < Project Manager email>

At the Pre-Design-Preconstruction Conference, the DBT shall name a Project Manager who shall act as a liaison between the DBT and KYTC.

8.7 ENTRY ON PRIVATE PROPERTY

Prior to performing any project development work, the awarded DBT shall send notification letters indicating the date and duration of entry to any affected property owners no less than forty-eight (48) hours nor more than thirty (30) days prior to the date of entry. The DBT shall forward copies of all notification letters distributed to KYTC's Project Manager. Any subsequent claims for compensation due to damages incurred during the project development phase shall be negotiated between the DBT and the affected property owners.

8.8 FIELD OFFICE

The DBT shall provide a Field office to be available and completely functional no later than 1 week prior to the start of construction work. Furnish the field office with a means for maintaining a room temperature between 68 and 80 degrees, with electric service, potable hot and cold water and neat, sanitary, enclosed toilet accommodations. Furnish associated lavatory, sanitary and cleaning supplies and arrange for waste disposal. The field office shall be on the project site unless an alternate location is approved by the engineer. The office shall be at least approximately 500 sf containing space for a meeting area and seating to accommodate 15 persons and 4 separate desk and chair workstations for use by KYTC. The office shall include Wi-Fi though broadband internet connection with a minimum speed of 100 MBPS.

9. BUILDABLE UNITS

Definition: Buildable Units are portions of the projects which may be designed, reviewed and built with only limited controls and assumptions coming from the design of other portions of the project. Often a Buildable Unit will be defined by a geographic area within the plan, but it may also be defined by types of work or construction stages which may require or permit similar, nearby work to be divided into separate Buildable Units. All Buildable Units shall summarize the materials required to construct that portion of the project. The summary shall include the Construction and Material Specifications Item Number, and a description of the materials to be used.

General: The DBT may break the project work into two or more separate BU which may be progressed through design and construction with minimal or known effect on each other and/or which may be dealt with sequentially such that sufficient data is available for design and review of each BU. In order that the design and construction of one BU may proceed without significant approved information from an associated BU, the DBT may develop and propose assumptions which will allow for the first BU to proceed through design and/or construction. These assumptions shall be submitted for review and comment but their accuracy and effort upon the final design are the sole responsibility of the DBT. Should error in these assumptions result in additional work, remedial work or other changes to assume an acceptable design or should they result in the need to remove work and substitute additional work, the DBT shall be responsible for all such costs including, removal of unacceptable materials from the site, modification, additional work, repairs, etc. as necessary to produce an acceptable result.

If the DBT elects to develop Buildable Units, The DBT shall prepare, for review by the Department, a table of Buildable Units for the project with each BU described in detail. This table of Buildable Units will be approved or comments given within 14 calendar days after the submission. If the table is approved, the DBT shall modify the Progress Schedule to show a separate group of activities for BU and these activities shall encompass all of the design and construction work in each BU. Work activities shall be further separated in the Progress Schedule to show a meaningful completion status (i.e. separate activities comprising the placement of a bridge deck on steel beams shall describe; shoring, form building, steel placement, placement of conduit & joints, pouring concrete, forming parapets, pouring or slip forming parapets, provision of membranes, provision of wearing surfaces, curing, repair, form removal, cleaning, etc.).

The Final Review Submission and construction plans shall specifically be identified by the Buildable Unit code. If the design of a BU requires input information from an adjacent or related BU, the source for that information in previously approved plans shall be cited or the DBT shall provide an estimated value of the data. The input data shall also be carefully identified. In the same way any assumption, calculations or results from the stage and BU which are used as input to another BU to verify previous assumptions. Should assumptions not match values calculated later, the DBT shall re-analyze all affected components and determine appropriate changes. Should those elements have already been constructed, the DBT shall recommend repairs, adjustments, modifications or replacement of the existing work as necessary to comply with the Scope of Work. All costs for re-design, re-submission, modifications, removals, disposal of materials and new work needed to remedy the project and bring it to compliance shall be borne by the DBT and no time extensions shall be approved for this.

10. DESIGN AND CONSTRUCTION REQUIREMENTS

10.1 LOCATION & DESIGN

Location & Design Special Provisions in addition to the Governing Regulations listed in Section 8.1 of this document.

10.1.1 SURVEY

All project survey requirements shall be in accordance with Section 300 of the KYTC Design Manual. Survey / Staking for construction shall be according to section 201 of the Standard Specifications; except that KYTC shall not provide any of the services described in section 201.03.01, those items of work shall be provided by the DBT. Placement of proposed Right of Way monuments, in accordance with KYTC standards, shall be required on this project. Placement of all proposed Right of Way monuments shall be performed by a Registered Surveyor, with a current registration, recognized by the Kentucky State Board of Registration for Professional Engineers and Surveyors. Costs associated for this item shall be borne by the DBT.

The DBT shall provide the following items prior to final acceptance of the As-Built Plans:

- A. Listing of all new monumentation, set (horizontal and vertical) plotted on the As-Built Plans.
- B. Copies of all Deeds, Plats, Maps, and other written evidence used to establish points related to the project including summaries of all parole evidence acquired as part of the survey operation.

10.1.2 FUNCTIONAL CLASSIFICATION OF ROADWAY

Urban Interstate : (I-275)

Urban Collector: (Graves Road & KY 237)

Interstate Ramp design shall be performed according to the standards established by the KYTC *Design Manual*.

10.1.3 DESIGN SPEED CRITERIA

65 mph (I-275)

35 mph (Graves Road & KY 237)

10.1.4 GEOMETRIC CITERIA

Geometric Criteria for the preliminary design information completed by KYTC is included in Appendix R. The DBT's final designs shall be equivalent to these criteria or should offer an improvement to these criteria. The entrance grades provided in Appendix R are for information only. Further design may require the grades to be adjusted, however, the grades proposed should be utilized as the maximum grade for that particular entrance. If DBT proposes to utilize a greater grade, then it must be approved by the Engineer.

10.1.5 PAVEMENT

See Appendix E for thickness details

Material Transfer Vehicle Required: Yes X No

See Special Note for Materials Transfer Vehicle in the Standard Specifications.

Pavement Ride Quality Required: Yes X No

See Section 410 of the Standard Specifications for Asphalt Pavement. Category B shall apply for Asphalt Pavement.

See Section 501 of the Standard Specifications for Concrete Pavement. Category B shall apply for Concrete Pavement.

10.1.6 TYPICAL SECTION

See Appendix E (No variations of typical section dimensions permitted).

10.1.7 DRAINAGE FOLDER REQUIRED

Yes X No

10.1.8 DESIGN EXCEPTIONS

The current edition of AASHTO's A Policy on Geometric Design of Highways and Streets Section 6.2.1 and Section 5.2.1 recommends that in rolling terrain, a design speed of 50 mph (rural collectors) and 40 mph (rural locals) respectively should be utilized with average daily traffic (ADT) greater than 2,000. KY 20 and Bullittsville Rd both have a posted speed limit of 35 mph. The horizontal curves and minimum grades required to accommodate these design speeds would have detrimental impacts to the residences surrounding the project. Both roads are also coming to an intersection and shall be required to slow down or stop. The project team has requested a design exception to utilize a 35 mph design speed to minimize impacts and match the conditions of the existing roadway.

The DBT shall advise of any proposed design features that do not meet the minimum design criteria. Due to the sensitive nature of the approval process for a Design Exception, it is a requirement that all design exceptions be submitted for consideration by the KYTC in writing no less than 45 days prior to submittal of the technical proposal. A detailed explanation of the justification for this exception shall be provided with this request. All DBTs shall be made aware of the request as well as approval or disapproval in writing. KYTC does not intend to approve design exceptions after the contract is awarded unless extreme and unforeseen circumstances may be demonstrated. The safety of the traveling public shall not be compromised by a design exception.

The following items need to be individually discussed for any requested design exception:

- A. Amount and character of traffic
- B. Type of project (e.g. new construction, 3R)
- C. Crash history relevant to the exception request
- D. Specific information pertinent to the type of exception being requested (i.e. deferral of bridge widening requests should address structural and function adequacy of existing bridge and project a future time for widening and etc.)
- E. Underlying reason for requesting exception
- F. Effect, if any, exception shall have on other standards (i.e. design speed exception would affect requirements for grade, curvature, sight distance, etc.)
- G. Effect of the exception on the safety and operation of the facility
- H. Cost of attaining full standards (phrases such as obtaining the standard would be too "costly" or beyond the scope of the project are of little value in making a decision)
- I. Future improvements and their relation to the requested exception
- J. Any features which would tend to mitigate the deviation

10.1.9 FUEL AND ASPHALT ADJUSTMENTS

Fuel and asphalt price adjustments, as detailed in the supplemental specifications, shall be applicable for this project. Payments are based on actual quantities placed per day rather than estimated values and the

base "index" values used to determine price adjustments shall be based on the values for the first of the month for when the price proposals are submitted to KYTC.

10.1.10 FENCING

Right of Way fencing is required. Right of Way fencing locations shall be designed according to any design or permitting manual. The DBT shall be responsible for removing existing Right of Way fencing when it is in conflict with the design developed by the DBT.

Pedestrian fencing for the Graves Road Bridge over I-275 shall be black vinyl coated fence according to section 817 of the Standard Specifications.

10.1.11 ADDITIONAL DESCRIPTION OF REQUIRED WORK AND SPECIAL PROVISIONS

All areas disturbed along residential properties shall be restored using sod as the seeding and protection. Vertical concrete surfaces in excess of 30 inches in height and 48 inches in width shall receive an architectural treatment. The architectural treatment shall approved by the engineer, but generally be of the "stacked stone" variety with at least ¾ inch reveal. The architectural treatment shall be surrounded by a 4-inch chamfered smooth border. Approach roads and commercial entrances may require reconstruction, as a part of this reconstruction, existing widths and profile grades shall be maintained or improved upon. This may require work off the existing Right of Way and in accordance with Section 12 of this document. Intelligent compaction of soils, aggregates and asphalt mixtures shall be used in along with paver mounted temperature profiles and E-ticketing as described in Appendix S.

10.1.12 ADDITIONAL CONSIDERATIONS

In developing the roadway design, gravity retaining walls should be used as a last resort to minimize ROW impacts.

10.2 STRUCTURES

10.2.1 STRUCTURE DESIGN/ADVANCE SITUATION FOLDER

The DBT shall have a consultant DBT member pre-qualified in Structure Design, Bridges under 500 feet. The DBT shall be responsible for preparing any structure plans required. The structure plans shall be developed in accordance with Division of Structure Design Guidance Manual: http://transportation.ky.gov/bridges/GuidanceManual.htm.

Review times shown in the Guidance Manual shall begin when a submittal is received. Submittals required shall be Advance Situation Folder, Stage 1 Preliminary Plans, Stage 2 Preliminary Plans, Stage 1 Final Plans and Stage 2 Final Plans. The structure plans shall be signed and sealed by a Licensed Professional Engineer. Structures may be submitted individually. The Division of Structural Design shall provide drawing numbers for each structure. The DBT shall present electronic copies in PDF format of plans and calculations for all submittals to the Division of Structural Design. This shall be in addition to any required hard copies.

10.2.2 EXISTING STRUCTURES IDENTIFICATION AND DATA

Plans are available for the existing Graves Road overpass at:

https://transportation.ky.gov/Construction-Procurement/Pages/Design-Build-Projects.aspx

The DBT should verify all pertinent information needed to facilitate the design and construction.

10.2.3 DESIGN AND CONSTRUCTION REQUIREMENTS OF STRUCTURE

All design and structure construction shall be in compliance with all applicable AASHTO design criteria as well as current KYTC standards.

All Shop Drawings shall be approved by Engineer of Record. PDF copies shall be provided to the Division of Structural Design. PDF copies shall be provided to KYTC Division of Structural Design.

10.2.4 FOUNDATION INVESTIGATION AND GEOTECHNICAL INVESTIGATIONS

All geotechnical information needed by the DBT for foundation investigation and all geotechnical investigations necessary to prepare the DBT's technical and price proposals shall be the responsibility of the DBT. The subsequent reports shall be submitted for review and approval by KYTC Geotechnical Branch. Please allow 14 calendar days for this review. Existing Geotechnical Information is for information purposes only.

10.2.5 GEOTECHNICAL, FOUNDATIONS, SLOPES, AND WALLS

All geotechnical information needed by the DBT for roadway and foundation investigation and all geotechnical investigations necessary to prepare the DBT's bid shall be the responsibility of the DBT. The subsequent reports shall be submitted for review and approval by the Cabinet's Geotechnical Branch. Please allow 14 calendar days per submittal for this review.

- A. The DBT's Geotechnical engineering firm shall be prequalified for Geotechnical engineering work (Engineering, Laboratory Testing and Drilling) in Kentucky.
- B. Design shall be in accordance with AASHTO LRFD Bridge Design Specifications, latest edition, except where overridden by state design standards. All design shall use LRFD methods except where such methods are not provided for in the AASHTO design manual, or these requirements. Where state standards recommend ASD design methods, equivalent LRFD methods shall be used. Specific approval to use non LRFD methods is required
- C. All geotechnical design and geotechnical explorations performed by the DBT shall be completed and submitted to KYTC in accordance with the latest copy of the KYTC Geotechnical Guidance Manual. The design shall be in accordance with the Guidance Manual except where overridden by these requirements. Meetings and submittals shall be in accordance with the Geotechnical Manual.
 - The DBT shall produce and submit a Foundation Analysis and Design Report for each structure and a Geotechnical Engineering Roadway Report for slopes and subgrade design. These reports shall include all engineering analyses and design recommendations.
- D. If the DBT determines subsurface explorations are necessary to properly design and construct the work in accordance with KYTC requirements, the DBT shall perform the subsurface explorations and analysis at its own expense. The DBT shall selectively locate subsurface explorations on the basis of field observations, and design considerations. Location of explorations shall be as topography, site conditions, soil conditions, and design factors dictate.

The DBT shall provide all subsurface exploration plans and explorations to KYTC in accordance with the KYTC Geotechnical Manual.

- E. Foundations for structures shall be designed in accordance with the KYTC Geotechnical Guidance Manual, KYTC Structural Guidance Manual, AASHTO LRFD Bridge Design Specifications, and with applicable Special Notes located in the Appendix K to this Project Scope document.
- F. The DBT shall design retaining walls in accordance with the KYTC Geotechnical Guidance Manual, KYTC Structural Design Guidance Manual, AASHTO LRFD Bridge Design Specifications, and with applicable Special Notes located in Appendix K.
 - The DBT shall design foundations for gravity retaining walls in accordance with the KYTC Geotechnical Manual. The gravity walls shall be constructed in accordance with KYTC Standard Drawing RGX-002. The geometry of the gravity walls may vary from the Standard Drawing only if approved by the Department.
 - 2. Gabion basket retaining walls shall not be permitted for permanent construction.
 - 3. Metal "Bin" type retaining walls shall not be permitted for permanent construction.
 - 4. Only preapproved Mechanically Stabilized Earth (MSE) wall systems shall be used on this Project. See the Special Note for MSE retaining walls located in Appendix K for preapproved systems. Only inextensible reinforcement shall be allowed.
- G. Reinforced soil slopes shall not be designed at a slope ratio steeper than one Horizontal to one (1) Vertical. Reinforced soil slopes shall be designed in accordance with design procedures presented in the latest version of Publication No. FHWA NHI-00-043, "Mechanically Stabilized Earth Walls and Reinforced Soil Slopes."
- H. The DBT shall be responsible for analysis and design of soil slopes. Slopes steeper than three to one (3H:1V) shall be reinforced. Slopes three to one (3H:1V) or flatter may require reinforcement or other remediation measures depending on soil conditions.
 - 1. Where embankment settlement is anticipated to exceed 3 inches in total settlement, the DBT shall submit an instrumentation plan for review to monitor settlement and determine when the pavement section can be placed.
 - All geotechnical instrumentation shall be left in place for future readings after the project has been completed. Instrumentation destroyed by the DBT shall be replaced at the DBT's expense.
 - 3. Shale cannot be used in the upper two feet of the subgrade.
 - 4. If shale that has a possibility of being acidic producing is used on the project, testing shall be required to determine the acidic producing potential. Acidic producing shale cannot be left exposed. The acidic producing shale shall be encased with a minimum 2.5- foot layer of compacted clay soil. A minimum of 4 feet of clay shall be required on top of the embankment to control the corrosion of guardrail and/or signpost, etc. from the acidic shale. Sulfate resistant cement (ASTM C-150 Type II) shall be used for subsurface structures such as pipes, culverts, bridges, etc.
 - 5. The subgrade should be constructed in accordance with the pavement design specifications. For a chemically stabilized subgrade a minimum preliminary CBR design value of 3.0 (CBR valued will be decided after soil testing is complete) is recommended for the soil beneath the chemically stabilized subgrade. Chemical treatment for the top 8 inches of subgrade is recommended (Stockpiling of soil may be required). The chemical identified for treating the soil types encountered on this project shall be cement. It is suggested that 6 percent, by dry mass, be utilized to determine plan quantities, using an average dry density to be determined after soil testing is complete. The chemical shall be applied in accordance with Section 208 of the current edition of Standard Specifications for Road and Bridge Construction; however, Contrary to Section 208 of the Standard

- Specifications, the curing time and testing of the subgrade may be constructed with an expedited schedule according to Appendix L. Where chemical stabilization is not feasible (cross over's, tie-in's, etc...) a minimum of 1 foot of Kentucky Coarse #2's, 3's or 23's shall be used. The granular material shall be wrapped with Geotextile Type IV fabric.
- 6. Any ponds located within project limits shall be drained and mucked out a minimum of 3 feet. This material shall just be limited to final dressing of slopes. Refill shall consist of suitable earth material or Kentucky Coarse #2's, 3's or 23's shall be used. The granular material shall be wrapped with Geotextile Type IV fabric.
- 7. Some areas of deep organic soils may be encountered. The organic material shall be removed. This material shall just be limited to final dressing of slopes. Refill shall consist of suitable earth material or Kentucky Coarse #2's, 3's or 23's shall be used. The granular material shall be wrapped with Geotextile Type IV fabric.
- 8. If springs are encountered during construction proper mitigation procedures shall be followed to allow for positive drainage.
- 9. Working platforms for Embankment or subgrade construction, consisting of limestone, may be needed in some areas. The granular material shall be wrapped with Geotextile Fabric Type IV.
- 10. Foundation embankment benches and longitudinal perforated pipe underdrains shall be constructed in accordance with Standard Drawings RGX-010 and RDP-006. If stability is a concern the benches shall be constructed one at a time beginning with the lowest bench. Each bench shall be backfilled prior to excavation of the next bench. This procedure shall be followed to help maintain stability of the existing slopes in these areas.
- Excavation support methods may be required. A dewatering method may be needed in some areas. The DBT shall be responsible for the stability of any excavations or temporary cuts.
 Protection of adjacent structures and utilities is the responsibility of the DBT. The DBT shall be responsible for any damage to the existing infrastructure. Any damage shall be repaired immediately.

10.3 PERMANENT TRAFFIC CONTROL

10.3.1 PAVEMENT MARKINGS AND DELINEATORS

The DBT shall provide all pavement striping, intersection markings, lane markings, and delineator posts in accordance with the MUTCD and applicable KYTC standards. The DBT shall provide striping plans no later than the final plan submittal stage for review and approval by KYTC. The DBT shall also provide inlaid pavement markers on I-275 and Graves road according to the specification in Appendix M. The DBT shall be aware that removal of existing pavement marker castings and permanent patching of the resultant hole with Fibercrete, or an approved equal, is required.

Other special provisions in addition to the Governing Regulations are listed in Section 8.1 of this document.

10.3.2 SIGNING SPECIAL PROVISIONS

All temporary signing shall be provided by the DBT for this project. Detour signage shall be submitted, approved and erected for the Graves Road Closure and any other closure deemed necessary by the Engineer. The DBT shall expect that up to 6 variable message boards may be required at a single time.

The DBT shall provide permanent sign plans as early as possible for KYTC approval. Review of the permanent signing plans may take up to 21 days. The IJS provided in Appendix D provides permanent signing details. The DBT shall design, fabricate and install all permanent signage for the project.

Other special provisions in addition to the Governing Regulations are listed in Section 8.1 of this document.

10.3.3 TRAFFIC SIGNALS SPECIAL PROVISIONS

Design, Construction and implementation of new traffic signals for the project shall be addressed as part of the DBT bid proposal. Traffic signals shall be completed at the Graves Road intersections with KY 20, both exit ramp termini and Worldwide Boulevard. Traffic data to for use in the design of the signalized intersections has been provided in Appendix N. The DBT shall provide plans for review and approval of the new traffic signals. Review of the traffic signal plans may take up to 21 days.

Other special provisions in addition to the Governing Regulations are listed in Section 8.1 of this document

10.3.4 ROADWAY LIGHTING SPECIAL PROVISIONS

Design, Construction and implementation of new lighting for the project shall be addressed as part of the DBT bid proposal. Roadway Lighting shall be completed at the Graves Road interchange and the KY 237 roundabout at Graves Road. The DBT shall provide plans for review and approval of the new lighting. Review of the lighting plans may take up to 21 days.

Other special provisions in addition to the Governing Regulations are listed in Section 8.1 of this document.

10.4 MAINTENANCE OF TRAFFIC (MOT)

Maintenance of Traffic Special Provisions in addition to the Governing Regulations listed in Section 8.1 of this document: The DBT shall submit an approach for MOT for the project that incorporates the elements listed as well as propose any innovative ideas that may expedite the work. A Traffic Management Plan shall need to be submitted and approved (form can be found on the KYTC Highway Design Web Page).

10.4.1 GENERAL

All MOT procedures shall be in accordance with Manual on Traffic Control Devices (MUTCD) except when the KYTC standard drawings or standard specifications are more restrictive the KYTC documents shall govern. The speed limit on any road within the project be reduced by 10 MPH with approval from the engineer.

10.4.2 MOT RESTRICTIONS

No lane closures shall be allowed on I-275, KY-237 and Worldwide Drive during observance of any National Holidays identified in Section 101 of the Standard Specifications and between the dates of November 1st and January 15th. Under special circumstances, KYTC reserves the right to restrict the use of lane closures due to unforeseen special events. In principle, the DBT shall maintain the current lane configuration (or better), for the life of the project (except for the closure of Graves Road over I-275 and a one week closure of Worldwide Drive at the intersection with Graves Road) including access to all adjoining properties. Williams road shall remain open and connected to either existing or proposed Graves Road at all times. Suggestions for additional working hours may be proposed by the DBT to KYTC as a part of the DBT project proposal.

Interstate lane closures shall only be permitted between the hours of 8:00 PM and 6:00 AM. All work on I-275, except traffic control operations and final pavement markings shall be conducted behind temporary concrete barrier wall as identified in the Standard Drawings. A lane closure for separation must be in place during barrier wall placement. Access to and from the work zone adjacent to the interstate shall be at the beginning or end of the string of barrier wall or at one approved entrance / exit point to be designed and submitted by the DBT for approval. Construction operations on I-275 using shoulder closures without barrier wall are prohibited unless they are less than one work shift and positive separation of at least 11 feet is provided.

Temporary Raised Pavement Markers, Type IVA as identified is section 112 of the Standard specifications shall be required when I-275 traffic lanes are situated outside their normal position. Delineators for barriers shall be required on temporary concrete barrier wall according to section 509 of the Standard Specifications.

Construction operations on roadways other than I-275 may be allowed without barrier wall during all daylight hours provided any resulting temporary drop-off conditions and signing requirements are adequately addressed. In general, any drop-off condition 4 inches or less shall be protected by barrels or delineators spaced every 40 feet. Drop-off's greater than 4 inches shall be wedged with DGA or other suitable materials on a 3:1 or flatter slope in conjunction with barrels spaced every 40 feet. If a positive separation of 8 feet or greater can be achieved between traffic and the drop-off, no wedging shall be required (except not drop- offs will be allowed on I-275). Temporary drop-offs during working hours that construction operations are taking place should be kept to a minimum. Drop-offs greater than 4 inches, resulting from excavations directly adjacent to traffic (with no positive separation), shall be limited to 500 feet in length. The intent of this requirement is to keep the temporary "wedging operation" in close proximity to the work to promote safety for the motorist.

All temporary striping shall be temporary paint, and all striping removal shall be performed by water-blasting. Temporary tape may only be used for short segments and durations with the approval of the engineer.

Paved and unrestricted 2-way access at least 30 feet wide shall be provided to the Fires Station on Graves Road at all times. The pavement depth shall at least match the depth of asphalt base provided for approach roads in the typical sections depicted in Appendix E.

The DBT shall submit the MOT plan to KYTC for approval. The KYTC will approve or provide comments within 14 calendar days.

10.4.3 MAINTAIN PAVEMENT

Contrary to section 105.11, the contractor will be required to perform pothole patching. Upon receipt of the "notice to begin work", the contractor shall be responsible for routine pothole patching. The contractor shall be responsible for patching both directions of I-275 between milepoints 6.5 and 10, Graves Road throughout the project length, KY 237 throughout the project length and any other pavements encompassed by the project. The contractor shall inspect and repair issues as necessary and significant spot issues shall be repaired within 24 hours of notice, for the safety and protection of the traveling public and their property and may require temporary, quick repairs. Other, more extensive repairs, may need to be scheduled in order to provide a more permanent preventative repair that will last throughout the winter. Maintaining the pavement within the project limits shall be considered a component of the overall traffic control plan and shall be subject to Section 112.03.15 – A) of the standard

specifications, except that only the prescribed dollar values in that section shall be used in lieu of the project liquidated damage rate.

10.4.4 LIGHTING

Contrary to Section 105.11 of the Standard Specifications, lighting shall be maintained by the DBT. Lighting shall be maintained on the mainline interstate and all associated ramps between milepoints 6.5 and 10.0 and the KY 237 roundabout at Graves Road. Existing or proposed lighting must remain burning throughout the entire timeline of the project; from the date Notice to Begin Work is distributed until the Project Completion Notice is issued. In the event that existing or proposed lighting cannot remain burning, temporary lighting shall be provided that meets the design parameters of the currently existing lighting.

In order to maintain the lighting system, the successful bidder may need to investigate and or perform work in areas outside the work. Maintaining the lighting system shall require the successful bidder to perform any work necessary to ensure all lights remain burning; all necessary shall be performed according to section 716 of the Standard Specifications. In the event that maintaining the lighting system requires new poles, transformer bases or light arms, the cabinet will provide those at no cost to the DBT; however all other materials and devices necessary to maintain the lighting shall be provided by the DBT. Maintaining the lighting system shall be considered a component of the overall traffic control plan and shall be subject to Section 112.03.15 – A) of the standard specifications, except that only the prescribed dollar values in that section shall be used in lieu of the project liquidated damage rate.

10.5. ADDITIONAL PROVISIONS (PROJECT-SPECIFIC)

11. ENVIRONMENTAL AND HAZARDOUS MATERIALS

11.1 ENVIRONMENTAL DOCUMENT

The project received National Environmental Policy Act (NEPA) clearance via a Categorical Exclusion 3 with an approval date of late February 2019, that is provided in Appendix G. The project approval was based on the impacts identified in the plans as presented in this proposal. Any impacts outside of the identified disturbance areas have not been cleared under the NEPA process. If the Design Build Team chooses to pursue impacts outside of the identified area, it is their sole responsibility to conduct the necessary field work and complete any necessary coordination to obtain environmental clearances, including updates to the environmental document. Additionally, anyone conducting work or fieldwork for any of the clearances will need to be on KYTC's list of approved consultants for the appropriate areas. As part of the environmental clearance for the project, several commitments were made for the project, as outlined below.

11.2 THREATENED AND ENDANGERED SPECIES

Due to the limited flowering season of Running Buffalo Clover (Trifolium stoloniferum), KYTC was unable to conduct the Biological Assessment (BA) for that species during the NEPA evaluation phase. As such, a commitment was made to conduct that BA prior to construction. KYTC will conduct this evaluation in Spring 2019 (as dictated by the plant's flowering period) and the results coordinated with the US Fish & Wildlife Service. Results of the survey and any necessary clearances will be provided prior to contract award.

In order to comply with restrictions associated with imperiled bats, tree clearing restrictions will be imposed on this project. No clearing of trees 5 inches or greater (diameter breast height) shall occur from June 1 - July 31. Failure to comply will result in violation of the Endangered Species Act. Any questions regarding this requirement should be directed to:

Danny Peake, Director Division of Environmental Analysis 200 Mero Street Frankfort, KY 40601

11.3 ARCHAEOLOGICAL CLEARANCE

During the environmental evaluation phase of the project, access was denied to four parcels for archaeological evaluation. Through a Memorandum of Agreement (MOA), archaeological investigation was deferred until prior to construction. KYTC will continue to seek access to these parcels and provide any necessary clearances on these parcels prior to project award. It is anticipated that these areas will be cleared prior to the contract being awarded. Construction activities cannot begin on these parcels until all clearances are obtained.

11.4 SURFACE WATER PERMIT

The DBT shall be aware of Clean Water Act permits issued by the US Army Corps of Engineers (USACE) and the Kentucky Division of Water (KDOW) as may apply to the Work. This shall include both Nationwide and Individual USACE Section 404 permits, KDOW section 401 Individual Water Quality Certifications. KYTC will secure the necessary USACE 404 and KDOW section 401 permit for the project for impacts identified in the preliminary design files distributed at Pre-Proposal meeting. Upon award of the contract, the DBT will coordinate with KYTC and the appropriate agencies to have the permit amended and transferred into their ownership.

The DBT shall be responsible for complying with all provisions set forth in the Permits. KYTC will pay (in advance) any costs or in-lieu fees associated with the permits as they pertain to the identified impacts within this document. If the DBT chooses to impact areas outside of the areas identified, it is their responsibility to coordinate changes the USACE and KDOW and pay any additional in-lieu fees.

11.5 ASBESTOS COMPLIANCE

The DBT will be responsible for meeting the requirements of the 10 Day Notice with the Kentucky Division for Air Quality (DAQ). DEP form 7036 will be completed and filed with the Florence Regional DAQ Office located at 8020 Veteran's Memorial Drive Suite 110, Florence KY 41042 at least 10 days prior to removal of the bridge structure on Graves Road over Interstate 275. KYTC will provide the results of the Asbestos inspection and laboratory results to be included with the notice.

11.6 CONSTRUCTION STORM WATER PERMIT (KYR10)

Projects that are not required to have a Section 402 Individual KPDES permit, must request coverage under the program's General Construction Storm Water Permit (KYR10). The DBT must submit to KYTC's project manager a BMP plan for the project and receive approval prior to beginning work. All temporary erosion control is the responsibility of the DBT as outlined in the Special Note for Erosion Control found in Appendix H. The DBT will be responsible for filing the Notice of Intent (NOI) with the Kentucky Division of Water requesting coverage under the KYR10 permit.

11.7 HAZARDOUS MATERIALS

KYTC is unaware of any hazardous or contaminated materials within the project limits. However, the DBT is advised that any hazardous materials or contaminated areas encountered as a part of the design and construction of the project shall be the responsibility of the DBT to identify, and take the appropriate steps to coordinate with KYTC for disposal of said materials in accordance with all laws and regulations.

Should the DBT encounter hazardous or contaminated areas on the project, the DBT shall prepare a Contaminated Materials Management Plan (CMMP) to address the methodologies to be employed by the DBT to minimize the disturbance of contaminated materials and to coordinate with KYTC for disposal of any contaminated materials encountered by the DBT as the result of the DBT's design and construction. KYTC shall retain status as "generator" of all wastes regulated under federal RCRA and applicable state laws. It shall be the DBT's responsibility to identify, and coordinate with KYTC to handle, manage and, if necessary, dispose of, all contaminated materials in accordance with all applicable local, state and federal regulations. It is understood that wherever practicable, contaminated materials shall be managed on the construction site.

Under most circumstances, KYTC will complete disposal of Hazardous Materials using KYTC forces within 14 calendar days. In the event that disposal extends beyond 14 days and delays are caused to the controlling item of the critical path schedule, or the DBT is required to perform disposal of the Hazardous Material, a supplemental agreement will be executed with the DBT according to section 104.03 of the Standard Specifications.

DBT shall have both the responsibility and authority to conduct any additional environmental assessment and/or testing it deems necessary to identify, and coordinate with KYTC to handle, manage, transport and dispose of contaminated materials encountered during construction, within the confines of local, state and federal environmental statutes, regulations and ordinances All environmental data collected shall be retained for KYTC review and be made available, if requested.

The DBT shall be solely responsible for the health and safety of its own employees with regard to contaminated materials. DBT shall be liable for any loss or damage incurred by its employees or third parties as a result of its management, handling or improper disposal of contaminated materials. DBT shall indemnify KYTC for any damages incurred there from.

DBT shall assure that all contaminated materials requiring off-site disposal are coordinated with KYTC to be transported and disposed of in accordance with applicable local, state and federal laws in a regulated facility approved by KYTC. The DBT shall be responsible for manifesting and gaining approval for disposal of each shipment of contaminated materials designated for disposal at a regulated facility. DBT shall retain copies of all manifests and associated documentation for review by KYTC upon request.

Section 11.7 for Hazardous Materials shall not apply to asbestos materials present in buildings or structures to be demolished. Section 11.7 shall only apply to the abatement of underground Hazardous Materials.

12. RIGHT-OF-WAY (ROW)

12.1 GENERAL REQUIREMENTS

The DBT shall be responsible for determining actual right of way needs (including easements for drainage, erosion control, utility relocations, and maintenance of traffic) that their design requires. Generally, KYTC district 6 only purchases right of way 10 feet beyond the back of sidewalks.

The DBT shall stake and flag all existing and proposed right of way and easements needed in the field prior to the start of construction. The DBT shall maintain these markings throughout the duration of the project.

All elements of the Right of Way Process shall be performed with discretion and confidentiality. The acquisition of private property for public use is a serious matter. Those in government charged with managing and implementing property acquisition programs have the responsibility to the government body and to the public to ensure that such right of way programs are executed professionally and fairly

All right of way documents, including the appraisal report, offer letter, and relocation assistance shall not be shown to, read to, permitted to be read by, or lent to a person other than those DBT Right of Way Team in discharge of the official business of the Division of Right of Way & Utilities. The DBT shall not disclosure or discuss confidential information about any parcel or owner(s) of a parcel. The DBT Right of Way Team shall be the only person's to discuss confidential information and then shall only discuss with KYTC Division of Right of Way Personnel.

The following sections outline the DBTs responsibilities for acquisition of right of way as deemed necessary by their design.

12.2 DESIGN-BUILD TEAM CONFLICT OF INTEREST

If at any time, the DBT or to the best of the DBT's knowledge, any DBT-Related Entity directly or indirectly: (i) acquires or has previously acquired any interest in real property likely to be parcels of the Project Right-of-Way or the remainders of any such parcels; (ii) loans or has previously loaned money to any interest holder in any real property likely to be a Project Right-of-Way parcel and accepts as security for such loan the parcel, or the remainder of any such parcel that is not a whole acquisition, or (iii) purchases or has previously purchased from an existing mortgagee the mortgage instrument that secures an existing loan against real property likely to be a Project Right-of-Way parcel, or the remainder of any such parcel, the DBT shall promptly disclose the same to KYTC. In the case of acquisitions, loans or mortgage purchases that occurred prior to the execution of the Agreement, such disclosure shall be made within ten (10) days after execution of the Agreement.

In the event that the DBT, or any subsidiary or parent company of the DBT, acquires a real property interest, whether title or mortgage, in parcels of the Project Right-of-Way, the real property interest acquired or a release of mortgage as the case may be, shall be conveyed to the State of Kentucky, without the necessity of eminent domain.

The DBT shall not acquire or permit the acquisition by the DBT or any DBT-Related Entity of any real property interest in a Project Right-of-Way parcel, whether in fee title or mortgage, for the purpose of avoiding compliance with the laws, practices, guidelines, procedures and methods described.

12.3 CLEARANCE/DEMOLITION OF PROJECT RIGHT-OF-WAY

The DBT shall be responsible for the clearance/demolition of buildings that are within the project right of way limits. Prior to demolition of any improvements, the DBT shall obtain photographs of the property and all improvements. The DBT shall also have photos of any other items of dispute in and of a quality suitable for presentation as evidence in court. Following acquisition or possession of any parcel of Project Right-of-Way, the DBT shall:

- A. Follow property management guidelines as set forth by KYTC Right of Way Manual.
- B. Secure and protect the buildings, improvements and fixtures on the Project Right- of-Way until they are disposed of or demolished. DBT shall board-up, mow, and winterize as required by KYTC or applicable Law.
- C. Coordinate with the owner and occupants to assure the clearance of personal property from the Project Right-of-Way, as applicable.
- D. Provide for any insect and rodent control and initiate extermination as required to protect the adjacent properties and rid the Project Right-of-Way from infestations.
- E. Secure Governmental Approvals required for demolition and environmental surveys or tests, and notify KYTC in writing of all such activities.
- F. The DBT shall be required to prepare necessary documentation for disposal of improvements, including the coordination and disposal of all contaminated or hazardous materials encountered, fixtures, and buildings in accordance with applicable Laws.
- G. Provide written notification to KYTC of any real and/or personal property remaining on the Project Right-of-Way after vacated by the occupants and not acquired as part of the acquisition.
- H. Terminate all utility service(s) when appropriate.
- I. Process all required forms, documents and permit applications in order to proceed with the timely demolition or removal of any and all improvements, buildings and fixtures located within the Project Right-of-Way, as applicable.
- J. Demolish and/or remove all improvements.
- K. Notify KYTC upon completion of the demolition and clearance of the Project Right- of-Way, as applicable.

12.4 PROCUREMENT OF RIGHT-OF-WAY

The DBT shall be responsible for all services and costs necessary to properly obtain the Right-of-Way and/or easements needed to complete the roadway project and utility relocations except for the purchase price of the property, which KYTC shall retain responsibility for. The services for right of way acquisition described herein Section 12 are to be included in the lump sum bid as part of the price proposal. In addition, the DBT shall provide a separate estimate for the right of way acquisition and relocation costs that KYTC will pay to the property owners disturbed by the project.

The DBT shall provide all services necessary to acquire title to the Project Right-of-Way and/or easements, in form and substance acceptable to KYTC, in the name of the Commonwealth of Kentucky. This shall include coordination of relocation of displaces and clearance/demolition of the improvements from the Project Right-of-Way, as more fully described in the following sub-sections.

Except as otherwise set forth in the Agreement, the DBT's Project Right-of-Way staff and/or Contractors shall function as independent contractors while acquiring Project Right-of-Way, and not as an agent, representative, or employees of KYTC.

12.4.1 STANDARDS FOR RIGHT-OF-WAY ACQUISITIONS BY THE DBT

The DBT shall acquire Project Right-of-Way in accordance with the Uniform Relocation Assistance and Real Property Acquisition Act, otherwise referenced as the UNIFORM Act, as well as applicable state and federal Law and the practices, guidelines, procedures, and methods contained in the following as it pertains to Right-of-Way:

A. KYTC Right of Way Manual and Relocation Assistance Manual (Kentucky properties)

Pursuant to the applicable federal regulations, the DBT shall (i) acquire Right-of- Way parcels for the Project on behalf of KYTC, but without the direct participation of KYTC, subject to KYTC rights of review, approval, and audit; (ii) certify acceptance of the KYTC Policies and Procedures; (iii) provide adequate access to all occupied properties; and (iv) maintain utility service to occupied properties until relocation is complete.

12.4.2 SOFTWARE REQUIREMENTS FOR RIGHT-OF-WAY ACQUISIOTIONS BY THE DBT

The DBT shall employ software that is compatible with the software in use by KYTC, or fully transferable to the KYTC system. The DBT must supply and maintain a web-based, parcel-by-parcel database that incorporates the fields and information required by KYTC. The DBT must maintain and participate in the KYTC Right-of-Way and Utilities Management System (RWUMS) for appraisal, appraisal review and acquisitions, and any other required Right-of-Way tracking system required by KYTC or otherwise agreed to by the parties. The database shall be fully accessible to persons authorized by KYTC.

12.4.3 DBT'S RIGHT-OF-WAY ACQUISITION PLAN

The DBT shall prepare a Right of Way Acquisition Plan and schedule prior to the start of any right of way activities. The Right-of-Way Acquisition Plan shall be submitted to KYTC for approval prior to beginning any of the activities identified in the plan.

The Right-of-Way Acquisition Plan shall clearly present the DBT's methodology to be used to secure the Right-of-Way needed to construct the Project. The Right- of-Way Acquisition Plan shall set forth DBT's organization, including names, titles and qualifications of Project Right-of-Way personnel, integration of the Project Right-of-Way schedule into the Project Schedule, interface between design and Project Right-of-Way activities, documentation and reporting, quality control procedures, and quality review standards.

The Right-of-Way Acquisition Plan shall contain, at a minimum, the following:

- A. The name of KYTC approved title attorneys to be used for title services.
- B. The name and qualifications of the proposed Right-of-Way Acquisition Manager (AM).
- C. The resumes and qualifications for appraisers, appraisal reviewers, relocation agents, negotiators, real estate attorneys, property management agents, approved condemnation attorneys, and Right-of-Way personnel who shall have the minimum qualifications and experience specified in the KYTC Right-of-Way Manual.
- D. A completed Project Report (form TC 62-75) provided in Appendix I.

The Right-of-Way Acquisition Plan shall establish the specific means by which the DBT shall:

- A. Provide sufficient personnel to achieve, in accordance with the Project Schedule, the goals and milestones established for Project Right-of-Way acquisition, relocation assistance, appraisals and appraisal review, and clearance/demolition of the improvements from the Project Right-of-Way.
- B. Provide administrative support.

- C. Provide for non-English speaking, visually impaired, or hearing-impaired translation, as necessary.
- D. Provide documentation and reports.
- E. Produce and distribute acquisition and relocation brochures as approved by KYTC.
- F. Establish, implement, and maintain quality control procedures and quality review standards for the acquisition for Project Right-of-Way.
- G. Prevent fraud, waste, and mismanagement.
- H. Provide methods for dispute resolution.
- I. Provide for expeditious navigation through condemnation proceedings.

12.4.4 SCHEDULE AND REVIEW PROCEDURES FOR THE RIGHT-OF-WAY ACQUISITION PLAN

The Project Schedule shall indicate the date to begin the acquisition of the Project Right-of-Way and the anticipated completion date of acquisition activities for each parcel. KYTC shall be advised of all properties and temporary rights or interests in real property to be acquired by the DBT. In developing the Project Schedule, the DBT shall give priority to the acquisition of parcels that have significant impact on the Project Schedule and/or affect the Critical Path as so indicated. The bi-monthly status reports shall provide updated projections for the acquisition date of each parcel.

Prior to beginning acquisition of a parcel, the DBT shall submit a complete Acquisition Package for said parcel. The Acquisition Package shall be prepared in accordance with the UNIFORM ACT as well as the KYTC Right-of-Way Manuals. Also, any unusual issues with the parcel shall be denoted. The submittal shall be made to the Project Manager for KYTC or their designee. Upon approval of the parcel Acquisition Package by KYTC, the DBT is released to acquire the parcel. KYTC shall retain all submittals as reference documents only. Submittal of the Acquisition Package to KYTC does not release the DBT from any responsibilities regarding the lawful performance of the acquisition of the Right- of-Way as defined by the RFP and other applicable laws and regulations. No adjustments to the Project Schedule shall be allowed due to this requirement.

The DBT is advised that for scheduling purposes, KYTC will be allowed up to 30 Calendar Days to process payments to respective property owners once the acquisition process has been completed and submitted to KYTC for execution.

12.4.5 PROJECT SCOPE OF SERVICES FOR RIGHT-OF-WAY ACQUISITIONS BY THE DBT

The DBT shall complete all administrative activities and prepare all documentation sufficient for the DBT to acquire the Project Right-of-Way. The DBT shall provide all Project Right-of-Way maps and surveys, appraisals, legal descriptions, acquisition documentation, requests to acquire Project Right-of-Way, condemnation-related activities, and funding/closing procedures. The DBT shall use only those attorneys that are on KYTC's Office of Legal Services statewide contract list for title reports, closings, and condemnation. Except as otherwise authorized by applicable State and federal policy and regulations for early acquisition and approved by KYTC, the DBT shall not proceed with acquisition of the Project Right-of-Way until Right-of-Way maps and legal descriptions for the applicable constructible segment as established by the logical termini of the Project have been prepared and approved by KYTC. KYTC shall provide a separate release for each approved segment. Further, the DBT shall not commence any negotiations with landowners nor shall eminent domain procedures begin until the Acquisition Package from the Right-of-Way AM for that particular parcel has been submitted and approved by KYTC.

If the DBT and the landowner cannot negotiate an agreed-upon purchase price, the DBT shall advise KYTC that the DBT has elected to commence acquisition of the property through eminent domain procedures. The DBT shall not be permitted to commence any condemnation action through the statutory procedure

without the express written consent of KYTC. Consent may be withheld by KYTC at their sole and absolute discretion. In the event KYTC withholds consent and delays are caused to the controlling item of the critical path schedule, the department will consider an extension of Contract time according to section 108.07 of the Standard Specifications.

The DBT shall not begin construction on any parcel of real estate unless property rights for the parcel have been conveyed and recorded in favor of KYTC, possession has been obtained through eminent domain procedures or a Consent and Release Agreement has been validly executed and delivered by all necessary parties to KYTC.

12.4.6 ACQUISITION PROCESS SUMMARY FOR RIGHT-OF-WAY ACQUISITIONS BY THE DBT

The DBT's major activities with respect to the acquisition of the Project Right-of-Way are:

- A. Project Right-of-Way surveying and mapping
- B. Title services
- C. Appraisal services
- D. Appraisal review
- E. Negotiations
- F. Closing services
- G. Relocation assistance
- H. Performance of Condemnation services
- I. Clearance and demolition of Project Right-of-Way
- J. Environmental due diligence
- K. Documentation and document control
- L. Progress reports
- M. Project Right-of-Way administration and management
- N. Project Right-of-Way quality management
- O. Preparation of the acquisition packet for approval
- P. Obtaining rights of entry, as necessary

12.4.7 RIGHT-OF-WAY PERSONNEL QUALIFICATIONS

DBT Right-of-Way personnel qualifications shall meet minimum standards set out in KYTC Right-of-Way Manuals.

12.4.8 DOCUMENTATION, REPORTING, AND LEGAL RESPONSIBILITIES FOR RIGHT-OF-WAY ACQUISITIONS BY THE DBT

The DBT is responsible for preparing all specific reports and supporting documentation for review and approval during the acquisition process required by the UNIFORM ACT, all applicable laws and regulations, and the Policies and Procedures for KYTC, as required. At the sole discretion of KYTC, should evidence be presented or it is suspected that the DBT is not following all laws and regulations in regards to the procurement of Right-of-Way for the Project, KYTC reserves the right to audit the DBT's Project documentation to verify contract requirements are being met. No adjustments to the Project schedule shall be allowed due to performance of an audit. If evidence is found that the DBT has failed to conform with all applicable laws and requirements established for the procurement of Right-of-Way as detailed in the RFP for this Project, the DBT may be subject to litigation and penalties as determined by a Court of Law in Kentucky. By submittal of a Proposal for this Project, the DBT acknowledges and agrees that the sole responsibility for the lawful procurement of Right-of-Way for this Project is the DBT's. Further, any delays, work stoppages, or financial penalties resulting from a failure to comply with all applicable laws

and requirements for the lawful procurement of Right-of-Way for this Project are the responsibility of the DBT and the DBT agrees to hold harmless KYTC.

All correspondence with KYTC and property owners relating to acquisition of real property shall include a heading with the following information (at a minimum):

- A. County/State
- B. Project Item Number Highway Designation
- C. Parcel number
- D. Name of record owner(s)

In administering and managing its Project Right-of-Way activities, the DBT shall:

- A. Maintain parcel records on file of all aspects of the acquisition process in accordance with KYTC requirements and applicable Law. Each parcel file shall include all documents required by the KYTC Right-of-Way Manuals as applicable and the UNIFORM ACT.
- B. Provide monthly summaries for the cost of Project Right-of-Way acquisition and related relocation assistance including amounts authorized and amounts paid on a parcel-by-parcel basis as requested by KYTC.
- C. Maintain and electronically transmit to KYTC, in a format acceptable to KYTC, bi-monthly status reports including appraisal, acquisition, and relocation status of all parcels and activities related to Project Right-of-Way.
- D. Input and update parcel status in KYTC approved web-based tracking system or as directed by KYTC.

12.4.9 REVIEW RESPONSIBILITIES OF KYTC FOR ACQUSITION PACKAGES

KYTC shall have the following responsibilities with acquisition of Project Right- of-Way:

- A. Upon receipt of a complete Acquisition Package prepared by the DBT's Right-of-Way AM, KYTC will review the package for completeness. KYTC will complete this review and approval in no longer than five (5) business days.
- B. KYTC will provide the DBT with a maximum amount that can be used as an administrative settlement for each parcel. Any increase to the approved amount shall require additional documentation.

12.4.10 RESPONSIBILITIES OF THE DBT AND KYTC OFFICE OF LEGAL SERVICES FOR USE OF CONDEMNATION FOR EMINENT DOMAIN FOR RIGHT-OF-WAY ACQUISITIONS BY THE DBT

The DBT shall be responsible for filing and concluding the condemnation suit for eminent domain on behalf of the State upon receipt of the approved condemnation package and executive order. The responsibilities of the DBT in connection with acquisition of Project Right-of-Way in regards to use of State's right for condemnation for eminent domain shall include but not be limited to:

- A. Provide records that the DBT has negotiated in good faith, in accordance with the UNIFORM ACT and the Right-of-Way Manual for KYTC. Document the reason(s) for condemnation including recommendations for property closure.
- B. Conduct all eminent domain-condemnation activities in accordance with the policies and procedures as described in the Right-of-Way Manual for KYTC, and all other applicable laws and regulations.

- C. After non-response or upon receipt of a copy of the rejected final offer from a property owner or other property right holder entitled to compensation, request an updated title report from the title attorney issuing the original title commitment.
- D. Use the information from the title report to join all parties having a property interest. Spouses of property holders with compensable rights must also be joined.
- E. Prepare a condemnation packet containing two copies each of the following documents: Report Form indicating all joined parties in the suit, negotiation logs, the updated title report not more than 90 days old, appraisal receipt acknowledgment, pre-appraisal contact sheet, signed and sealed field notes, parcel sketch, bisection clause and access clause exhibits (if necessary), final offer letter reflecting latest appraisal, any correspondence sent by the DBT or from the owner of the compensable interest or representatives, one copy of the appraisal report not more than 90 days old, and proof of good faith negotiations. Submit two complete condemnation packets to the KYTC Right-of-Way Administrator.
- F. Send a copy of the complete petition to the title attorney and confirm with the title attorney that the appropriate parties were joined in the case and that no changes in title have occurred since the original litigation guaranty was issued.
- G. Upon approval of the Condemnation Package by the KYTC Office of Legal Services, file the petition for condemnation with the appropriate court clerk after a determination that a timely settlement is not feasible.
- H. Be responsible for the all services and other duties required for the successful prosecution of the suit, including attendance in court and filing necessary documents to complete all eminent domain proceedings. This may include appearances at pre-commissioner's hearing preparations, special commissioner's hearings, and subsequent proceedings including jury trials and related proceedings.
- I. Provide written monthly updates as to the parcel status to the KYTC Right- of-Way Administrator throughout the process.
- J. Serve in person a "Notice of Hearing or Trial" at least 11 days prior to the date of the special commissioners' hearing, trial, or other hearings and notice requirements as directed or authorized by the court.
- K. Call and send reminder letters two to three weeks in advance of any hearing to the KYTC Right-of-Way Administrator such that KYTC is kept appraised of the progress of the court case.
- L. Make payment to all commissioners involved in the hearing and include payment for commissioners as part of general Project Right-of-Way services.
- M. Schedule and pay for all court related expenses including, but not limited to, court reporter services, transcription costs, mediation fees, expert witness fees, exhibits, and exhibit workbooks as required for the successful prosecution of the case. All documents and exhibits used in the special commissioner's hearings shall be retained as part of the Project records.
- N. File in a timely manner and provide proper service of objections after completion of the special commissioner's hearing as required. Within three days after objections have been filed, the DBT, at its cost, shall order transcripts of such hearing and provide said documents to the KYTC Right-of-Way Administrator.

KYTC and KYTC's Office of Legal Services shall have the following responsibilities in connection with acquisition of Project Right-of-Way in regards to use of State's right for condemnation for eminent domain:

A. Upon receipt of a complete condemnation package from the DBT, KYTC shall coordinate with the KYTC Office of Legal Services to review the condemnation package. KYTC shall deliver the

- complete condemnation package to the KYTC Office of Legal Services within two business days after receipt from the DBT.
- B. Upon receipt of the condemnation package by the KYTC Office of Legal Services, the office shall have 20 business days to approve the condemnation package and determine if is acceptable to move forward with filing of the condemnation suit. If condemnation package is acceptable, the KYTC Office of Legal Services shall issue an executive order authorizing the DBT to file the condemnation suit on behalf of the State. The KYTC Office of Legal Services reserves the right to request that the DBT revise the condemnation package as required prior to approval in order to meet all legal requirements for the filing of condemnation suits for eminent domain. All resubmittals required from the DBT shall be approved in 10 business days.
- C. KYTC will return the approved condemnation package and executive order authorizing the DBT to file suit on behalf of the State to the DBT within two business days after receipt of the approved condemnation package from KYTC's Office of Legal Services.

12.4.11 ADDITIONAL REPORTING REQUIREMENTS FOR RIGHT-OF-WAY ACQUISITIONS BY THE DBT In addition, the DBT shall provide the following reports and electronic files:

- A. Monthly Parcel Report: DBT shall provide a report, prior to the first of the month, listing all parcel deletions, parcel additions, and parcel splits.
- B. Monthly Progress Report: DBT shall provide a report of all survey activity that occurred over the previous month, including a two-week look ahead of anticipated survey activity.
- C. CAD Files: The DBT shall provide digital CAD files in MicroStation format which include: property lines and/or existing Right-of-Way lines, as surveyed; proposed Right-of-Way lines; parcel numbers; resource files; level assignments; and plot files. DBT shall submit CAD files prior to submitting the first Acquisition Package and provide updates as needed.

12.4.12 TITLE SERVICES FOR RIGHT-OF-WAY ACQUISITIONS BY THE DBT

With respect to title services, and in compliance with KYTC Policies and Procedures, the DBT shall:

- A. Complete titles as directed by Right-of-Way manuals and legal services in KY.
- B. Select and contract with one or more title attorneys that are on KYTC's Office of Legal Services statewide contract list. The DBT shall be responsible for obtaining a five-year sales history, a preliminary title commitment or preliminary title report, and, if necessary or appropriate, copies of all underlying documents and a plot of all easements, including existing Utility property interests, referenced therein for each parcel (including fee acquisitions, slope easements, other drainage and roadway Right-of-Way or easements and abandonment of Utility easements) to be acquired by KYTC for the Project. Each title report shall be dated not more than 30 days prior to the date of submittal to KYTC of the Acquisition Package for such parcel. The DBT shall, at its own cost, review each title report to ensure that it complies with the format required by the Right-of-Way Manual for KYTC. The DBT shall, at its own cost, retain the services of a real estate attorney, licensed and approved by KYTC, to be available for title support and acquisition assistance. All title reports must be in the following required format (format as required by KYTC's Office of Legal Services): clearly indicate which exclusions and exceptions shall be deleted upon acquisition of the subject parcel, and clearly indicate any required deliverables to the title attorney to clear identified exclusions and exceptions. Title reports shall be in accordance with KYTC's Right-of-Way Manual. The DBT shall notify the title attorney, by letter, which exceptions may be removed, including easements that: (a) are appurtenant to and/or of benefit to the parcel but not included in the parcel to be acquired, and (b) are a burden on the parcel and not acceptable.

- C. Review the preliminary title commitment or report to ensure that all current owners of record title are contacted and that negotiations or condemnation actions are conducted with all appropriate parties.
- D. Work with the current owners of record title to each parcel or interest in a parcel or their designee and all other appropriate parties to clear any title exceptions or exclusions not acceptable to KYTC.
- E. Ensure that all Project Right-of-Way shall be acquired in fee simple absolute or easement interest as appropriate, free and clear of any and all liens and encumbrances. Title to the Project Right-of-Way shall be in the name of the Commonwealth of Kentucky.

12.4.13 APPRAISALS FOR RIGHT-OF-WAY ACQUISITIONS BY THE DBT

The DBT shall complete fair market value appraisals with appraisers meeting the minimum qualifications established herein. All appraisals, for all parcels to be acquired, shall be prepared in conformance with applicable law (including the UNIFORM Act), and in accordance with professional appraisal methods and KYTC's Division of R/W & Utilities Appraisal Guidelines manual. The DBT shall select appraisers from KYTC list of approved fee appraisers.

12.4.13.1 Appraisal Review for Right-of-Way Acquisitions by the DBT

All necessary review appraisals shall be prepared in conformance with applicable law (including the UNIFORM Act), and in accordance with professional appraisal methods and KYTC standards for all parcels to be acquired. The DBT shall select review appraisers from KYTC's list of approved fee appraisers. KYTC will evaluate the review appraisal and issue approval or denial within 5 business days.

12.4.14 PROJECT RIGHT-OF-WAY ACQUISITIONS BY THE DBT

Acquisition Packages submitted by the DBT to KYTC will include the following items, prepared for each parcel in accordance with the requirements of this section or Right-of-Way manual:

- A. A cover sheet setting forth the following information for each parcel.
 - 1. County/State Project item number
 - 2. Parcel number and number of parts
 - 3. Name of owner
 - 4. Extent of acquisition (partial or whole acquisition)
 - 5. Type of conveyance (fee, easement, etc.)
- B. A complete legal description of the parcel adequate to effect the desired acquisition of the parcel, signed and sealed by a Registered Land Surveyor. A legal description and parcel plat is required for each parcel. Control of access shall be addressed in all legal descriptions. All descriptions shall be in recordable form and shall be prepared in a form and manner acceptable to KYTC in all respects.
- C. A title report, current within 180 Days, including copies of all documents identified in the exceptions listed therein and a plot of all easements identified therein. The Acquisition Package shall include the DBT's analysis of each preliminary title report or title commitment to determine potential problems and proposed methods to cure title deficiencies. The DBT shall perform title curative work. The DBT shall include copies of all curative documents in the Acquisition Package.
- D. A copy of the appraisal report; review appraisal report; and all supporting documentation, review, and supporting documents.
- E. A real/personal property report detailing what items making up each parcel are classified as real estate, tenant-owned improvements, or personal property. Particular attention shall be paid to items that have questionable classifications.
- F. Replacement Housing Calculations, notification of business eligibility, completed displacee

interviews, all comparables used in estimating the Replacement Housing Calculations, and letter to displacee(s) explaining Replacement Housing Calculations. Calculations and replacement housing benefit package shall be prepared and reviewed by a qualified consultant, in conformance with KYTC standard relocation procedures and State and federal laws and regulations.

G. The proposed initial offer letter, MOU, deed, and any other documents, which shall be prepared by the DBT as required.

Upon approval of the Acquisition Package from the DBT Right-of-Way AM by KYTC, the DBT may proceed with the offer to the property owner.

12.4.15 RIGHT-OF-WAY NEGOTIATIONS FOR RIGHT-OF-WAY ACQUISITIONS BY THE DBT

The DBT shall conduct all negotiations in accordance with the KYTC Right-of- Way Manual.

12.4.16 RELOCATION ASSISTANCE FOR RIGHT-OF-WAY ACQUISITIONS BY THE DBT

The DBT shall coordinate and perform the administrative requirements necessary to relocate any occupants from Project Right-of-Way. All work prepared by the DBT with respect to relocation assistance shall be performed in accordance with the KYTC Right-of-Way Manual.

KYTC will be responsible for the payment of all appropriate relocation costs for the respective parcel.

12.4.17 CLOSING SERVICES FOR RIGHT-OF-WAY ACQUISITIONS BY THE DBT

For purposes of closing services, the DBT shall:

- A. Prepare the escrow agreement and closing documents, including a closing memorandum identifying all parties involved in the closing, and listing all documents to be executed and/or delivered in connection with the closing.
- B. Select and contract with one or more attorneys that are on KYTC's Office of Legal Services statewide contract list to perform closings. Attend closings; provide curative documents and exhibits as required and in conjunction with the applicable title attorney. Confirm that all conditions to closing are satisfied.
- C. Coordinate with the applicable title attorney to obtain an updated title commitment within 24 hours prior to closing and provide an approved updated title commitment within 30 Days following closing and transmit the same to KYTC.
- D. Obtain and deliver to KYTC one certified copy of each instrument of conveyance immediately after closing to KYTC within five business days after receipt. Cause to be delivered to KYTC a copy of the recorded deed within 10 business days after the attorney receives the recorded deed.

12.4.18 CONDEMNATION FOR RIGHT-OF-WAY ACQUISITIONS BY THE DBT

When it has become apparent that the condemnation process must be utilized in order to obtain possession of a parcel the DBT shall not condemn any parcel without prior approval of the KYTC's Office of Legal Services. The DBT shall submit to the parcel owner (s) a 10-day letter notifying the property owners of the pending condemnation process.

The DBT shall be responsible for all aspects for the filing and execution of condemnation suits for the acquisition of Right-of-Way, including the preparation of all documentation required, and attorneys' expenses needed for obtaining clear title to each parcel authorized for condemnation of the Project. The DBT shall use only those attorneys that are on KYTC's Office of Legal Services statewide contract list to perform condemnation services. The KYTC Office of Legal Services reserves the right to review and

approve the condemnation package prepared by the DBT prior to the filing of a condemnation suit for eminent domain. In order to expedite review by the KYTC Office of Legal Services, the DBT shall provide the following information in the condemnation package:

- A. Approved Condemnation Pay Statement (RWUMS)
- B. Record of Contacts (RWUMS) and Correspondence (10 Day Letter, Notice of Condemnation Letter, Etc.)
- C. Notice of Proposed Acquisition Letter (Rev. 5/2017)
- D. FMV Offer to Purchase Letter (RWUMS)
- E. Approved Parcel Summary (Include all encumbrances-Item 3)
- F. (RWUMS)
- G. Appraisal Report or Approved MAR (RWUMS not more than 90 days old) with Approved MAR Range of Values and Color Photos
- H. Finalized Deed of Conveyance/Deed of Easement/Grant of Easement to KYTC prepared by Staff/Closing Attorney. (Include and attach Microsoft Word Version of Deed of Conveyance/Deed of Easement/Grant of Easement separately for OLS.)
- I. Title report (not more than 90 days old cover sheets only Source deeds not needed)
- J. (TC-11-18 Version 6/2014)
- K. Colored plan sheet(s) indicating the property to be acquired
- L. Report Form indicating all joined parties in the suit,
- M. Negotiation logs
- N. Appraisal receipt acknowledgment
- O. Pre-appraisal contact sheet
- P. Signed and sealed field notes
- Q. Bisection clause and access clause exhibits (if necessary)
- R. Final offer letter reflecting latest appraisal
- S. Proof of good faith negotiations. Submit two complete condemnation packets to the KYTC Right-of-Way Administrator.

Contract time shall not be extended due to the length of time required for acquisition of the property necessary to complete the project. The contractor shall be aware that it is possible that condemnation through eminent domain may be required and contract time will not be extended to account for condemnation suits.

The only possibilities for extension of contract time due to R/W acquisitions shall be if:

- A. KYTC withholds consent to file suit against a property owner and delays are caused to the controlling item of the critical path schedule, or
- B. A condemnation suit escalates into a "Right to Take" challenge and delays are caused to the controlling item of the critical path schedule.

In the event either of these circumstances occurs the department will consider an extension of Contract time according to section 108.07 of the Standard Specifications. Those considerations will be made based upon the date when KYTC withheld consent, or the date when a property owner files a "Right to Take" challenge.

13. UTILITIES

13.1 GENERAL REQUIREMENTS

A number of existing utilities are located within or in the vicinity of the Project Right-of- Way, some pursuant to statutory rights and some pursuant to property rights. DBTs are advised it is their responsibility to locate all utilities and take into account impacts their design creates.

This Section establishes procedures and requirements for adjusting utilities, if deemed necessary, including such processes as coordination with utility owners, administration of the engineering, construction, and other activities necessary for utility adjustments, and required documentation.

The DBT shall cause all utility adjustments necessary to accommodate construction, operation, maintenance and/or use of the project, in both its initial configuration and in its ultimate configuration. The DBT shall be responsible for preparing and executing all agreements with the utility owners impacted by the project. Some utility adjustments may be performed by the utility owner with its own forces and/or contractors and consultants (i.e., utility owner-managed); all others shall be performed by the DBT with its own forces and/or contractors and consultants (subject to any approval rights required by the utility owner for those working on its facilities) (i.e., DBT-managed). The allocation of responsibility for the utility adjustment work between DBT and the utility owners shall be specified in the Utility Agreements executed by the DBT with the respective utility owner. All costs associated with the design, right-of-way (utility easement) and relocation of utilities for this project shall be the responsibility of the DBT. The DBT shall clearly demonstrate in the schedule prepared for the project how the utility relocation work is to be accomplished. No contract time extensions shall be granted to the DBT due to relocation of utilities for the project.

The DBT's obligations regarding reimbursement to utility owners for all costs of utility adjustment work shall be as set forth in the Utility Agreements prepared for the project by the DBT and in conformance with FHWA's Program Guide for Utility Relocation and Accommodation for Federal-Aid Projects. In general, in order to facilitate the timely relocation of the utilities for the Project, KYTC has advised all respective utility companies thought to be potentially impacted by the project that the costs associated with utility relocation work shall be reimbursed to the respective utility owner by the DBT. This includes both public and private utilities. However, as per FHWA's Program Guide for Utility Relocation and Accommodation for Federal-Aid Project, any "betterments" to the utilities made as part of the relocation work are not eligible project expenses and shall not be included in the project costs. The DBT and the respective utility owner shall clearly demonstrate in the agreements prepared for the project how any "betterments" planned for the Utility facilities during the relocation work are paid for using non-project funds. The DBT shall be responsible for strictly adhering to this requirement. Should it be determined that project funds have been used for betterment of the utility facilities without prior approval by KYTC, an amount equal to the cost determined to be expended upon betterment of the utility facilities relocated for the project shall be deducted from the DBT's contract amount.

This Section does not address utility services to the project. Utility services to the project shall be the subject of separate agreements between the DBT and utility owners.

13.1.1 WHEN UTILITY ADJUSTMENT IS REQUIRED

A utility adjustment may be necessary to accommodate the project for either or both of the following reasons: (a) a physical conflict between the project and the utility; and/or (b) an incompatibility between the project and the utility based on constructability, future operation, safety, and maintenance. The

physical limits of all utility adjustments shall extend as necessary to functionally replace the existing utility, whether inside or outside of the project right-of-way. Section 13.2.4.2 contains provisions that address the acquisition of easements for utilities to be installed outside of the project right-of-way.

Utilities may remain in their existing locations within the project right-of-way if the existing location shall not adversely affect the construction, operation, safety, maintenance and/or use of the project and if the utility is not adversely affected by the project.

13.1.2 CERTAIN COMPONENTS OF THE UTILITY ADJUSTMENT WORK

13.1.2.1 Coordination

The DBT shall communicate, cooperate, and coordinate with KYTC, the utility owners, and potentially affected third parties, as necessary for performance of the utility adjustment work. The DBT shall be responsible for preparing and securing execution of all necessary agreements.

Please be advised that the utility owner, as part of the review and comment for the Utility Agreement by KYTC, shall be responsible for obtaining an Encroachment Permit for all utility relocation work to be done within the public right-of-way. The DBT shall be responsible for all coordination needed to ensure that the Encroachment Permits and any other approvals needed from the appropriate regulatory agencies are received and approved by the proper authority prior to any utility relocation work within the public right-of-way taking place.

13.1.2.2 Placement of Utilities

Longitudinal underground utilities shall not be located within the proposed roadway. When crossing the roadway, crossings shall occur perpendicular to the proposed roadway.

13.1.2.3 Flowable Fill Requirements

The DBT shall use flowable fill as the backfill media any place underground utility facilities cross under the existing or proposed roadway surfaces.

13.1.2.4 Betterments

The utility owner shall be reimbursed only for the cost of constructing the most economical type of facilities that satisfactorily meet the service requirements of the former facilities unless the utility owner specifies a lesser replacement, or if the utility owner has standards dictating larger minimums than the facilities which currently exist. Please see KYTC Policy Manuals and FHWA's Program Guide for Utility Relocation and Accommodation for Federal-Aid Projects for additional requirements in this regard.

If the utility owner proposes to include enhancements or "betterment," all costs associated with the betterment are the responsibility of the utility owner and shall not be included in the project cost. The DBT shall perform all coordination necessary to ensure that any utility betterment planned for the project by the utility owner is adequately addressed in the utility agreement and properly documented in the encroachment permit prior to beginning the relocation.

13.1.2.5 Protection in Place

The DBT shall be responsible for Protection in Place of all utilities impacted by the project as necessary for their continued safe operation and structural integrity.

13.1.2.6 Abandonment and Removal

As applicable to work being performed by the DBT, the DBT shall make all arrangements and perform all work necessary to complete each abandonment or removal (and disposal) of a utility in accordance with the approved utility agreement. The DBT shall obtain governmental approvals and consent from the affected utility owner and any affected landowner(s) or shall confirm that the utility owner has completed these tasks.

13.1.2.7 Service Lines and Utility Appurtenances

As applicable to work being performed by the DBT, whenever required to accommodate construction, operation, maintenance, and/or use of the project, the DBT shall cause Service Line Adjustments and Utility Appurtenance Adjustments. On completion of these, the DBT shall cause full reinstatement of the roadway, including reconstruction of curb, gutter, sidewalks, and landscaping, whether the utility adjustment work is performed by the Utility Owner or by the DBT.

13.1.2.8 Early Adjustments (Not Applicable)

13.1.2.9 Agreements Between the DBT and Utility Owners

Except as otherwise stated in this Section or in the Agreement, each utility adjustment shall be specifically addressed in a utility agreement. The DBT is responsible for preparing, negotiating, and obtaining execution by the utility owners, of all utility agreements (including preparing all necessary exhibits and information about the project, such as reports, plans, and surveys). A utility agreement is not required for any utility adjustment consisting solely of protection in place in the utility's original location within the project right-of-way, unless the utility owner is being reimbursed for costs incurred by it on account of such protection in place.

13.1.2.10 Utility Agreements

The DBT shall enter into one or more utility agreements with each affected utility owner to define the design, material, construction, inspection, and acceptance standards and procedures necessary to complete utility adjustments, as well as to define the DBT's and the utility owner's respective responsibilities for utility adjustment costs and utility adjustment activities such as design, material procurement, construction, inspection, and acceptance. A utility agreement may address more than one utility adjustment for the same utility owner. Additional adjustments may be added to an existing utility agreements by a utility agreement amendment.

The DBT shall prepare each utility agreement using KYTCs standard form or a similar document approved by KYTC. Promptly following issuance of a notice to proceed, the DBT shall begin negotiations with each affected utility owner to reach agreement on one or more utility agreements. The DBT shall use good faith efforts to finalize a utility agreement with each affected utility owner within a reasonable time period after issuance of NTP. Each utility agreement (including the utility adjustment plans attached thereto) shall be subject to KYTC review and comment as part of the utility agreement /encroachment permit approval process.

13.1.2.11 Utility Agreement Amendments

Modification of an executed utility agreements or any component thereof shall be addressed using a utility agreement amendment. A utility agreement amendment may be used only when the allocation of responsibility for the utility adjustment work covered by that utility agreement amendment is the same as in the underlying utility agreement; otherwise, an additional utility agreement and new encroachment permit shall be required.

Each utility agreement amendment (including any utility adjustment plans attached thereto) shall be subject to KYTC approval as an amendment to the original encroachment permit.

13.1.3 RECORDKEEPING

The DBT shall maintain construction and inspection records in order to ascertain that utility adjustment work is accomplished in accordance with the terms and in the manner proposed on the approved utility adjustment plans and otherwise as required by the applicable utility agreement(s). The DBT may use the modified KYTC Utility Relocation Progress Report.

13.2 ADMINISTRATIVE REQUIREMENTS

13.2.1 STANDARDS

All utility adjustment work shall comply with all applicable laws, agency Encroachment Permit requirements, this RFP, regulatory agency approvals, the applicable utility adjustment standards, and the requirements as set forth in the utility company standards and specifications.

13.2.2 COMMUNICATIONS

The DBT is responsible for holding meetings and otherwise communicating with each utility owner as necessary to accomplish in a timely manner the utility adjustments necessary to construct the project. KYTC will participate in these meetings if requested by the utility owner or the DBT, or otherwise as deemed appropriate in order to facilitate the progress on the project.

At least five business days in advance of each scheduled meeting, the DBT shall provide notice and an agenda for the meeting separately to KYTC and the appropriate utility owner. The DBT shall prepare minutes of all meetings with utility owners and shall keep copies of all correspondence between the DBT and any utility owner. Copies of these meeting minutes shall be forwarded to KYTC for the project files within one week following the respective meeting.

13.2.3 UTILITY ADJUSTMENT MANAGER

The DBT shall provide a utility adjustment manager with appropriate qualifications and experience for the utility adjustment work required for this project.

The utility adjustment manager's (UM) primary work responsibility shall be the performance of all the DBT's obligations with respect to utility adjustments. The UM shall be authorized by the DBT to approve all financial and technical modifications associated with utility adjustments and modifications to the utility agreement.

13.2.4 REAL PROPERTY MATTERS

The DBT shall provide the services described below in connection with existing and future occupancy of property by utilities.

13.2.4.1 Documentation of Existing Utility Property Interests

It shall be the DBT's responsibility to determine all existing utility property interest within the project right-of-way claimed by any utility owner.

13.2.4.2 Acquisition of Replacement Utility Property Interests

The DBT shall be responsible for working with each utility owner for acquiring any replacement utility property interests that are necessary for its utility adjustments. The DBT shall have the following responsibilities for each acquisition:

- A. The DBT shall coordinate with and provide all project information needed to each utility owner as necessary for the utility owner to identify any replacement utility property interests required for its utility adjustments.
- B. If the DBT and/or DBT subcontractors assists a utility owner in acquiring a replacement utility property interest, the DBT shall ensure that the following requirements are met:
 - 1. The files and records must be kept separate and apart from all acquisition files and records for the project right-of-way.
 - 2. The items used in acquisition of replacement utility property interests (e.g., appraisals, written evaluations, and owner contact reports) must be separate from the purchase of the project right-of- way.
- C. The DBT shall reimburse the utility owner for all replacement utility property interests required for its utility adjustments. No betterment in terms of property interest shall be paid for using project funds.

13.2.5 DOCUMENTATION OF REQUIREMENTS

The DBT shall prepare and obtain execution by the utility owner of (and record in the appropriate jurisdiction, if applicable), all agreements including all necessary exhibits and information concerning the project (e.g., reports, plans, and surveys). Each agreement shall identify the subject utility(ies) by the applicable Encroachment Permit Number and shall also identify any real property interests by parcel number or highway station number or by other identification acceptable to KYTC.

13.3 DESIGN

13.3.1 DBT'S RESPONSIBILITY FOR UTILITY IDENTIFICATION

The DBT bears sole responsibility for ascertaining, at its own expense, all pertinent details of utilities located within the project right-of-way or otherwise affected by the project, whether located on private property or within an existing public right- of-way, and including all service lines.

13.3.2 TECHNICAL CRITERIA AND PERFORMANCE STANDARDS

All design plans for utility adjustment work, whether furnished by the DBT or by the utility owner, shall be consistent and compatible with the following:

- A. The project as designed and constructed
- B. Any utilities remaining in, or being installed in, the same vicinity
- C. All applicable governmental approvals/permits
- D. Private approvals of any third parties necessary for such work
- E. KYTC Policies and Procedures as set forth in Kentucky's State Utility and Rail Guidance Manual and as specified in the approved utility agreement.

The DBT shall be responsible for validating that all utility adjustments performed as part of this project adhere to these criteria.

13.3.3 UTILITY ADJUSTMENT PLANS

Utility adjustment plans, whether furnished by the DBT or by the utility owner, shall be signed and sealed by a registered Professional Engineer (PE), if required by the utility owner, regulatory agencies, or KYTC.

13.3.3.1 Plans Prepared by DBT

Where the DBT and the utility owner have agreed that the DBT shall furnish a utility adjustment design, the DBT shall prepare and obtain the utility owner's approval of plans, specifications, and cost estimates for the utility adjustment (collectively, "Utility Adjustment Plans") by having an authorized representative of the utility owner sign the plans as "reviewed and approved for construction." The Utility Adjustment Plans (as approved by the utility owner) shall be attached to the applicable utility agreement and estimate, which shall serve as the appropriate Encroachment Permit application submitted for KYTC approval. Please be advised that the utility company is ultimately responsible for execution of the utility agreement, regardless of who prepares the plans. The DBT is responsible for facilitating this process in a manner such that all requirements are adequately addressed and commitments fulfilled in accordance with all provisions set forth in the contract documents.

Unless otherwise specified in the applicable utility agreement(s), all changes to utility adjustment plans previously approved by the utility owner (excluding estimates, if the utility owner is not responsible for any costs) shall require written utility owner approval. The DBT shall transmit any KYTC comments to the utility owner and shall coordinate any modification, re-approval by the utility owner, and re-submittal to KYTC as necessary to obtain KYTC approval, as applicable.

13.3.3.2 Plans Prepared by the Utility Owner

For all Utility Adjustment Plans to be furnished by a utility owner, the DBT shall coordinate with the utility owner as necessary to confirm compliance with the project plans, including possible changes being proposed by the DBT. Those utility adjustment plans shall be attached to the applicable utility agreement and estimate, which shall serve as the appropriate Encroachment Permit for KYTC approval. The DBT shall be responsible for coordination with the utility company to ensure that all KYTC comments to the utility owner are adequately addressed in the design and construction of the project, including, any modification, re-approval by the utility owner and re-submittal to KYTC as necessary to obtain KYTC approval.

13.3.3.3 Design Documents

Each proposed utility adjustment shall be shown in the design documents, regardless of whether the utility adjustment plans are prepared by the DBT or by the utility owner.

13.3.3.4 Certain Requirements for Underground Utilities

Casing or long-life materials as specified in accordance with the KYTC Permits Manual and the KYTC Utilities Manual shall be required for use on the project, where applicable.

13.3.3.5 Utility Agreement Submittals

Each utility adjustment shall be addressed in a utility agreement prepared jointly by the DBT and the utility owner and submitted to KYTC for review and comment. The DBT shall coordinate with the utility owner to prepare all components of each utility agreement. Completion of the review and approval process for the applicable utility agreement, as well as issuance of any required KYTC approvals, shall be required before the start of construction for the affected utility adjustment work.

In its sole discretion, KYTC has the authority to approve the placement of utilities within project right-of-way. It shall be the responsibility of the DBT to work with the utility owner to prepare all required documentation to be included with each subsequent utility agreement submittal.

The DBT shall arrange for the utility owner to execute each utility agreement and subsequent Encroachment Permit required to do the work on the Project.

Provisions governing the procedure for and timing of utility agreement submittals are in Section 13.5 (Deliverables).

All utility adjustments covered by the same initial utility agreement may be addressed in a single Encroachment Permit. Please refer to the KYTC Encroachment Permit Manual for additional information. In general, the utility agreement package required for each utility relocation shall include:

Encroachment Permit application (KYTC).

- A. Utility agreement (executed between the DBT and the Utility Owner).
- B. Utility adjustment plans and specifications as referenced in the utility agreement.
- C. Roadway plans and profile and/or structure plans and X- sections clearly indicating existing and proposed utility location. For utilities deemed acceptable to remain in place by the utility owner and the DBT, the location of the utility, both horizontally and vertically, along with any special construction requirements or protection needed to prevent damage to the facility during construction of the project, must be clearly defined.
- D. Utility relocation cost estimate as defined in the utility agreement including definition and separation of any betterment proposed.
- E. Six complete utility agreement packages as described herein or as directed by KYTC. Once review and comment is complete, three copies shall be returned to the DBT and utility company for their use.

13.4 CONSTRUCTION

13.4.1 GENERAL CONSTRUCTION CRITERIA

All utility adjustment construction performed by the DBT shall conform to the requirements listed below. In addition, the DBT is responsible for verifying that all utility adjustment construction performed by each utility owner conforms to the requirements described below. In case of nonconformance, the DBT shall cause the utility owner (and/or its contractors, as applicable) to complete all necessary corrective work or to otherwise take such steps as are necessary to conform to these requirements.

- A. All criteria identified in Section 13.3 (DESIGN).
- B. The utility adjustment plans and agency requirements included in the Encroachment Permit approved by KYTC.
- C. Approved utility agreement amendments.
- D. All project safety and environmental requirements.
- E. Erosion prevention and sediment control requirements.
- F. Easement acquisition procedures.

13.4.2 INSPECTION OF UTILITY OWNERS' CONSTRUCTION

The DBT shall set forth procedures for inspection of all utility adjustment work performed by utility owners (and/or their contractors) to verify compliance with the applicable requirements described in <u>Section</u> 13.4.1 (General Construction Criteria). The inspection shall validate that the utility work adheres to the

<u>above criteria</u>, is as <u>designed</u>, and <u>conforms to the approved</u> utility agreement and any approved amendments. The DBT should be aware utility facility owners may require a representative from the company to inspect the work performed on that company's facilities during active construction.

13.4.3 SCHEDULE UTILITY ADJUSTMENT WORK

The utility adjustment work (other than construction) may begin at any time following issuance of an encroachment permit number. The DBT should be aware there may be seasonal restrictions on utility outages. No time extensions will be granted for any utility company restrictions. The DBT shall not arrange for any utility owner to begin any demolition, removal, or other construction work for any utility adjustment until all of the following conditions are satisfied:

- A. The utility adjustment is covered by an executed utility agreement (and any conditions to commencement of such activities that are included in the utility agreement have been satisfied);
- B. Availability and access to affected replacement utility property interests or public right-of-way have been obtained.
- C. If any part of the construction work for the utility adjustment shall affect the project right-of-way, then approvals from the KYTC shall be received.
- D. The review and comment process has been completed and required approvals have been obtained for the Encroachment Permit covering the utility adjustment.
- E. All governmental and permitting approvals necessary for the utility adjustment construction have been obtained, and any pre-construction requirements contained in those approvals have been satisfied.
- F. The DBT has verified that all utility adjustments address the project needs and are not in conflict with one another.
- G. The DBT has conducted a preconstruction joint utility meeting to schedule and plan all utility owner adjustments. KYTC shall be invited to attend this meeting.
- H. All other conditions to that work stated in the RFP have been satisfied.

Any delays incurred due to utility relocation work on the project are the responsibility of the DBT. This shall include delays incurred due to utility relocations and unforeseen utility repairs. The DBT shall be responsible for direct coordination with all utility companies involved in the project. The DBT will have to coordinate and work in conjunction with any utility owner, no matter if the DBT is physically relocating features for that utility owner or not. In addition, it may be necessary to phase work to avoid active utilities that ultimately become inactive. Relocation of those utilities that will ultimately become inactive may either be performed by the DBT, or the relocation may need to be performed by the utility owner. Other than utility relocation costs contained in the lump sum bid amount for the project, KYTC will not provide any additional monetary compensation or time extensions for delays caused during the relocation of any utility.

13.4.4 STANDARD OF CARE REGARDING UTILITIES

The DBT shall carefully and skillfully carry out all work impacting utilities and shall mark, support, secure, exercise care, and otherwise act to avoid damage to utilities. At the completion of the work, the condition of all utilities shall be equivalent to their use and function prior to construction.

13.4.5 EMERGENCY PROCEDURES

The DBT shall provide emergency procedures with respect to utility adjustment work. The DBT shall obtain emergency contact information from, and establish emergency procedures with, each utility owner.

13.4.6 UTILITY ADJUSTMENT FIELD MODIFICATIONS

The DBT shall establish a procedure to be followed if a utility adjustment field modification is proposed by either the DBT or a utility owner, after the utility agreement (which includes the utility adjustment plans) has been approved. The procedure shall contain, at minimum, the following processes:

- A. The utility owner's review and approval of a utility adjustment field modification proposed by the DBT, or the DBT's review and approval of a utility adjustment field modification proposed by the Utility Owner.
- B. Submittal of plans for the proposed utility adjustment field modification to KYTC for its approval.
- C. Transmittal of utility adjustment field modifications to the appropriate construction field personnel.
- D. Inclusion of any utility adjustment field modifications in the record drawings for the Project.

The DBT shall cause the procedure to be followed for all utility adjustment field modifications, whether the construction is performed by the DBT or by the utility owner.

13.4.7 SWITCHOVER TO NEW FACILITIES

After a newly adjusted utility has been accepted by the utility owner and is otherwise ready to be placed in service, the DBT shall coordinate with the utility owner regarding the procedure and timing for placing the newly adjusted utility into service and terminating service at the utility being replaced. The DBT should be aware there may be seasonal restrictions on utility outages. No time extensions will be granted for any utility company restrictions.

13.4.8 RECORD DRAWINGS

The DBT shall provide record drawings to each utility owner for utilities adjusted by the DBT, in accordance with the applicable utility agreement(s).

The DBT shall provide As-Built Record Drawings to KYTC (regardless of whether design and/or construction of the subject utilities was furnished or performed by the DBT or by the utility owner). These drawings shall show the location of, and label as such, all abandoned utilities and shall show and label all other utilities, whether remaining in place or relocated, located within the project right-of-way, or otherwise impacted by the project. The DBT shall provide the record drawings for each adjustment to KYTC not later than 90 days after the utility owner accepts the adjustment.

13.4.9 MAINTENANCE OF UTILITY SERVICE

All utilities shall remain fully operational during all phases of construction, except as specifically allowed and approved in writing by the utility owner. The DBT shall schedule utility adjustment work in order to minimize any interruption of service, while at the same time meeting the project schedule and taking into consideration seasonal demands. Again, the DBT should be aware there may be seasonal restrictions on utility outages. No time extensions will be granted for any utility company restrictions.

Any intentional or accidental disruption of service due to damage to gas, sewer, or water mains caused by any of the DBT's operations without three days advance notice to the utility facility owner shall be cause for liquidated damages in the amount of five thousand dollars per day (\$5,000//day) per occurrence against the DBT until such a time as the utility facility is restored.

Any intentional or accidental disruption of any individual gas, sewer, or water service caused by any of the DBT's operations without three days advance notice to the utility facility owner shall be cause for

liquidated damages in the amount of five hundred dollars per day (\$500/day) per occurrence against the contractor until such a time as service is restored.

In the case of a main disruption, liquidated damages shall be charged at the main disruption rate only. Liquidated damages shall not be charged in addition to service disruptions when a main disruption is involved.

Any cost associated with damage during construction shall be the responsibility of the DBT.

13.4.10 TRAFFIC CONTROL

The DBT shall be responsible for the coordination of all traffic control made necessary by the utility adjustment work, whether performed by the DBT or by the utility owner. Traffic control for utility adjustments shall be coordinated with, and subject to approval by, the local agency(ies) with jurisdiction. Traffic control shall comply with the guidelines of the MUTCD and of Section 10.4 (Maintenance of Traffic) of this RFP document. Delegation of responsibilities regarding who performs the traffic control operations during the utility adjustment work shall be included in the utility agreement.

13.4.11 UNKNOWN UTILITIES

If during construction, the DBT uncovers a utility facility that the respective utility company did not know existed, the DBT is to bring this to KYTC's attention immediately. KYTC will review the situation with the respective utility company and the DBT to determine the best course of action to minimize impacts to the utility facility and the project schedule. If it is determined by KYTC that establishing the presence of the unknown utility was not possible by the DBT during the procurement phase, KYTC will consider this a changed condition and work with the DBT and the utility company to make the appropriate adjustments for cost as part of a change order. The project schedule shall only be revised if it can be demonstrated to the satisfaction of the KYTC that the unknown utility conflict has materially affected the critical path for the project.

The DBT shall follow the procedures for extra work/change orders identified in Sections 104.02 (Alterations of Plans or Character of Work), 108.07 (Determination and Extension of Contract Time), and 109.04 (Extra Work) of the Standard Specifications.

13.5 DELIVERABLES

The DBT shall provide all submittals described in this section to meet the project schedule, taking into account KYTC-designated review and response time. For this Project, KYTC requires 10 business days for review, comment, or approval of Encroachment Permits, provided that all required documentation is included with the Encroachment Permit submittal. At the sole discretion of KYTC, if it is determined that additional information is required in order to review and process the Encroachment Permit for approval, the DBT shall revise the encroachment permit application to include the required revisions or missing information as identified by KYTC, and said agency shall have 10 business days from the date of resubmittal for review and comment.

13.5.1 DBT'S UTILITY TRACKING REPORT AND PROJECT COORDINATION REQUIREMENTS

The DBT shall maintain a utility tracking report in tabular form, listing all utilities located within the project right-of-way or otherwise potentially affected by the project. The utility tracking report shall include sufficient information regarding all factors needed to reasonably determine the status of each utility to be relocated as part of the project. The DBT shall submit the utility tracking report to KYTC and update it

monthly. The DBT shall facilitate, at a minimum, monthly utility company status meetings to discuss any project issues and to update KYTC on the progress being made on the project.

13.5.2 UTILITY COMPANY CONTACTS

See Appendix J

14. PLAN SUBMITTALS AND REVIEW REQUIREMENTS

14.1 QUALITY CONTROL

The DBT, upon selection by the Awards Committee, shall be responsible for the professional quality, technical accuracy and adherence to the Governing Regulations listed in Section 8.1 of this document, for all plan submittals required under this contract.

The DBT shall immediately notify the Department of any apparent discrepancy between the various design and construction manuals and the Conceptual Documents.

Unless stated otherwise, review comments do not revise the scope or intent of the project and do not constitute a request for changes beyond the current contracted Scope of Services.

In the event the Department determines that any required submission is incomplete, contains inaccuracies which preclude a meaningful review, or does not adhere to the Governing Regulations listed in Section 8.1 of this document, the Department will advise the DBT of the short comings and direct the DBT to revise and resubmit the plan. No time extension shall be granted as a result of such action. The Department will schedule a review meeting or issue review comments as appropriate.

In the event the DBT believes that any review comment, or orders issued by the Department, require a change to the scope of the agreed work, the DBT shall first contact the Department for clarification and shall, within 10 days of receipt of the comments or orders, provide written notice to the District Project Manager and Project Engineer concerning the reasons why the DBT believes the scope has been changed.

14.2 MAJOR DESIGN DECISION

Separate submittals for concurrence with major design decisions are required. Major design decisions involve significant utility relocation, unforeseen acquisition of ROW, traffic operation or geometric decisions that involve two or more viable solutions, and any other decision that impacts the public, operation of the facility or future maintenance.

When the DBT becomes aware of additional decisions during the course of the design, they shall advise KYTC's Project Manager in writing.

14.3 FINAL PLANS IN HAND REVIEW SUBMISSION

For each Buildable Unit the Consultant shall submit Final Plans In Hand detailed design plans as per the KYTC Design Manual for review. All submissions shall be shown on the required Progress Schedule. The Department shall have 14 calendar days from receipt to review complete submissions. This review time shall be shown on the required Progress Schedule. Following the review, the Department will return to the DBT marked plans noted 'ACCEPTED', 'ACCEPTED AS NOTED' or 'NOT ACCEPTED'. The DBT shall correct errors, incorporate changes, perform investigations and make related changes to the plans and supporting documents prior to submitting construction plans.

The DBT shall supply half-size (11" x 17") paper prints simultaneously to the parties indicated below along with an electronic PDF version. Each affected utility company shall receive one half-size (11" x 17") set of plans.

Plans Distribution Table	Number of Half Size Sets
KYTC District Office with PDFs on CDs	2
KYTC Central Office	1

14.4 CONSTRUCTION PLANS

After the review comments for the final plan review submission have been complied with, and following approval of the design documentation, the DBT shall prepare plan sets for use during construction. All review comments shall be resolved in writing by the DBT to satisfaction of the Department before DBT submits the construction plans. Each plan sheet shall have its last revised date noted on the sheet and clearly marked 'Approved For Construction'. Physical construction shall not begin until the plans marked 'Approved For Construction' (by the Project Manager) are delivered to each party on the Plan Distribution Table below. KYTC will comment on these plans within 14 working days of their submission by the Project Manager. No time extensions will be approved by the Project Manager if the plan distribution is not completed and project delays occur as a result.

The DBT shall supply full size (22"x35") and/or half size (11"x17") paper prints and electronic pdf version of each plan submission simultaneously to the parties indicated below:

Plans Distribution Table	Number of Half Size Sets
KYTC District Office	4
KYTC Central Office	2

15. INDEX OF ATTACHMENTS

Appendix A: Form A for SOQ Submittal

Appendix B: DBE Conditions

Appendix C: EEO / Wage Rates / Insurance / FHWA 1273 / Ethics Appendix D: Interchange

Justification Study

Appendix E: Typical Sections Appendix F: CPM Note

Appendix G: Environmental Document (CE-3) Appendix H: Special Note for Erosion Control
Appendix I: Right of Way Project Report (Form TC 62-75) Appendix J: Utility Company Contacts

Appendix K: MSE Wall Special Note

Appendix L: Special Note for Cement Stabilized Roadbed Appendix M Special Note for Inlaid Pavement Markers

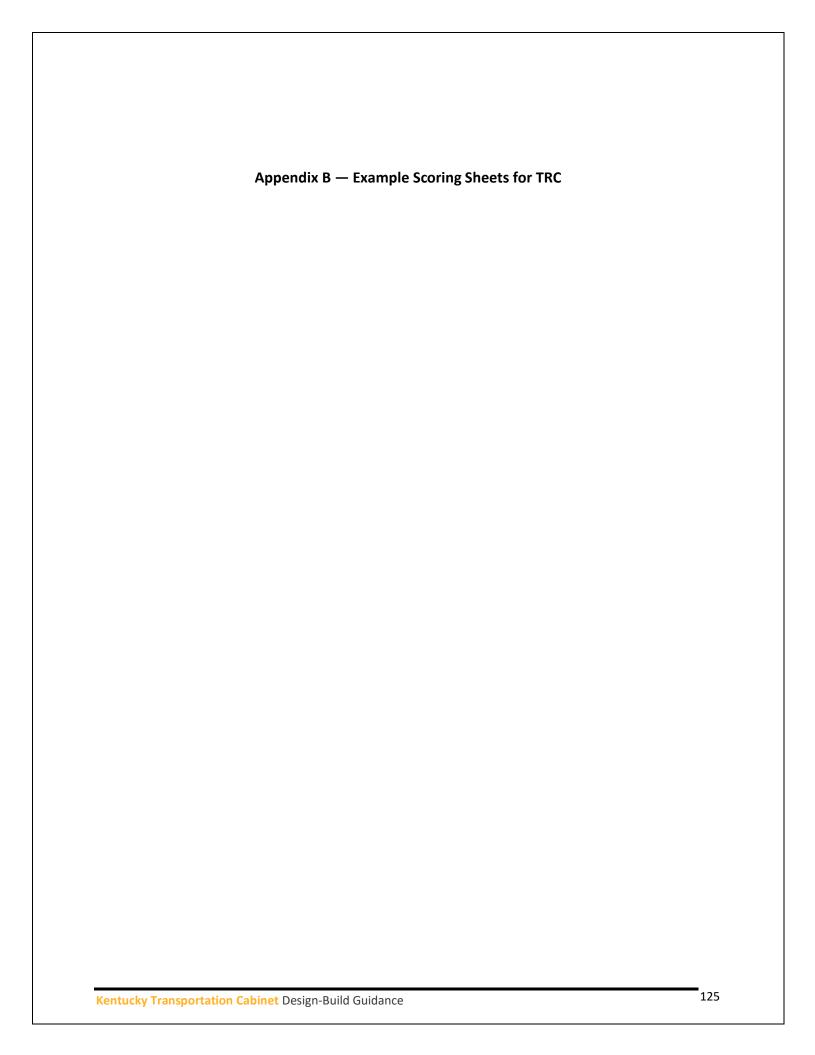
Appendix N: Traffic Data

Appendix O: Form "PP" – Price Proposal Appendix P: Documents for Bid

Appendix Q: Acknowledgement of Receipt of Proposal Addenda (Form "AOR") Appendix R:

Geometric Criteria

Appendix S: Construction Special Notes



Part A - Project Schedule, Organization and Management (XX Points) 7.5 A.2 <u>A</u> Project Management Plan Component DBT Experience on projects of similar complexity Project Schedule, Completion Date & Organization Part A - Total Score = Max Points ≋ ≋ ≋ Score Example Score Sheet for Technical Review Committee Notes Score DBT #2 Notes Score DBT #3

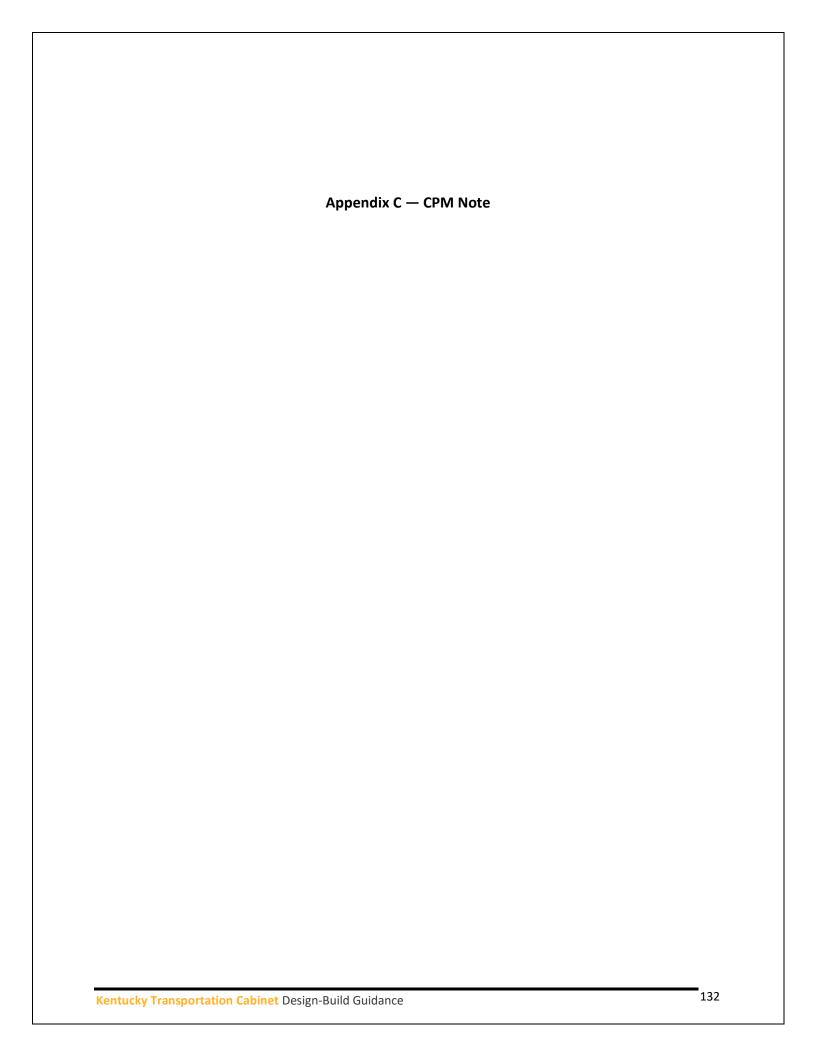
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Part E - Construction includes Construction Management Plan, Quality Plan and Safety Plan (XX Points) **E** \square E Ш Component Construction
Component #4 Construction
Component #3 Construction
Component #2 Construction
Component #1 Part E - Total Score = Max Points ≋ ≋ ⋈ ≋ Score Notes Score DBT #2 Notes Score DBT #3 Notes

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Part G-	DBE Statement	Component	Part G - DBE Plan (Pass/Fail)	Part F-	Utility Coordination/ Relocation Plan	Component	F - Utility Co
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SPECIAL NOTE FOR CPM SCHEDULE

1.1 Section Outline

- 1. Quality Assurance
- 2. Interim Baseline and Baseline Schedules
- 3. Monthly Progress Update Schedules
- 4. Buildable Unit Phase Submission Schedules
- 5. Revision and Delay Schedules
- 6. Weather Delay Schedules
- 7. Recovery Schedules
- 8. Float

1.2 Quality Assurance

The DBT shall designate a Schedule Representative at the preconstruction conference who shall be responsible for coordinating with the Engineer during the preparation and maintenance of the schedule. The DBT Schedule Representative should have experience in using and monitoring CPM schedules on projects with comparable complexity to this Project.

1.3 Interim Baseline and Baseline Schedules

A. Definitions:

- 1. **Baseline Schedule:** The Baseline represents the contractor's intended/bid plan for prosecuting the work depicted in the contract documents/scope, at the time of bid. The baseline is the reference to which actual progress, delays, and/or acceleration will be compared. The baseline is intended to be a predictive tool to be used during the course of construction to plan the project.
- 2. Interim Baseline Schedule: The Interim Baseline Schedule represents the first 90 calendar days of the contractor's intended/bid plan for prosecuting the work depicted in the contract documents/scope, at the time of bid. The Interim Baseline Schedule acts as a short term planning and schedule monitoring tool while the full baseline schedule is being developed.

B. Schedule Levels

- 1. For the purposes of this specification, Schedule Levels shall be defined as follows:
 - i. Level 1 The Project Level: includes the project name.
 - ii. Level 2 The Work Breakdown Level: Includes each Buildable Unit or element of the project.
 - iii. Level 3 Work Element Level: Includes high level activities for each buildable unit or element of work. Examples include: Perform Excavation, Install Footings, Install Piers, Install Structure, Place Deck, etc. Level 3 activities are not required to comply with the 20day maximum duration requirement of this specification.
 - iv. Level 4 The Activity Level: Further details the Level 3 activities for each buildable unit to discrete and measurable activities. Examples related to a Level 3 "Install Footing" activity would include Excavate Footing, Install Formwork, Reinforce Footing, Place Concrete, Cure Footing, and Strip Formwork. Level 4 activities shall comply with the 20- day maximum duration prescribed by this specification.

C. Interim and Full Baseline Development Overview:

1. Interim and/or Full Baseline Submission

- i. The Contractor may elect to submit an Interim Baseline depicting the first 90 calendar days of work, or a Full Baseline Schedule depicting the work for the entire project.
- ii. The Interim and/or the Full Baseline shall include the phases as described in sections ii and iii below.

2. Design Phase

- i. For the Interim and Full Baseline, the design phase shall be a Level 4 schedule per section 1.3.B.1.iv.
- ii. The schedule shall include all phase submissions according to the scope of work, along with all applicable review times.

3. Construction Phase

- i. For the Interim Baseline, activities outside of the first 90 days shall show Level 2 activities, per section 1.3.B.1.ii, summarizing major elements and buildable units of work.
- ii. For the Interim and Full Baseline, any construction activities occurring within the first 90 days of the project shall be detailed to Level 4 and comply with the specifications beginning at 1.3.E.
- iii. For the Full Baseline, all construction activities occurring outside of the first 90 days and where there are no "Released for Construction (RFC) plans shall be detailed to Level 3 and comply with the specifications beginning at 1.3.E.

D. Interim and Full Baseline Workflow

1. Interim Baseline

- The interim baseline shall include the design phase as indicated in section 1.3.C.2 Design Phase
- ii. Construction Phase work shall be included as indicated in section 1.3.C.3 Construction Phase.
- iii. Revisions to the interim baseline will not be permitted after Acceptance that affect the Activity ID's, Activity Descriptions, Relationships, or Durations.
- iv. Once "Accepted" the interim baseline shall be updated as per Section 1.4 with actual progress up to the point that the Full Baseline is "Accepted".
- v. Time impacts or weather shall be applied to the Interim Baseline as per Sections 1.6 and 1.7, once "Accepted", until after the Full Baseline is "Accepted".

2. Full Baseline

- i. The Full Baseline Schedule shall be developed according to Section 1.3.C.2 and 1.3.C.3.
- ii. The Full Baseline shall include the "Accepted" Interim Baseline and shall be a continuation of the logic and plan developed in the interim phase.
- iii. Any changes made to the Interim Baseline and included in the Full Baseline will be grounds for immediate rejection.
- iv. The Full Baseline shall not include any impacts or updates known at the time of submission. Any/all impacts are to be strictly contained within the Interim Schedule until the Full Baseline Schedule is "Accepted".
- v. Upon Acceptance of the Full Baseline, all Accepted updates applied to the Interim Schedule shall be incorporated into the first full Schedule Update.
- vi. Upon Acceptance of the Full Baseline, any/all known impacts shall be incorporated into the schedule and the use of the Interim Schedule shall be discontinued.

E. Setup and Format for Interim and Baseline Schedules

1. General Requirements

- i. The Contractor shall be responsible for assuring all work, including all subcontractor work, is included in the schedule.
- ii. The Contractor shall be responsible for assuring that all work sequences are logical and that the schedule indicates a coordinated plan.
- iii. Show the order and interdependence of activities, with the use of appropriate activity relationships, and the sequence for accomplishing the work.
- iv. Where Level 3 detail is required (see section 1.3.B.1.iii), describe buildable units of the project in enough detail to provide a general overall duration and sequence of the buildable unit. Provide logic indicating required interdependencies with other buildable units or other required work such as, but not limited to, utility work.
- v. Where Level 4 detail is required (see section 1.3.B.1.iv), all Level 3 elements shall be broken down into measurable activities which can be identified and tracked by the Department or their Representative.
- vi. The contractor shall provide for and coordinate independent utility work, and/or work provided "by others" into the CPM schedule in such a way as to minimize rework, minimize additional protection of previously installed work, and in an effort to mitigate delays.
- vii. Failure by the Contractor to include any element of work required for performance of the Contract shall not excuse the Contractor from completing all work within the required time.
- viii. Acceptance by KYTC or their Representative will not relieve the Contractor of any of their responsibilities for the accuracy or feasibility of the schedule.
- ix. Omissions and errors will be corrected as described in Section 1.6 in this specification and will not affect contract time.

2. General Settings

- i. Calculate the critical path as "longest path"
- ii. The schedule may only be calculated using retained logic
- iii. Show open ends as non-critical
- iv. Total float shall be calculated as finish float
- v. Ignore relationships to and from other projects
- vi. Use "Duration" as the activity percent complete type

3. Calendars

- i. All calendars shall be Project level calendars, not Global or Resource calendars.
- ii. Calendar names should include the KYTC Contract ID number and a describing function (i.e. 20XXXX - 5 day w/ holidays and weather, 20XXXX - 7 day cure, 20XXXX - 5 day asphalt w/ weather).
- iii. At a minimum, calendars should be established for KYTC reviews, standard work week, cure/settlement periods, milestones, and any items with temperature restrictions as per the specifications.
- iv. Seasonal (winter) and environmental shutdown periods shall be shown using non-working calendars.
- v. Weather and Seasonal Conditions shall be entered into all calendars containing physical work as non-work days per month and anticipated days lost due to weather should be reasonably distributed throughout each calendar containing physical work.

- vi. All project milestones shall be on a 7 day/week calendar with no non-work days.
- vii. All review periods for KYTC shall be included on a designated calendar of 5 days/week and shall include typical government holidays.
- viii. Anticipated weather and/or shutdown periods shall not be included for any days past the contract completion date. In the event the contract completion date is amended to a later date, weather days will be granted on a day for day basis pending an Accepted Weather Delay Analysis according to section 1.7.

4. Work Breakdown Structure / Activity Codes

- i. The contractor shall provide an organizational structure consisting of a Work Area, Phase, and Responsibility (at a minimum).
- ii. The structure shall be formed using Project Activity Codes.
- iii. A WBS structure may be used, but shall still include the activity codes as indicated above.

5. Constraints

- i. Use constraints sparingly in the schedule. Constraints should only be used for contractual milestones such as the start, interim completion dates, and the finish date.
- ii. Constraints should never be used in place of relationship ties. Activities should be split, if necessary, to create logical ties in lieu of constraining activities.
- iii. The Start and Finish Milestones may contain mandatory start and finish constraints respectively.
- iv. Interim Milestones should use only Early or Late Constraints.

6. Milestones

- i. Start Project: The Contractor shall include as the first milestone in the schedule, a milestone named "Start Project". The date used for this milestone is the date the Notice to Proceed is issued by KYTC and shall be constrained to Start On said date.
- ii. End Project Milestone: The Contractor shall include as the last activity in the project schedule, a milestone named "End Project". The date used for this milestone is considered the project completion date and shall be constrained to Finish On or Before said date.
- iii. Start Phase Milestone: The Contractor shall include as the first activity for a project phase, an activity named "Start Phase X", where "X" identifies the phase of work.
- iv. Start Buildable Unit Milestone: The Contractor shall include as the first activity for a buildable unit, an activity named "Start BU X", where "X" identifies the Buildable Unit.
- v. End Phase Milestone: The Contractor shall include as the last activity in a project phase, an activity named "End Phase X" where "X" identifies the phase of work, and shall be tied as the predecessor to the Start of the next plan phase milestone.
- vi. End Buildable Unit Milestone: The Contractor shall include as the last activity in a buildable unit, an activity named "End BU X" where "X" identifies the buildable unit.
- vii. The Contractor may include additional milestones but, as a minimum, shall include all contractual milestones. Milestones added by the contractor, but that are not contractual milestones may be tied via activity logic to other activities but cannot be constrained.

7. Activities

 Level 3 Activities shall be included in sufficient detail to represent the contract scope of work and provide for logical sequencing of major work elements of buildable units and demonstrate a logical, reasonable, workable plan to complete the work on or before the

- contract completion date.
- ii. Level 4 Activities shall be included in sufficient and traceable detail to indicate the plan for constructing the major work elements within the buildable unit. The activities shall comply with the scope, specifications, and any/all other contract requirements required to construct the project.
- iii. Activity Identification (ID). Assign each activity a unique identification number. Activity ID length shall not be less than 4 characters nor exceed 10 characters. Once accepted, the Activity ID shall be used for the duration of the project.
- iv. Activity Description. Each activity shall have a narrative description consisting of a verb or work function (e.g.; form, pour, excavate) and an object (e.g.; slab, footing, underdrain).
- v. Assign a planned duration in working days for each activity.
- vi. Assign an appropriate project calendar to each activity in the schedule.
- vii. Include activities for submittals, working drawings, shop drawing preparation, material procurement and fabrication, delivery of materials, plant, and equipment, long lead items and other similar activities.
- viii. Include review activities by KYTC or their Representatives with a duration of not less than 10 business days on a calendar containing typical government holidays.
- ix. Do not exceed a duration of 20 working days for any construction activity except as follows:
 - 1. Level 3 activities
 - 2. Settlement Periods
 - 3. Long Lead Items
 - 4. Fabrication Items
 - 5. Shop drawing preparation
 - 6. Other items upon Acceptance from KYTC or their Representative.
- x. Do not represent the maintenance of traffic, erosion control, or any other similar items as single activities extending to the Completion Date. Break these Contract Items into component activities such as initial setup, and/or tear down in order to meet the duration requirements of this section.
- xi. Include activities such as cure times and/or settlement periods as per the applicable specifications.

8. Activity Relationships and Logic

- i. All activities, except the first activity, shall have a predecessor(s).
- ii. All activities, except the final activity, shall have a successor(s).
- iii. Use only finish-to-start relationships with no leads or lags to link activities, or use start-to-start relationships with lags no greater than the predecessor duration to link activities.
- iv. Use of finish-to-finish relationship is required when both activities are already linked with a start-to-start relationship.

9. Lag

- i. The use of lag is discouraged and should be used sparingly. Split activities into initial and final stages with appropriate durations to create logical link points in lieu of using lag.
- ii. Lead is not permitted.
- iii. Use lags no greater than the predecessor duration.

10. Level of Effort Activities

i. Use level of effort activities to show the duration of specified contract work periods,

- phases and road closures.
- ii. The level of effort activity type is allowed to have a start-to-start relationship with the first activity in a series of activities and a finish-to-finish relationship with the last activity in a series of activities.
- iii. Level of Effort activities shall be included to summarize the overall duration of each buildable unit or division of work for both Level 3 and Level 4 schedules. The LOE activities shall be tied with a SS relationship to the "Start BU X" milestone and as a FF to the "End BU X" milestone.

F. Submission Requirements:

- 1. Interim Baseline Schedule Submission:
 - i. At the pre-construction meeting, a formal schedule presentation will be conducted by the contractor describing the elements of the Scope of Work as depicted by the schedule in terms of the design, logic, phasing, milestones, closures, and utilities/relocations.
 - ii. No physical work shall commence prior to "Acceptance" of an interim baseline or the full baseline schedule.
 - iii. Submit per section 1.3.F.3 (General Requirements); additionally, 11x17 schedule hard copies and 8.5x11 copies of the narrative shall be provided and distributed by the contractor at the pre-construction meeting.

2. Baseline Schedule Submission:

- i. If an interim is waived by the contractor the Full Baseline shall be submitted no later than the pre-construction meeting. At the pre-construction meeting, a formal schedule presentation will be conducted by the contractor describing the elements of the Scope of Work as depicted by the schedule in terms of the design, logic, phasing, milestones, closures, and utilities/relocations.
- ii. OR; no later than 45 calendar days from the submission of an interim schedule.
- iii. No physical work shall commence prior to "Acceptance" of an interim baseline or the full baseline schedule.
- iv. Submit per section 1.3.F.3 (General Requirements).

3. General Requirements

- i. Submit all schedules within the time frames specified.
- ii. Provide an electronic .mpp file (actual format to be determined by the Engineer) compatible with Microsoft Project.
- iii. Provide an electronic .pdf print out of the full schedule, displaying the Gantt Chart, Activity ID, Activity Description, Original Duration, Start Date, Finish Date, and Total Float.
- iv. Provide a written schedule narrative in .pdf format describing the following:
 - 1. Current schedule interim milestone dates and completion dates
 - 2. A general description of the critical path
 - 3. Current Delays
 - 4. Anticipated Delays
- v. Name the .mpp file as follows:

Table 1 Schedule Filename	Convention			
Progress Schedule	1st Submission	2nd Submission	3rd Submission	
Interim Schedule	20XXXX 01IS	20XXXX 02IS	20XXXX 03IS	

20XXXX _01B	20XXXX _02B	20XXXX _03B
20XXXX _01SU01	20XXXX _02SU01	20XXXX _02SU01
20XXXX _01SU02	20XXXX _02SU02	20XXXX _03SU02
20XXXX _01TIA01	20XXXX _02TIA01	20XXXX _03TIA01
20XXXX _01WD01	20XXXX _02WD01	20XXXX _03WD01
20XXXX _01RS01	20XXXX _02RS01	20XXXX _03RS01
20XXXX _01RV01	20XXXX _02RV01	20XXXX _03RV01
20XXXX _01BU01	20XXXX _02BU01	20XXXX _03BU01
	20XXXX _01SU01 20XXXX _01SU02 20XXXX _01TIA01 20XXXX _01WD01 20XXXX _01RS01 20XXXX _01RV01	20XXXX 01SU01 20XXXX 02SU01 20XXXX 01SU02 20XXXX 02SU02 20XXXX 01TIA01 20XXXX 02TIA01 20XXXX 01WD01 20XXXX 02WD01 20XXXX 01RS01 20XXXX 02RS01 20XXXX 01RV01 20XXXX 02RV01

Note: 20XXXX is the Contract ID Number

G. Interim Baseline and Baseline Review

1. Interim Baseline Review

- The interim baseline schedule will be presented by the contractor, as a formal presentation, at the pre-construction meeting and will be discussed as a part of said meeting.
- ii. The interim schedule will be Accepted or rejected by the Department within 14 calendar days. Upon Acceptance, the interim schedule data shall not be changed with the submission of the full baseline schedule.
- iii. If the schedule is rejected the contractor shall revise the schedule and resubmit within 7 calendar days. The re-submission of the schedule shall occur at a schedule meeting.
- iv. The Department shall have 7 calendar days to review the resubmission of the interim schedule.
- v. The Department may elect to withhold pay estimates until the interim schedule is accepted.

2. Baseline Schedule Review

- i. If an Interim Schedule is waived by the Contractor, the project Baseline Schedule will be presented by the contractor, as a formal presentation, at the pre-construction meeting and will be discussed as a part of said meeting.
- ii. If an Interim Baseline Schedule is submitted, the Contractor shall submit the full Baseline Schedule to KYTC or their Representative within 45 calendar days of the Pre- Construction Meeting.
- iii. The review of the Baseline Schedule shall commence the day after it is received by KYTC or their representative and shall span 21 calendar days (excepting holidays) in which KYTC or their representative shall either accept, reject, or accept as noted the Baseline.
- iv. If KYTC or their Representative does not provide written notification regarding the disposition of the baseline schedule within 21 calendar days (excepting holidays), the submission will be considered Accepted.
 - i. For baseline schedules that are "Accepted as noted", the Contractor shall make the necessary revisions and resubmit the revised schedule within 7 calendar days. Revisions to the baseline schedule beyond those requested by KYTC or their Representative as a part of the "Accepted as Noted" status will be grounds for immediate rejection.
 - ii. For baseline schedules that are "rejected", KYTC or their Representative shall indicate in writing all portions of the schedule that are not in compliance with the contract requirements. KYTC or their Representative shall conduct a mandatory meeting with the Contractor and the Contractor's Schedule Representative within 5 business days of KYTC or their Representative's written notice. The

- purpose of this meeting is to resolve all issues with the baseline schedule. At this meeting the Contractor shall provide clarification and all requested information necessary for KYTC or their Representative to "Accept" the baseline schedule.
- iii. In the event the contractor fails to submit a full baseline within 45 calendar days of submitting an Interim Baseline, the Department may withhold pay estimates until the full baseline is submitted.
- iv. In the event the baseline schedule is not "Accepted" within 120 days of execution of the contract, all work shall cease on the project until the baseline schedule is "Accepted".
- v. Acceptance of the baseline schedule does not revise the Contract Documents. The baseline schedule shall be "Accepted" or "Accepted as noted" by KYTC or their Representative prior to KYTC or their Representative evaluating any contractor claims associated with time impacts.

1.4 Monthly Progress Update Schedules

A. Definition:

- 1. Monthly Progress Update Schedule: The update schedule indicates the actual progress achieved within a given period (i.e. monthly) and the impact of the actual progress on the remainder of the activities in the project. The impacts of actual progress to the remaining activities provides for a predictive measure on the future course of the project. The Monthly Progress Update Schedule shall only contain updates to the start, finish, or progress of activities in the schedule from the previous data date to the current data date. No revisions shall be included in a Monthly Progress Update Schedule. The actual progress is compared to the baseline schedule, or the latest previously Accepted Monthly Progress Update Schedule to ascertain the actual progress of the project.
- B. Monthly Progress Update Schedule Preparation Interim Schedule
 - 1. Once the Interim Schedule is "Accepted" it shall be updated in accordance with the specifications.
 - 2. Enter the "Actual Start", "Actual Finish", "Remaining Duration", or "Percent Complete" as appropriate for each activity within the update period.
 - 3. Any activity with an actual start shall also contain an appropriate percent complete.
 - 4. Update the data date to the end of the update period.
- C. Monthly Progress Update Schedule Preparation Baseline Schedule
 - 1. Enter the "Actual Start", "Actual Finish", "Remaining Duration", or "Percent Complete" as appropriate for each activity within the update period.
 - 2. Any activity with an actual start shall also contain an appropriate percent complete.
 - 3. Update the data date to the end of the update period.

D. Submission Requirements:

- 1. Monthly Progress Update Schedule Submission Deadlines
 - i. The monthly update period shall begin on the 1st day of the month and will terminate on the last day of the month. KYTC or their Representative may adjust these dates as
 - ii. necessary to meet project conditions or other requirements.
 - iii. The Contractor shall submit their Monthly Progress Update Schedule, with a data date of the first day of the month following the update period, no later than the 10th of the month, for the life of the project.

iv. Submit per section 1.4.D.2 (General Requirements).

2. General Requirements

- i. Submit all schedules within the time frames specified.
- ii. Provide an electronic .mpp file compatible with Microsoft Project.
- iii. Provide an electronic .pdf print out of the full schedule, displaying the Gantt Chart, Activity ID, Activity Description, Original Duration, Start Date, Finish Date, and Total Float.
- iv. Provide a written schedule narrative in .pdf format describing the following:
 - 1. Current schedule interim milestone dates and completion dates
 - 2. A general description of the critical path
 - 3. Changes or shifts in the critical path and the reason for these changes or shifts
 - 4. Overall project status (ahead, on, or behind schedule)
 - 5. Current Delays
 - 6. Anticipated Delays
- v. Name the .mpp file as per Table 1.

E. Monthly Progress Update Schedule Review

- 1. KYTC or their Representative will review the schedule within 7 calendar days (excepting holidays) beginning on the first business day after the contractor's submission.
- 2. KYTC will review the contractor's actual dates compared to the project records to verify the accuracy of the information.
 - Alternatively, KYTC or their Representative may provide a listing of the schedule activities for the update period along with the recorded dates to the contractor prior to the update schedule submission.
 - ii. If KYTC or their Representative provides their dates to the contractor, the contractor shall provide a disposition on the variance of any dates which are more than 3 days apart between the recorded dates of the contractor and the recorded dates of KYTC or their Representative.
- 3. Any discrepancies between the contractor's recorded dates, and the dates recorded by KYTC or their Representatives shall be reconciled before the last day of the month in which the schedule was submitted. Failure to reconcile before the last day of the month in which the schedule was submitted shall be grounds for withholding pay estimates.
- 4. Added work/activities, revisions made to logic, descriptions, calendars or any adjustments that may manipulate the schedule calculations will result in an immediate rejection of the schedule.
- 5. Neither KYTC nor their Representative will process pay estimates until the Monthly Progress Update Schedule is received for the previous period.

1.5 Buildable Unit Phase Submission Schedules

A. Definition:

1. Buildable Unit Phase Submission Schedules: The baseline schedule includes a combination of Level 3 and Level 4 detail which would be reasonably understood by the at the time of the baseline submission. As buildable units are completed to a 100% stage of design, the Level 3 schedule data from the baseline submission will be refined and detailed to a Level 4 schedule for each buildable unit. The Buildable Unit Submission indicates the full and complete schedule for the buildable unit along with its logical relationships with other buildable units and required work elements. Upon completion of the design of all buildable units, all elements of the schedule shall be at Level 4 and shall represent the full and accurate accounting of all activities required to construct all elements

of the project.

B. Buildable Unit Phase Submission Overview

- Upon Submission of the 100% review plans for each buildable unit or group of buildable units, a
 Buildable Unit Phase Submission schedule shall be submitted replacing the Level 3 buildable unit
 details with Level 4 detail. The 100% plan submission design review period will not begin unless
 the Buildable Unit Phase submission is included.
- Buildable Unit Phase Submissions shall not be permitted to contribute to negative float, nor reduce positive float without the expressed consent of the Department upon review of Buildable Unit Phase submission.

C. Buildable Unit Phase Submission Preparation

- 1. The Buildable Unit Phase Submission shall be developed using the latest "Accepted" Full Baseline, or the most recent "Accepted" Update schedule.
- 2. The Buildable Unit Phase Submission Schedule may include a single buildable unit or may cover multiple buildable units.
- 3. No changes shall be permitted to any previously "Accepted" buildable units. The submission shall only include details specifically related to the submitted buildable unit(s).
- 4. Buildable Unit Phase Submission schedules shall be submitted as an independent schedule from any revision schedules.
- 5. Each buildable unit shall be inserted into the schedule in such a way that the first activity of the Level 4 schedule utilizes the appropriate predecessors as the first activity of the Level 3 schedule and the last activity of the Level 4 schedule utilizes the appropriate successors of the last activity of Level 3 schedule.
- 6. The Level 3 information shall remain in the schedule until the Level 4 data is "Accepted" at which time it may be dissolved from the schedule.
- 7. The Level 4 data shall be constructed according to the applicable requirements of Section 1.3.

D. Submission Requirements:

- 1. Buildable Unit Phase Submission Deadlines
 - i. The Phase submission shall be submitted along with the 100% design review plans. The 100% design review plans will not be accepted by the Department without inclusion of the Buildable Unit Schedule submission.
 - ii. Submit per section 1.5.D.2 (General Requirements).

2. General Requirements

- i. Submit all schedules within the time frames specified.
- ii. Provide an electronic .mpp file compatible with Microsoft Project.
- iii. Provide an electronic .pdf print out of the full schedule, displaying the Gantt Chart, Activity ID, Activity Description, Original Duration, Start Date, Finish Date, and Total Float.
- 3. Provide a written schedule narrative in .pdf format describing the following:
 - i. Current schedule interim milestone dates and completion dates
 - ii. A general description of the critical path
 - iii. Changes or shifts in the critical path and the reason for these changes or shifts
 - iv. Overall project status (ahead, on, or behind schedule)
 - v. Current Delays
 - vi. Anticipated Delays
- 4. Name the .mpp file as per Table 1.

E. Buildable Unit Phase Submission Review

- 1. KYTC or their Representative will review the schedule within 14 calendar days (excepting holidays) beginning on the first business day after the contractor's submission.
- 2. Upon "Acceptance" of the Buildable Unit Phase Submission, any all update or impact data shall be transferred to the "Accepted" Phase Submission Schedule and submitted to the Department within 7 calendar days.

1.6 Revision and Delay Schedules

A. Definition:

- 1. **Delay Schedule:** During the course of the project, issues may arise that could not have been anticipated at the time of bid. These issues are entered into a Delay schedule in order to show the impact of the issue on the contractor's schedule. Extra work added by the owner and eligible for a time extension is not considered a delay, but shall be included in a revision schedule.
- 2. **Fragmentary Network (fragnet):** A fragnet is defined as the sequence of new activities that are proposed to be added to the existing schedule. The fragnet shall identify the predecessors to the new activities and demonstrate the impacts to successor activities. Alternatively, the fragnet may indicate a sequence of activities that have already happened.
- 3. Revision Schedule: The Work may require, the Owner may request, and/or the Contractor may make revisions to the CPM schedule in order to align the schedule to the physical work in the field and to maintain the predictive nature of the schedule as established in the baseline schedule. Addition of new activities or new calendars or changes to existing activities, calendars or logic constitute a revision. The revision shall incorporate all actualized activities up to the date of the revision. For revisions involving extra work requested by KYTC, no time extensions will be granted unless justified in a revision schedule including said work.

B. Reasons for Revisions:

- 1. The Contractor shall revise the schedule to correct Out-of-Sequence logic errors that impact the critical path.
- 2. A revision schedule must be compiled in order to justify any time extension related to extra work.
- 3. The Contractor may elect to revise the schedule in order to reflect actual/intended prosecution of the work or as per any part of section 1.6.B.5.(i-v) below.
- 4. KYTC or their Representative may request a schedule revision when the current schedule does not accurately reflect the current prosecution of the work in order to align the schedule to actual field operations.
- 5. KYTC or their Representative may request a schedule revision when the current schedule no longer serves as a predictive tool to plan the course of the project due to:
 - i. Additional or non-performed work.
 - ii. Deviations from the schedule by the contractor's operations.
 - iii. Progress has accelerated or decelerated.
 - iv. There is a general deviation in the planned activity dates as compared to commonly held project knowledge regarding the project's progress.
 - v. Accepted phasing adjustments.

C. Revision Schedule Preparation:

1. The basis of any revision or delay schedule shall be the most recently accepted Monthly Progress Update Schedule.

- 2. Based on the most recently accepted Monthly Progress Update Schedule, revise the schedule to provide a predictive tool reflecting the planned course of the project to achieve the completion of the project by the current contract completion.
- 3. All revisions shall comply with applicable sections of section 1.3.

D. Delay Schedule Preparation:

- 1. Determine project progress prior to circumstance(s) necessitating the time impact analysis. The previous accepted monthly update schedule, updated to the date of the circumstance(s) alleging to have caused delay, shall be used to display the prior progress of the project. This schedule is referred to as the Un-impacted Schedule
- 2. In a copy of the Un-impacted Schedule, prepare a new Project Activity Code for the fragmentary network (fragnet).
- 3. Prepare a fragnet depicting the circumstance that is believed to have delayed the project within the new activity code.
- 4. Insert the fragnet into the schedule logic
 - i. The first activity of the fragnet shall be the successor to the last activity that was completed prior to the alleged delay.
 - ii. The last activity of the fragnet shall be the predecessor to the first activity that could not commence due to the alleged delay.
- 5. Run the schedule calculations and determine the finish date. This schedule is referred to as the Impacted Schedule.
- 6. Compare the Impacted Schedule finish date with the Un-impacted Schedule finish date in order to determine the duration of any warranted time extension.

E. Submission Requirements:

- 1. Revision Schedule Submission Deadlines
 - i. Revision schedules shall be submitted with a Monthly Progress Update, or within 5 business days of "acceptance" of a progress update.
 - ii. In the event discrepancies are discovered in the Monthly Progress Update, said discrepancies shall be resolved prior to the submission of the Revision schedule or shall be resolved in both the Monthly Update AND the Revision if submitted simultaneously.
 - iii. Revision schedules resulting from extra work believed to have an effect on the critical path shall be submitted with the cost proposal for the extra work.
 - iv. Revision schedules shall be separated from Buildable Unit Phase Submissions.
 - v. Delay Schedule Submission Deadlines
 - vi. Delay schedule submissions shall occur within 5 business days of the alleged delay event.

2. General Requirements

- i. Submit all schedules within the time frames specified. Revisions shall be based on the latest accepted Monthly Progress Update. The Revision Schedule shall be submitted with the latest "accepted" Monthly Progress Update in which it was based on.
- ii. Provide an electronic .mpp file compatible with Microsoft Project for both the Revision schedule as well as the latest "accepted" Monthly Update Schedule.
- iii. Provide an electronic .pdf print out of the full schedule, displaying the Gantt Chart, Activity ID, Activity Description, Original Duration, Start Date, Finish Date, and Total Float.
- iv. Provide a written schedule narrative in .pdf format describing the following:
 - 1. Current schedule interim milestone dates and completion dates
 - 2. A general description of the critical path

- 3. The specific reason(s) for the revision or delay
- 4. Changes or shifts in the critical path and the reason for these changes or shifts
- 5. Overall project status (ahead, on, or behind schedule)
- 6. Current Delays
- 7. Anticipated Delays
- v. Name the .mpp file as per Table 1.

F. Revision/Delay Schedule Review

- 1. KYTC or their Representative will review the schedule within 14 calendar days (excepting holidays) beginning on the first business day after the contractor's submission.
- 2. If KYTC or their Representative does not provide written notification regarding the disposition of the revision schedule within 14 calendar days, the submission will be considered Accepted.
- 3. For revision schedules that are "Accepted as noted", the Contractor shall make the necessary revisions and resubmit the revised schedule within 7 calendar days. Revisions to the revision schedule beyond those requested by KYTC or their Representative as a part of the "Accepted as Noted" status will be grounds for immediate rejection.
- 4. For revision schedules that are "rejected", KYTC or their Representative shall indicate in writing all portions of the schedule that are not in compliance with the contract requirements. KYTC or their Representative shall conduct a mandatory meeting with the Contractor and the Contractor's Schedule Representative within 5 business days of KYTC or their Representative's written notice. The purpose of this meeting is to resolve all issues with the revision schedule. At this meeting the Contractor shall provide clarification and all requested information necessary for KYTC or their Representative to "Accept" the revision schedule.
- 5. Acceptance of the revision schedule does not revise the Contract Documents. The revision schedule shall be "Accepted" or "Accepted as noted" by KYTC or their Representative prior to KYTC or their Representative evaluating any contractor claims associated with time impacts.
- 6. Upon acceptance, the revision schedule shall be the basis for evaluations replacing the original baseline logic.

1.7 Weather Delay Schedules

A. Definition:

 Weather Delay Schedule: The schedule which indicates the effect of the actual weather experienced in a given period as compared to the anticipated weather included in the baseline schedule as depicted in the Weather and Seasonal Conditions table of Section 1.3.E.3.v. The Weather Delay schedule is a calculation performed by the software after the anticipated weather days have been removed and the actual Weather Days have been inserted into the appropriate calendar.

B. Weather Delay Schedule Preparation

- 1. Make a copy of the previously accepted Monthly Progress Schedule file. This copy is referred to as the Weather Impacted Schedule.
- 2. For the month that incurred actual weather days, remove the anticipated weather only from calendars associated with the work that was delayed and input the actual weather days experienced into the Weather Impacted Schedule.
- 3. Schedule the project WITHOUT changing the data date.

C. Submission Requirements:

1. Weather Delay Schedule Submission Deadlines

i. The Weather Delay Schedule shall be submitted no later than the 5th of the month following the weather impacted work.

2. General Requirements

- i. Submit all schedules within the time frames specified.
- ii. Submit the weather impacted schedule, and the previously accepted Un-impacted Monthly Update Schedule.
- iii. Provide an electronic .mpp file compatible with Microsoft Project for both schedules.
- iv. Provide an electronic .pdf print out of the full schedule, displaying the Gantt Chart, Activity ID, Activity Description, Original Duration, Start Date, Finish Date, and Total Float.
- v. Name the .mpp file as per Table -1.

D. Weather Delay Schedule Review

- 1. KYTC or their Representative will review the schedule within 7 calendar days (excepting holidays) beginning on the first business day after the contractor's submission.
- 2. KYTC or their Representative will confirm or dispute the requested weather days and reconcile with the Contractor within the 7 calendar day period.
- 3. If warranted, a time extension will be granted for the weather days experienced in the requested month.

1.8 Recovery Schedules

A. Definition:

1. **Recovery Schedule:** If an update is submitted showing the completion date more than 14 calendar days behind schedule, the contractor shall submit a plan of action for recovering the lost time in order to complete the project by the established contract completion date. This plan shall be in the form of a recovery schedule, along with a written narrative.

B. Recovery Schedule Preparation

- 1. Make a copy of the latest submitted Monthly Progress Schedule file. This copy will be used to develop the recovery schedule.
- 2. Revise the schedule to provide a workable plan for completing the project by the current contract completion date.
- 3. All revisions shall comply with applicable sections of section 1.3.

C. Submission Requirements:

- 1. Recovery Schedule Submission Deadlines
 - The Recovery Schedule shall be submitted no more than 7 calendar days after the submission of an Update Schedule indicating a completion more than 14 calendar days behind schedule.

2. General Requirements

- Submit all schedules within the time frames specified.
- ii. Provide an electronic .mpp file compatible with Microsoft Project.
- iii. Provide an electronic .pdf print out of the full schedule, displaying the Gantt Chart, Activity ID, Activity Description, Original Duration, Start Date, Finish Date, and Total Float.
- iv. Provide a written schedule narrative in .pdf format describing the following:
 - 1. Current schedule interim milestone dates and completion dates.

- 2. A general description of the critical path.
- 3. The specific plan for recovering time to meet the contract completion date.
- 4. Changes or shifts in the critical path and the reason for these changes or shifts.
- v. Name the .mpp as per Table 1.

D. Recovery Schedule Review

- 1. KYTC or their Representative will review the schedule within 14 calendar days (excepting holidays) beginning on the first business day after the contractor's submission.
- 2. If KYTC or their Representative does not provide written notification regarding the disposition of the revision schedule within 14 calendar days, the submission will be considered Accepted.
- 3. For revision schedules that are "Accepted as noted", the Contractor shall make the necessary revisions and resubmit the revised schedule within 7 calendar days. Revisions to the recovery schedule beyond those requested by KYTC or their Representative as a part of the "Accepted as Noted" status will be grounds for immediate rejection.
- 4. For revision schedules that are "rejected", KYTC or their Representative shall indicate in writing all portions of the schedule that are not in compliance with the contract requirements. KYTC or their Representative shall conduct a mandatory meeting with the Contractor and the Contractor's Schedule Representative within 5 business days of KYTC or their Representative's written notice. The purpose of this meeting is to resolve all issues with the revision schedule. At this meeting the Contractor shall provide clarification and all requested information necessary for KYTC or their Representative to "Accept" the revision schedule.
- 5. Acceptance of the revision schedule does not revise the Contract Documents. The Recovery schedule shall be "Accepted" or "Accepted as noted" by KYTC or their Representative prior to KYTC or their Representative evaluating any contractor claims associated with time impacts.
- 6. Upon acceptance, the revision schedule shall be the basis for evaluations replacing the original baseline logic.
- 7. KYTC will withhold pay applications until KYTC or their Representative Accepts the Recovery Schedule.
- 8. In the event the current Completion Date is in dispute, the recovery schedule will need to be submitted once the dispute has been resolved.

1.9 Float

Use of float suppression techniques, such as; preferential sequencing (arranging critical path through activities more susceptible to KYTC caused delay), lag logic restraints, zero total or free float constraints, extending activity times, or imposing constraint dates other than as required by the contract, shall be cause for rejection of the project schedule or its updates.

- A. Definitions of Float: Total Float is the length of time along a given network path that the actual start and finish of activity(s) can be delayed without delaying the project completion date. Project Float is the length of time between the End Project Milestone and the Contract Completion Date.
- B. Ownership of Float: Float available in the schedule, at any time shall not be considered for the exclusive use of either KYTC or the Contractor. During the course of contract execution, any float generated due to the efficiencies of either party is not for the sole use of the party generating the float; rather it is a shared commodity to be reasonably used by either party for project issues. Efficiencies gained as a result of favorable weather within a calendar month, where the number of days of normally anticipated weather is less than expected, will also contribute to the Project Float. A schedule showing work completing in less time than the contract time, and accepted by KYTC, will be

- considered to have Project Float. No time extensions will be granted nor delay damages paid unless a delay occurs which impacts the project's critical path, consumes all available float and extends the work beyond the Contract Completion Date.
- C. Negative Float: Negative float will not be a basis for requesting time extensions. Any extension of time will be addressed in accordance with the applicable sections of this specification. Scheduled completion date(s) that extend beyond the contract (or phase) completion date(s) may be used in computations for assessment of liquidated damages. The use of this computation is not to be construed as an order by KYTC to accelerate the project.



<Project Title> DESIGN-BUILD PROCUREMENT TEAM CONFIDENTIALITY AND NON-DISCLOSURE AGREEMENT

l,	_, as a participant in the < Project Title> Design-Build project
procurement process, hereby agree that	t, except as otherwise provided by law:

I will maintain the confidentiality of all Confidential Information to which I may gain access as a result of my participation in the design-build procurement process. "Confidential Information" may include, but is not limited to:

- a. Statements of Qualifications
- b. Alternative Technical Concept Proposals
- c. Technical Proposals
- d. Price Proposals
- e. Rating Forms
- f. Alternative Technical Concept One-on-One meetings
- g. Oral Interviews
- h. Proprietary information as designated by a Design Build Team (DBT); and
- i. Other information designated confidential by KTYC.

The following information is not considered "Confidential Information":

- a. Information is known to the public or which becomes public knowledge through no fault of my own.
- b. Information already in my possession.
- c. Information which I independently developed.
- d. Information which is requested by any court or government agency pursuant to a written court order, subpoena, regulation or process of law.

I will maintain security and control over all documents containing Confidential Information in our custody during the design-build procurement process and provide the same care to avoid disclosure or unauthorized use of the Confidential Information as I generally provide to protect my own proprietary information, and agree not to make unnecessary copies of these documents. If requested, I will return all documents to the *Project Title>* Design-Build Procurement Team when our work with the documents is completed.

I will not inappropriately use the Confidential Information in a way that compromises the bid process or the confidential status of any information.

I will not divulge any Confidential Information regarding the design-build procurement process to any representative of any Design Build Team, construction firm, consultant, the media, any member of the public, or any person who is not a member of the *Project Title>* Design-Build Procurement Team. I will take all steps reasonably necessary to protect the Confidential Information and to prevent it from entering into the public domain or into the possession of unauthorized persons.

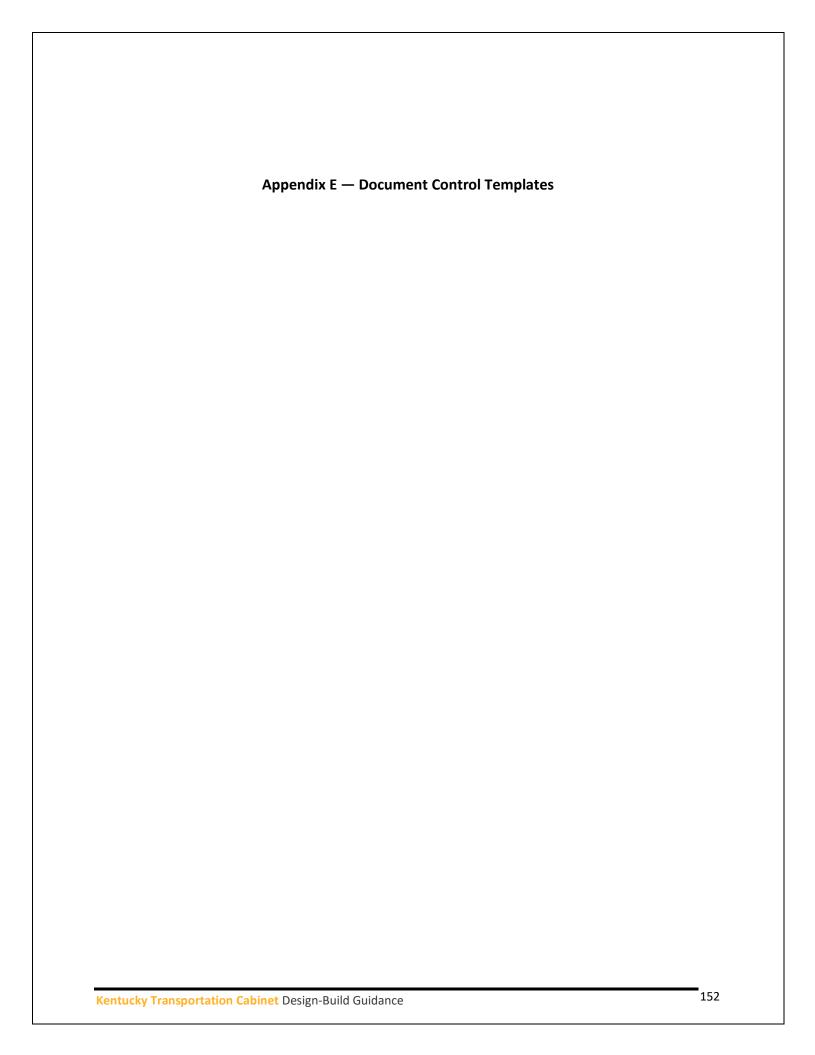
KYTC intends to make all non-proprietary Confidential Information public upon award of the Design Build contract. However, where proprietary information or "trade secrets" are included in the one or more of the DBT's submissions, it must be specifically identified (e.g., by sheet number) in the DBT's submission.

I will promptly report in writing (via email or otherwise) to the KYTC *Project Title>* Project Manager any attempts to access confidential information by Design Build Teams, construction firms, consultants, the media, or any other person or company not involved in the procurement process or the *Project Title>* Design-Build Procurement Team.

The term of this Confidentiality Agreement will commence on the date of execution and shall terminate one year thereafter, unless terminated earlier by written notice of either party. The obligations of this Confidentiality Agreement related to the use or disclosure of Confidential Information shall survive the expiration, termination or cancellation of this Confidentiality Agreement for a period of three (3) years from such expiration, termination or cancellation, whichever is first occurring.

I will continue to fulfill the obligations of this Agreement until KYTC determines that Confidential Information is no longer confidential.

Ву:	
Title	
Company:	
Date:	



19-9001 (6-78) Graves Road Submittals

#	Submittal	File?	U?	KYTC Reviewer	Received Date	Forward Date	Review Due Date	Submission Date	Comments	Open / Closed	Email
1	Drilled Shaft Installation Plan	yes		Carl Van Zee	1/8/20	1/9/20	1/22/20	1/14/20	Filed.	Closed	FW: 830 Graves Road - Submittal #1 - Drilled Shaft Installat
	Roadway Geotechnical Report	yes		Michael Carpenter	1/10/20	1/10/20	1/24/20	1/21/20	9% cement to be used for stablization		FW: Roadway Report - Graves Road - Boone - 6-78.00
2	Resubmittal	yes		Michael Carpenter	1/24/20	1/26/20	2/7/20	1/26/20		Closed	
	Resubmittal	yes		Michael Carpenter	2/12/20	2/12/20	2/26/20	2/19/20			
2	IJS Document	yes		FHWA				1/29/20	FHWA has approved the IJS	Closed	RE: 6-78: IJS Addendum Status IJS Addendum as of 12-19
,	Resubmittal	yes		Carol / Ken	2/12/20	2/12/20	2/26/20	4/9/20		Closed	nc. 0-76. IS Addendam Status IS Addendam as Of 12-1
	Buildable Unit 2, 3, 4 Revised Plan Submittal	yes		Multiple	1/20/20	1/20/20	2/3/20	2/3/20	Approval received from Ted for Traffic Plans.		
4	Resubmittal	yes		Multiple	2/17/20	2/18/20	3/2/20	3/2/20		Closed	RE: Buildable Unit 2, 3, 4 Revised Plan Submittal
	Traffic Review	yes		Ted Swanseger	2/17/20	2/18/20	3/2/20	4/6/20			
5	Flowable Fill and Class A Concrete	yes		Brian Donnelly	2/21/20	2/21/20	3/6/20	3/3/20		Closed	
6	Dwg. 28173 Overhang Design	yes		Erika Drury	2/26/20	2/26/20	3/11/20	3/11/20		Closed	
7	Dwg. 28173 - D19-32 Pile Hammer	yes		Erika Drury	2/28/20	3/3/20	3/13/20	3/16/20		Closed	
8	Dwg. 28173 Bearing Pads	yes		Carl Van Zee	3/16/20	3/16/20	3/30/20	3/17/20		Closed	
9	Lighting and Signal Concrete Mix Design	yes		Chad Schneider Brian Donnelly	4/6/20	4/6/20	4/20/20	5/6/20	Acceptable - need KYTC form filled out.	Closed	
10	Lighting Control Center	yes		Ted Swanseger	4/6/20	4/10/20	4/20/20	4/23/20		Closed	
11	Pull Box	yes		Ted Swanseger	4/8/20	4/8/20	4/22/20	4/9/20		Closed	
11	Resubmittal	yes		Ted Swanseger	4/14/20	4/14/20	4/28/20	4/15/20		Cioseu	
12	Misc Electrical	yes		Ted Swanseger	4/9/20	4/9/20	4/23/20	4/10/20	Approved, Make sure that if using for ground wires that it is color	Closed	
12	Resubmittal	yes		Ted Swanseger	4/20/20	4/20/20	5/4/20	4/21/20	coded as green per the NEC (any wire #6 or smaller).	Cioseu	
13	Dwg. 28173 SIP Shop Drawings and Calcs	yes		Erika Drury	4/25/20	4/27/20	5/9/20	5/4/20	Submitted as "Submittal #8"	Closed	
	Poles and luminaires	yes		Ted Swanseger	5/11/20	5/11/20	5/25/20	5/13/20			
14	Resubmittal	yes		Ted Swanseger	5/29/20	5/29/20	6/12/20	5/29/20		Closed	
	Resubmittal	yes		Ted Swanseger	6/9/20	6/9/20	6/23/20	6/11/20		Ciosco	
	Resubmittal	yes		Ted Swanseger	7/17/20	7/17/20	7/31/20	7/20/20			
15	Mast Arm Pole	yes		Ted Swanseger	5/1/20	5/1/20	5/15/20	5/5/20		Closed	
	Resubmittal	yes		Ted Swanseger	6/8/20	6/8/20	6/22/20	6/11/20			
16	Fox Concrete Submittal yes	yes		Chad Schneider	7/15/20	7/15/20	7/29/20	7/16/20		Closed	
10	TOX CONCIETE SUBMITTEE	yes		Chad Schneider	7/16/20	7/16/20	7/30/20	7/21/20		Cioseu	
17	BU6 Structure Culvert ASF	yes		Doug Gesso	7/6/20	7/6/20	7/20/20	7/23/20	Comments were given to Palmer	Open	
18	Buildable Unit 5A, 6 Plan Submittal	yes		Multiple	7/9/20	7/9/20	7/23/20	7/23/20	Comments were given to Palmer	0	
10	Additional ROW Comments	yes		Carol				8/6/20		Open	
19	Culverts 1 and 2 Geotech Report	yes		KYTC Geotech	8/4/20	8/4/20	8/18/20	8/6/20		Closed	

19-9001 (6-78) Graves Road RFIs

#	RFI / Issue	File?	U?	KYTC Reviewer	Received Date	Forward Date	Review Due Date	Submission Date	Comments	Open / Closed
1	Potential Aesthetic Upgrades	yes		Multiple					Requires MOA and change order	Open
2	Recycled #2	yes		СО	3/25/20	3/25/20	4/8/20	3/26/20	Denied.	Closed
3	Request to Butt Weld Splice Piles	yes		Carl Van Zee	4/23/20	4/23/20	5/7/20	4/27/20		Closed
4	Dwg. 28173 End Bent Diaphragms	yes		Carl Van Zee	6/5/20	6/8/20	6/19/20	6/9/20	Approved - provided that the concrete surface is left rough, keys are used, and type 5 epoxy from section 826 of the spec book is used. The joint should be located near the top of the beam. Contract is responsible for repair of any cracking that may occur on the face of the diaphragm.	

#	Email	File?	U?	KYTC Reviewer	Received Date	Forward Date	Submission Date	Comments	Open / Closed
	RE: Graves Rd - Encasement for Boone County Water line	no	yes		1/15/20			Filing.	
1	Fwd: Boone County Encroachment Permit - Graves Road Design Build Project - Duke Energy Conduit				1/17/20				Closed
1 7	RE: 6-78.00 - Relocated Graves Rd over I-275 - Drawing Number 28173 - Stage I Final Submission	yes		Carl Van Zee	1/15/20	1/16/20	1/26/20	Filing.	Closed
3	Fwd: 6-78.00 - Relocated Graves Rd over I-275 - Drawing Number 28173 - Stage II Final Submission	yes		Carl Van Zee	2/3/20	2/3/20	2/6/20	Filing.	Closed
4	Re: 6-78 19-9001 Drainage Folder for BU 2, 3, and 4	yes		Doug Gesso		1/28/20	2/3/20	Filing.	Closed
	FW: Boone County - Item Number 6-78 - Graves Road Design Build (Memo and Checklists)	yes			1/15/20			Filing.	Closed
6	FW: Subgrade Recommendations - Graves Rd - Boone - 6-78	yes		Michael Carpenter	1/14/20	1/14/20	1/21/20	This submittal was discussed at Meeting held on 1-28- 20. SUB 2	Closed
7	FW: Graves Rd - Lime Stabilized Subgrade	yes		Michael Carpenter	1/24/20	1/24/20		Procuring field samples	Open
8	CPM schedule - Revised Baseline Letter - Accepted as Noted	yes		WSP	2/6/20		2/11/20	Sign and send review letter	Closed
	FW: 6-78: Call Regarding Ramps B/D D6 Signed GLS	yes		Jill Asher	2/13/20	2/13/20	4/13/20		Closed
10	Signal Plan Comments	yes		Ted Swansegar	2/13/20	2/13/20	4/6/20	SUB 4	Closed