



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

Construction division
SUITE 700, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TN 37243
(615) 741-2414

JOHN C. SCHROER
COMMISSIONER

BILL HASLAM
GOVERNOR

November 16, 2018

ADDENDUM #4

**Re: I- 75 Interchange @I-24
Hamilton County
Contract No. DB1801**

To Whom It May Concern:

This addendum revises the RFP Contract Book 1, Book2, and Book 3. Attached are the revised sheets.

You must acknowledge this addendum by completing the "Addendum Letter Acknowledgement form C and the Technical Proposal Signature Page (Form TPSP) within your Technical Proposal. It is the bidder's responsibility to notify all affected manufacturers, suppliers and subcontractors of this change.

Sincerely,

A handwritten signature in cursive script, appearing to read "Lia O'Neal".

Assistant Director of Construction
Construction Division

**DESIGN-BUILD
RFP CONTRACT BOOK 1
INSTRUCTIONS TO
DESIGN-BUILDERS (ITDB)
TENNESSEE DEPARTMENT OF TRANSPORTATION**

Interstate I-75 at Interstate I-24 Interchange Modification

Hamilton County- TENNESSEE

CONTRACT NUMBER: DB1801



July 27, 2018

Addendum #1 August 24, 2018

Addendum #2 September 26, 2018

Addendum #3 November 13, 2018

Addendum #4 November 16, 2018

The Design-Builder shall be fully and totally responsible for the accuracy and completeness of all work performed under the Contract, and shall indemnify and hold the Department harmless for any additional costs and all claims against the Department which may arise due to errors or omissions of the Department in the Provided Materials, and of the Design-Builder in performing the work.

2. PROJECT OVERVIEW

Project Description: **Interstate 75 at Interstate 24 Interchange Modification**

This project will consist of:

- Replacement of the median barrier with a 51-inch high median barrier from the Georgia State Line to south of Spring Creek;
- Replacement of the storm sewer system on I-75 from the Georgia State Line to south of Spring Creek;
- Adding an additional lane on I-75 as shown on the Functional Plans;
- Provide a minimum ~~60~~50-mph design speed for all interchange ramps;
- Widening I-75 to add an additional lane from S. Chickamauga Creek to a point south of the CSX Railroad as shown on the functional plans. Concrete pavement with ~~asphalt~~concrete shoulders will be used for the area to be widened;
- Concrete pavement rehabilitation for the existing pavement from S. Chickamauga Creek to a point south of the CSX Railroad as shown on the functional plans;
- New bridges and widening the existing bridge over S. Chickamauga Creek;
- Widening the I-75 southbound to I-24 westbound interstate-to-interstate ramp and I-24 eastbound to I-75 northbound interstate-to-interstate ramp from two to three lanes;
- Realignment and widening of the I-75 northbound to I-24 westbound interstate-to-interstate-ramp and the I-24 eastbound to I-75 southbound interstate-to-interstate ramp from two to three lanes;
- Proposed sidewalk, curb and gutter along both sides of Spring Creek Road.
- Addition of ~~a~~ new noise walls;
- Removal and replacement of all guardrail. New guardrail in locations shown on the Functional Plans;
- Resurfacing all existing asphalt pavement within the project limits;
- Modifications to existing drainage structures and installation of proposed drainage improvements;
- Replacement of all lighting within the project limits;
- Utility relocations;
- ITS relocations and improvements; and
- Installation of new overhead signs and sign structures as shown in the roll plots.

Additionally, the Design-Builder shall be responsible for:

3. SELECTION PROCEDURE

The Department will utilize a *Meets Technical Criteria (A+B)* selection process in this procurement to award a Contract to the responsible Design-Builder that demonstrates it meets the technical criteria and can deliver the best combination of price and time (A+B) in the design and construction of the Project.

Price Proposals will be calculated in accordance with the following method:

Total Contract (A+B) = A+ (B x TIME)

Where, A = Contract Amount

B = the number of Calendar Days (from the Initial Notice to Proceed) indicated by the time needed to complete the Project in their Price Proposal and will become the contract completion time to be shown in the contract book.

TIME VALUE = Value associated with time of completion on this Project.

B: Calendar Days

Amount of one Calendar Day is ~~\$100,000~~ \$30,000 as stated in Special Provision 108B.

It is intended that all construction be completed by the earliest feasible date to minimize public inconvenience and enhance public safety. Should the total number of calendar days that the Design-Builder placed in the Proposal under the “B” portion of the Proposal to be deemed excessive, then the Proposal will be rejected. To this end the Design-Builder shall pursue the work rigorously utilizing the necessary work week, work hours and/or work shift schedules to expedite the work. The total Contract (A+B) cost will be used by the Department to determine the Apparent Design-Builder, but reimbursement to the Design-Builder shall be based solely on the Proposal Price total “A” and any incentive or disincentive payment made in accordance with the Contract.

IMPORTANT: The number of Calendar Days “B” is to be placed in the Price Proposal. Failure to enter a value for “B” will make the Proposal irregular and be cause for rejection.

Calendar days will be charged in accordance with the Contract and time charges will begin on the date shown on the initial NTP letter. Time charges will continue until work is complete, excluding punchlist items and vegetation establishment, on the Project in accordance with the Contract.

Notwithstanding any other provision of this Contract to the contrary, no time adjustments will be allowed for:

- Adverse weather conditions;
- The time required to Review and Approve Shop Drawings;
- The time required to review VECs;

**DESIGN-BUILD
RFP CONTRACT BOOK 2
CONTRACT**

TENNESSEE DEPARTMENT OF TRANSPORTATION

Interstate 75 at Interstate 24 Interchange Modification

Hamilton County - TENNESSEE

CONTRACT NUMBER: DB1801



July 27, 2018

Addendum #2 September 26, 2018

Addendum #3 November 13, 2018

Addendum #4 November 16, 2018

July 27, 2018

STATE OF TENNESSEE

I-75/I-24
Hamilton County
Contract #: DB1801

SPECIAL PROVISION

REGARDING

PROJECT COMPLETION AND LIQUIDATED DAMAGES

The project shall be completed in its entirety as set forth in the Contract.

Daytime lane closures shall not be allowed at any time, unless otherwise specified herein or as directed by the Engineer.

Temporary lane closures on I-24, and I-75 and Spring Creek Road will be allowed Sunday through Thursday nights between 9:00 P.M. and 6:00 A.M as described in RFP Book 3. Construction, Maintenance of Traffic. For each hour, or portion thereof, in which the temporary lane closure is not completed and open to traffic, the sum of \$6,000 per hour per lane shall be deducted from the monies due the Design-Builder, not as a penalty, but as liquidated damages.

Temporary lane closures on local streets shall will only be allowed nightly Sunday through Thursday nights between 9:00 p.m. and 6:00 a.m. For each hour, or portion thereof, in which the temporary lane closure is not completed and open to traffic, the sum of \$1,800 per hour per lane shall be deducted from the monies due the Design-Builder, not as a penalty, but as liquidated damages.

In addition to temporary lane closures, the Design-Builder will be allowed up to four (4) total weekend closures of interstate-to-interstate Interstate 75-to-Interstate 24 ramps and Interstate 24-to-Interstate 75 ramps within the interchange. The Design-Builder shall not have more than one interstate-to-interstate ramp closed at any time. The Design-Builder will be allowed up to two (2) six (6) weekend closures of the Spring Creek Road over I-24 bridges. A weekend is defined as between Friday at 10:00:00 P.M. and Monday at 4:00:00 A.M. outside of the holidays, and major events discussed in RFP Book 3.

For each hour, or portion thereof, in which a full weekend closure on the interstate-to-interstate ramps described in the previous paragraph is not completed and open to traffic, the sum of \$6,000 per hour per lane shall be deducted from the monies due the Design-Builder, not as a penalty, but as liquidated damages. For each hour, or portion thereof, in which a full weekend closure on Spring Creek Road is not completed and open to traffic, the sum of \$1,800 per hour per lane shall be deducted from the monies due the Design-Builder, not as a penalty, but as liquidated damages.

Rolling roadblocks are permitted during blasting operations, the erection/construction of overhead signs and setting of bridge beams. These roadblocks shall be conducted by law enforcement agencies specified in Special Provision 712PO – DB. Rolling roadblocks will only be allowed at night between 9:00 P.M. and 6:00 A.M. with a maximum duration of 30 minutes. For each 15-minute period, or portion thereof, in excess of the allotted 30-minute period that any traffic lane remains closed, the sum of \$3,000 per lane shall be deducted from the monies due the Design-Builder, not as a penalty, but as liquidated damages.

Blasting within the project limits shall not occur on a Sunday. Blasting shall be permitted between 9:00 A.M. and 2:00 P.M. If necessary for the public's protection from blasting, the Design-Builder may close traffic lanes in the vicinity of blasting site up to 15 minutes in any one-hour period. For each 15-minute period, or portion thereof, in excess of the allotted 15-minute period that any traffic lane remains closed, the sum of \$3,000 per lane shall be deducted from the monies due the Design-Builder, not as a penalty,

but as liquidated damages.

The table below summarizes the liquidated damages referenced above.

Route Name/Type	Temporary Lane Closures Liquidated Damages	Full Weekend Closure Liquidated Damages	Rolling Roadblock/Blasting Liquidated Damages
I-24, I-75, including ramps	\$6,000 per hour per lane	\$6,000 per hour per lane N/A	\$3,000 per 15 min. per lane
Interchange Ramps	N/A	\$6,000 per hour per lane	\$3,000 per 15 min. per lane
Spring Creek Road	\$6,000 \$1,800 per hour per lane	\$6,000 \$1,800 per hour per lane	N/A
Local Streets including State Routes	\$1,800 per hour per lane	N/A	N/A

Welcome Center

The Design-Builder shall minimize disruptions to the normal operations of the Welcome Center located on I-75 north of the Ringgold Road interchange. The Design-Builder will be allowed to close the Welcome Center as detailed in RFP Book 3. Failure to restore full access to and normal operations of the Welcome Center within the allowed times will result in liquidated damages of \$1,200 per calendar day until full access and normal operations are restored. Additionally, RFP Book 3 contains additional information regarding mandatory advance notice.

Noise Barriers

The Design-Builder shall complete construction of the new noise barrier east of Spring Creek Road prior to any work on the I-75 to I-24 ramps. Once work begins, the noise barrier shall be completed within 90 days. Failure to complete construction within the allowed 90 calendar days will result in liquidated damages of **\$1,000** per day until noise barrier construction is complete. Noise barrier construction and/or repairs shall only be conducted during daytime hours not earlier than 8:00 A.M. and no later than 7:00 P.M. For each hour, or portion thereof, in which the noise barrier construction and/or repairs continue (outside the daytime hours allotted), the sum of **\$500** per hour per noise barrier shall be deducted from the monies due the Design-Builder, not as a penalty, but as liquidated damages.

Potholes

The Design-Builder shall mitigate potholes greater than or equal to 1 square foot and 1.25 inches deep or an equivalent volume of size, shape and location that presents a hazard to the traveling public within 24 hours of discovery or notification. Failure to complete pothole mitigation within the 24-hour period will result in the sum of **\$1,000** per occurrence per day (or portion thereof) until pothole mitigation is complete. These deductions are not penalties but are liquidated damages.

The following sections summarize the liquidated damages associated with ITS field device and supporting infrastructure downtime.

Fiber Network

The Design-Builder shall ensure continuous operation of the fiber optic lines within construction limits.

SP108B

SP108B

Temporary disconnect of communication shall not exceed forty-eight hours. Failure to restore communication within the allowed forty-eight hours will result in liquidated damages of \$500 per hour until communication is restored.

Dynamic Message Signs (DMS)

The Design-Builder shall ensure continuous operation of the dynamic message signs (DMS) within construction limits. Temporary loss of DMS operation during construction activities shall not exceed thirty calendar days. Failure to restore full operation within the allowed thirty calendar days will result in liquidated damages of \$500 per day/per DMS until full operation of the DMS is restored. Full operation is defined as the DMS being installed, integrated with TMC software, and accessible/controllable by TMC personnel. ~~If necessary, multiple DMS may be down at the same time.~~

CCTV Cameras

The Design-Builder shall ensure continuous operation of the all CCTV cameras affected by construction activities. Temporary loss of CCTV camera operation during construction activities shall not exceed forty-eight hours. Failure to restore full operation within the allowed forty-eight hours will result in liquidated damages of \$500 per hour/per CCTV camera until full operation of the camera is restored. Full operation is defined as the CCTV camera being installed, integrated with TMC software, and accessible/controllable by TMC personnel. ~~If necessary, multiple CCTV cameras may be down at the same time.~~

Radar Detection System (RDS)

The Design-Builder shall ensure continuous operation of the radar detection systems (RDS) within the construction limits. Temporary loss of RDS operation during construction activities shall not exceed fourteen calendar days. Failure to restore full operation within the allowed fourteen (14) calendar days will result in liquidated damages of \$500 per day/per RDS until full operation of the RDS is restored. Full operation is defined as the RDS being installed, integrated with TMC software, and accessible/controllable by TMC personnel. ~~If necessary, multiple RDS may be down at the same time.~~

The table below summarizes the liquidated ITS-related damages referenced above.

ITS Device Type	Allowable Down Time	Liquidated Damages
Fiber Network	48-Hours	\$500 per hour
DMS	30 Calendar Days	\$500 per day per DMS
CCTV	48-Hours	\$500 per hour per CCTV
RDS	14 Calendar Days	\$500 per day per RDS

Project Completion Date

The Design-Builder shall complete all work to be done under the Contract on or before the Design-Builder’s completion date, set forth in RFP Book 2 Section D.3. If the Design-Builder fails to complete all work specified in the Contract, except for plant/vegetation establishment and punch list items, on or before the Design-Builder’s completion date, a sum of money equal to ~~\$30,000~~ per Calendar Day, for the first 30 calendar days after the Design-Builder’s completion date, shall be deducted from monies due to the Design-Builder, not as penalty, but as liquidated damages. For each calendar day thereafter, a sum of money equal to **\$100,000** shall be deducted from monies due to the Design-Builder, not as a penalty, but

as liquidated damages.

~~Failure to complete the project on or before the Design Builders established number of Calendar Days set forth in the Contract, shall apply for the project. For each calendar day after this established date, that all work specified in the contract, except for vegetation establishment and punch list items; is not complete, a sum of money equal to \$100,000 per Calendar Day shall be deducted from monies due to the Design Builder, not as a penalty, but as agreed compensation for damages resulting from the Design Builder's delay in completion of construction operations on the Department and road users.~~

Where provisions of this Special Provision conflict with Subsection 108.09 of the Standard Specifications, as amended, this Special Provision prevails. Additionally, RFP Book 3 contains additional information regarding mandatory closure concurrence and advance notice.

DESIGN-BUILD
RFP CONTRACT BOOK 3
PROJECT SPECIFIC INFORMATION

TENNESSEE DEPARTMENT OF TRANSPORTATION

Interstate 75 at Interstate 24 Interchange Modification
Hamilton County- TENNESSEE

CONTRACT NUMBER: DB1801



July 27, 2018

Addendum #1 August 24, 2018

Addendum #2 September 26, 2018

Addendum #3 November 13, 2018

Addendum #4 November 16, 2018

○ ***DBE GOAL***

The assigned Disadvantaged Business Enterprise (DBE) goal for this Project is 10%. The Design-Builder shall exercise all necessary and reasonable steps to ensure that DBEs participate in at least the percent of the total project cost set forth above as the goal. The Design-Builder shall require all Subcontractors to also comply and make good faith efforts in achieving this goal and shall comply with all requirements of 49 Code of Federal Regulations (CFR) part 26.

○ ***ON-THE-JOB/APPRENTICESHIP TRAINING***

On-the-Job/Apprentice Training is required on this Project and ~~will~~ shall be included in the bid document and special provision. See for further information §7.2.11 of the Design-Builders (DB) Standard Guidance.

3. ROADWAY

The roadway shall be designed to adhere to the latest editions of all appropriate TDOT Roadway Standard Drawings, TDOT Roadway Design Guidelines and Instructional Bulletins, TDOT Drainage Manual, TDOT Traffic Design Manual, TDOT Design CADD Standards, TDOT Survey Manual and the Department accepted AASHTO *Policy on Geometric Design of Highways and Streets*, and *Manual on Uniform Traffic Control Devices (MUTCD)*.

Microstation and Geopak shall be used in the preparation of CADD and design files.

○ GENERAL

The Design-Builder shall provide new aggregate underdrains with pipe as specified in the Pavement Designs, within the limits of full-depth pavement replacement and widening. The Design-Builder shall provide appropriate outlets of the underdrains as specified by the Department's Standard Drawings. The Project shall consist of the following I-75 Segments:

Segment 1 (from the Georgia state line to just north of Ringgold Road – approx. 1,710 LF total) ~~will~~shall consist of removing the existing median barrier wall and the inside shoulder pavement, modifying or reconstructing existing cross drains, installing new storm drainage system along the shoulders, ~~constructing full-depth inside shoulders~~, installing new 51-inch-tall single slope median barrier wall, milling and overlaying existing asphalt pavement, signing and pavement marking.

Segment 2 (from just north of Ringgold Road to approx. 1,130' north of the existing Welcome Center off ramp – approx. 3,340 LF total) ~~will~~shall consist of removing the existing median barrier wall and the inside shoulder pavement, modifying or reconstructing existing cross drains, installing new storm drainage system along the shoulders, installing new 51-inch-tall single slope median barrier wall, milling and overlaying existing asphalt pavement, widening ~~the existing roadway and outside shoulders~~ with full-depth asphalt pavement, signs and pavement markings.

Segment 3 (from approx. 1130' north of the existing Welcome Center off ramp to approx. 112' west of S. Chickamauga Creek bridge – approx. 5,260 LF total) (Includes I-75 Interchange @ I-24 to a point just west of the I-24/Spring Creek Road bridges) ~~will~~shall consist of constructing proposed roadway ~~and shoulders~~ on a new alignment with new full-depth pavement, drainage systems, 51-inch-tall single slope median barrier wall, bridges, retaining walls, guardrail, signing and pavement marking.

Segment 4 (from approx. 112' west of S. Chickamauga Creek bridge to 455' west of the CSX Railroad bridge – approx. 3,725 LF total) ~~will~~shall consist of widening the existing roadway and outside shoulders with concrete ~~pavement and outside asphalt shoulders~~, rehabilitating the existing concrete pavement, extending existing cross-drain culverts, widening the Chickamauga Creek bridge, and constructing retaining walls, guardrail, signs and pavement markings. The roadway and shoulders ~~will~~shall be widened to full-width and match the Ultimate Phase with the exception of approximately 650 LF of asphalt outside shoulder to allow for guardrail transition on the north end of the project (I-75 northbound); the travel lanes ~~will~~shall be transitioned to match the existing lanes (to the north) using pavement markings. The following concrete repair quantities are anticipated:

Concrete Repair (Partial Depth): 20 S.Y.

All other proposed ramps shall be designed and constructed to match the design speeds shown on the Functional Plans.

Traffic lanes on I-75, interstate-to-interstate ramps, and ramps with 2 or more lanes shall be 12 ft. wide. One-lane ramps shall be 16 ft. wide.

Interstate-to-interstate ramps: Inside and outside shoulders shall be 12 ft. wide (10 ft. stabilized).

I-75 (station 303+42 to station 325+00): Existing 16.5 ft. +/- inside shoulder (stabilized) to be reconstructed. Outside shoulder shall be 12 ft. wide (10 ft. stabilized).

I-75 (station 327+00 to station 352+54.04): Existing 14.0 ft. +/- inside shoulder (stabilized) to be reconstructed. Outside shoulder shall be 12 ft. wide (10-ft. stabilized).

I-75 (station 352+54.04 to station 404+50): Inside shoulder shall be 14 ft. (14-ft. stabilized). Outside shoulder shall be 12 ft. wide (10-ft. stabilized).

I-75 (station 406+50 to station 443+85): Existing 11 ft. inside shoulder (stabilized) to remain. Outside shoulder shall be 12 ft. wide (10-ft. stabilized).

Ramps (A, B, C, E, F, G, and H): Inside shoulders shall be 6 ft. (4-ft. stabilized). Outside shoulders shall be 8 ft. (6-ft. stabilized).

Ramp (D): Inside shoulder shall be 6 ft. (4-ft. stabilized). Outside shoulder shall be 12 ft. (10-ft. stabilized).

Spring Creek Road: Typical section shall consist of 5 @ 12-ft. traffic lanes, 4-ft. bicycle lane on both sides of the roadway, 2.5-ft. curb and gutter on both sides of the roadway, and 5-ft. sidewalks on both sides of the roadway.

Vertical clearances for all alignments (entire roadway width including the full shoulder width) and all existing overhead structures along I-75, interstate-to-interstate Ramps, and Ramps shall have a minimum 16 ft., 6 in. minimum vertical clearance. The 16 ft., 6 in. minimum clearance shall be maintained during all construction phases of the project. This requirement shall include all temporary roadway surfaces used during construction. The Design-Builder shall submit plans as outlined in the TDOT Design Guidelines to the TDOT Structures Division for Grade Approval.

I-75 and interstate-to-interstate ramps including all structures shall be designed and constructed for the ultimate number of lanes as shown on the Functional Plans and Interstate Access Request (IAR)-Ultimate Design. All lanes, shoulders, structures, roadway embankments, retaining walls, and overhead sign structures shall be constructed to the ultimate configuration. Signing and striping ~~will~~shall be constructed for the initial phase as shown in the signing and striping Functional Plans and roll plots.

The Design-Builder shall be responsible for preparation of final signed and sealed construction plans used to construct the proposed improvements. They shall be prepared in accordance with TDOT's Design Guidelines and the previous design standards referenced in this section.

If the Design-Builder wishes to change the horizontal or vertical alignment or deems that additional ROW is needed outside of the secured ROW, they ~~will~~shall be responsible for any and all additional environmental technical studies and completion of the re-evaluation of the NEPA document,

modification and approvals to the Interstate Access Request (IAR), ROW appraisals and acquisitions, utilities coordination/relocation and any permits necessary.

The Design-Builder ~~will~~shall be responsible for the design and construction of all proposed overhead structures within the Project limits. The Design- Builder shall ensure minimum vertical clearance is provided throughout the duration of construction and upon completion of the project as defined in the TDOT Roadway Design Guidelines. The Design-Builder shall submit plans as outlined in the TDOT Roadway Design Guidelines to the TDOT Structures Division for Grade Approval.

The ramp construction and closures shall be phased in accordance with Special Provision 108B. Access to all side roads shall be maintained throughout the duration of construction.

The Design-Builder shall identify the need for any special roadway design details (i.e. any special drainage structures, rock embankment, special guardrail, retaining walls, concrete barrier designs, etc.) and shall provide special design drawings to the Department for Review and Acceptance.

The Design-Builder shall ensure that all applicable “General and Special Notes” found in Section VI of the current edition of the TDOT Roadway Design Guidelines are adhered to during construction.

The geometric configurations of all roadway components shall be designed to provide adequate drainage and prevent hydroplaning (during construction and when complete). Cross slopes shall be in accordance with the requirements of the roadway typical section as shown in the Functional Plans. Design-Builder to provide hydraulic calculations (including spread calculations) to the Department.

All proposed slopes associated with the roadway shall be sodded.

All existing access-control fence located within the following limits ~~will~~shall be replaced with the exception of that which is within a wetland area as designated on the survey provided by the Department.

- I-75 Northbound from Spring Creek to South Chickamauga Creek
- I-75 Southbound from South Chickamauga Creek to I-24 Westbound at Spring Creek Rd.

All permanent and temporary safety appurtenances (sign supports, guardrail, barrier rail, impact attenuators, etc.) shall meet current TDOT standards and shall have all required Department certification documents.

Portions of the City of Chattanooga are protected from flooding by a system that includes levees, walls, pumps and other earthworks. The area along the northern boundary of this project that stretches from South Chickamauga Creek to west of Spring Creek Road is in close proximity or contains several of these flood control measures. The pump station at Cornelison Road and the pump station at Spring Creek Road along with all required piping must remain fully functional at all times during and after this project. No modification or excavation of the levee will be allowed. Portions of the ramp from I-75 South to I-24 West also serve as part of the flood control system. Therefore, any work on this ramp must result in a finished grade elevation equal to, or higher than, the existing. Earthworks along right of way between Spring Creek Road and Eastgate Loop that are part of the flood control system are not to be disturbed. The Design-Builder shall not impact the existing Brainerd Levee Pump Station System located within the existing right-of-way. Any impacts to the facility shall be the responsibility of the Design-Builder. ~~For clarification or~~

questions concerning the flood control features or their function in this area, please contact Mr. Bill Payne, City Engineer at (423) 643-6160.

Deviations and Exceptions

The functional design of the project is based upon an approved Interstate Access Request (IAR). Any deviations from the approved IAR including ingress and egress points will require coordination with the Federal Highway Administration (FHWA) and may require a revision and approval from the Federal Highway Administration to the IAR.

The Design-Builder shall be responsible for any IAR modifications and approvals. All proposed modifications ~~will~~ require an Alternative Technical Concept (ATC) subject to Department approval.

To insure connectivity to future construction phases at the I-75 north project limits and I-24 project limits, any deviations from the Functional Plans and IAR shall require an ATC and approval from the Department. Deviations from horizontal (greater than 5.0 feet) ~~and vertical alignment (any change)~~ as shown on the Functional Plans will require an Alternative Technical Concept (ATC) with Department approval. The Design-Builder is responsible for any impacts result from deviations from the Functional Plans or IAR.

The existing 11-ft. inside shoulders on Segment 4 of I-75 will not require a design exception. No other areas have been identified requiring a design exception.

No design exceptions will be allowed without Department approval.

Guardrail and Barriers

All existing guardrails along I-75, interstate-to-interstate ramps, and ramps shall be removed and replaced. The Design-Builder shall only remove sections of existing guardrail adjacent to traffic as specified in the Design-Builder plans when necessary and only after the Department concurs in the necessity of removal due to construction requirements and after appropriate warning devices are installed. The proposed guardrail, including any anchor system, shall be installed quickly to minimize traffic exposure to any hazard. Guardrail shall be removed and replaced in accordance with the current editions of TDOT Standard Drawings and TDOT Standard Specifications, as amended, Section 909. Guardrail is to be complete and in place before the roadway (including all ramps) is opened to traffic.

All permanent and temporary safety appurtenances (sign supports, guardrail, barrier rail, impact attenuators, etc.) shall meet current TDOT standards and shall have all required Department certification documents.

Where new guardrail or barrier ties to existing concrete barrier and bridge parapet, the Design-Builder shall develop special tie-in details and submit prior to installation for the Department's Review and Acceptance.

All proposed median barriers shall be in accordance with the TDOT Standard Drawings for Median Concrete barriers, and shall adjust the barrier shape as necessary to accommodate bridge piers and sign supports located within the median. Median barrier wall shall be a 51-inch-tall single slope wall per TDOT Standard Specifications unless noted otherwise in the Functional Plans.

reviewed by the Department and courtesy copies shall be provided to the local communities. If determined by the Department and/or local Floodplain Administrators that a Conditional Letter of Map Revision (CLOMR) is required, local community approval and the subsequent submission to FEMA shall occur as early in the Project timeline as possible, and the Design-Builder shall be responsible for engineering fees and application fees. The Design-Builder shall allow up to one year in the schedule for FEMA approval of any required CLOMR review. Regardless of whether a CLOMR is required, the Design-Builder ~~will be required to~~ shall submit an application for a Letter of Map Revision (LOMR) to FEMA within six (6) months of completion of construction in order to document final changes to BFEs and floodways. The LOMR submittal shall be based on certified as-built survey data of the completed project, and the Design-Builder shall be responsible for engineering fees and application fees.

Hydraulic Design File Report for Hydraulic Structures

The Design-Builder shall prepare a Hydraulic Design File (HDF) Report and any other required documentation for all existing and/or proposed bridge-class structure crossing sites, and for culverts that convey at least 500 cubic feet per second for the design storm. All aspects of the drainage design must meet all criteria listed in the latest edition of the TDOT Design Procedures for Hydraulic Structures, the Department's Drainage Manual, and any Environmental Commitments identified in the NEPA Approval. Additional required documentation may include, but not be limited to, the preparation and submittal of any CLOMR or LOMR required for community and/or FEMA coordination. The HDF Report shall further include the detailed calculations with electronic and printed copies of the computer software input and output files, as well as a discussion about hydrologic and hydraulic analysis and reasons for the design recommendations. At a minimum, for each bridge-class crossing or structure conveying more than 500 cubic feet per second for the design storm, the HDF Report shall include:

- Correspondence in chronological order.
- Maps- located on a portion of the county map or city map and 7.5-minute USGS quadrangle (preferably color).
- Hydraulic report summary.
- Photographs - See TDOT Hydraulic Manual-Chapter 10 for minimum requirements. Aerial photographs should be included if available.
- Analysis
 - Discharge calculations.
 - Frequency discharge relationship.
 - Stage discharge relationship.
 - Supporting hydraulic information (previous flood studies, gage data, etc..).
 - Existing structure analysis, with cross sections plotted (if applicable).
 - Natural water surface model with no bridge or road fill
 - Proposed structure analysis, with cross sections plotted and any alternatives.
 - Scour analysis, if applicable.
 - Deck drainage analysis.
 - On-site inspection report.
 - Other information.

Where multiple structures occur on a single project, the correspondence section should not be repeated. The cover of the design file should include the project description, PIN, and/or project number as indicated in Department schedules. Also, each stream crossings station, stream name, and associated bridge identification number (if available) should be indicated on the cover. Survey data should be included in the file for future reference.

The hydraulic design file will be reviewed, approved, and filed in the Hydraulic Design Section's files.

○PAVEMENT MARKINGS

The Design-Builder shall prepare pavement marking plans for the Department's concurrence. Pavement markings ~~will~~shall be constructed for the initial phase as shown in the signing and striping Functional Plans and roll plots. The design and installation of permanent pavement markings shall be in strict accordance with the current edition of the Manual on Uniform Traffic Control Devices (MUTCD), TDOT Roadway Design Guidelines, TDOT Standard Drawings, TDOT Standard Traffic Operations Drawings, TDOT Traffic Design Manual, and the current edition of the TDOT Standard Specifications. All pavement marking removal on final surfaces shall be accomplished by water blasting or another non-marring method. Any damage to the pavement surface caused by the selected method shall be removed and replaced at the contractor's expense.

Permanent pavement line markings shall be thermoplastic installed to permanent standards at the end of each day's work. Short unmarked sections shall not be allowed. Temporary pavement markings to be utilized for less than seven (7) working days may be painted. Temporary pavement markings to be utilized for seven (7) working days or more shall be spray thermoplastic or tape. On the final surface, the Design-Builder shall have the option of using temporary pavement markings installed to permanent standards at the end of each day's work and then installing the permanent markings after the paving operation is completed. All pavement markings beyond the immediate work area that are affected by the Work shall be reapplied to permanent standards.

Pavement markings depicting interstate shields shall be placed on the pavement at locations shown on the Signing and Marking Roll Plots. Any modifications to the locations shall be approved by the Department.

Contrast striping shall be used for all permanent striping on concrete pavement/structures along I-75.

See Phase 1 and Ultimate Signing and Marking Roll Plots as provided on the Project Website for guidance.

○SIGNING

The Design-Builder shall prepare signage plans for the Department's concurrence/review prior to ordering. Signs ~~will~~shall be constructed for the initial phase as shown in the Signing and Marking Roll Plots. In addition, the Design-Builder shall ensure all signs beyond the project limits are consistent with new alignments and travel lanes.

The design and installation of permanent roadway signs shall be in strict accordance with the current edition of the MUTCD, TDOT Roadway Design Guidelines and TDOT Standard Drawings, the

The ground wire shall be run inside conduit within structures, shall be colored green and have THW insulation.

Existing foundations shall be removed a minimum of twelve inches below ground line.

Light standards shall be round tapered poles. Length shall be determined by required mounting height.

All proposed roadway light standards shall be designed in accordance with the requirements of the latest edition of the LRFD Standard Specifications For Structural Support For Highway Signs, Luminaires and Traffic Signals published by the American Association of State Highway and Transportation Officials.

The Design-Builder shall coordinate with TDOT's Traffic Operations Division and Electric Power Board of Chattanooga to determine the proposed lighting fixture type (i.e. mast arm, offset, etc.) to be used on the project and any specific design parameters.

All proposed roadway light standards shall be mounted on bases with an access door. Transformer bases shall meet AASHTO specifications and have FHWA approval. Standards shall aluminum with transformer bases.

Bracket arms (if used) shall be round tapered truss type with strap mounting and lengths as scheduled. Bracket arm upsweep shall be the same for all light standards of the same type.

See Lighting Roll Plot as provided on the Project Website for guidance in regard to proposed lighting facilities.

○GROUND SURVEY

The ground survey including survey control will be provided by the Department.

The Design-Builder shall verify the ground survey and survey control before utilizing in the design of the project. In addition, the Design-Builder ~~will~~shall be responsible for field surveys and support activities, such as, but not limited to geotechnical investigations, ROW stakeout, construction stakeout, etc.

If the Design-Builder's design footprint extends beyond the limits of the survey provided by the Department, ~~it will be the responsibility of~~ the Design-Builder shall be responsible ~~to~~for ~~secure~~securing the necessary additional survey.

All field survey activities shall be performed in accordance with the latest version of the TDOT Survey manual and any other applicable design standards previously referenced.

○PAVEMENT DESIGN REPORT

The Pavement Design Report for this Project has been developed by the Department.

Proposed asphalt and concrete pavements ~~will~~shall be constructed utilizing the pavement designs provided in this report unless otherwise approved in advance by the Department.

For Segments 1, 2, and 3, paving on inside shoulders shall be full depth pavement.

Segment 4, work on inside concrete shoulders ~~will~~shall include concrete pavement repair and joint repair.

The Pavement Design and minimum criteria for pavement related Alternative Technical Concepts (ATC) are located in **Appendix A**.

4. STRUCTURES

The Design-Builder ~~will~~shall be responsible for the design and construction of all structures within the Project limits including interstate and interchange ramp bridges, retaining walls and noise walls, as further described below.

The Design-Builder shall be responsible for the removal and disposal of all deficient structures, or portions thereof.

Upon completion of the Project, the Design-Builder shall provide TDOT Structures Division a final revised set of plans for all structures (bridges, walls, etc.). The plans shall be delivered on CD (each sheet an individual PDF file).

○BRIDGES

The Design-Builder shall be responsible for the design and construction of one (1) widened bridge on I-75 at Chickamauga Creek and thirteen (13) new bridges on the Mainline I-75, ramps to I-24, ramps for the Welcome Center, and Spring Creek Road over I-24 WB/EB. The northbound and southbound bridges on mainline I-75 are treated as separate bridges except the bridge widening, which is considered one bridge.

The Design-Builder shall be responsible for the design and construction of all remaining structures necessary to complete the Project.

The Design-Builder shall also be responsible for needed repairs of existing bridges as noted on the Functional Plans.

New bridge elements shall be designed using the AASHTO Load and Resistance Factor Design (LRFD) Bridge Design Specifications, Eighth Edition (2017), and the AASHTO Guide Specifications for LRFD Seismic Bridge Design, Second Edition (2011) with all interims.

The Design-Builder shall adhere to the Department's Standard Specifications for Road and Bridge Construction (2015 Edition) for construction materials and methods.

Design Requirements

Accelerated Bridge Construction (ABC) methods may be used, but must be approved in writing by the Department.

Girders shall be continuous for live loads for pre-stressed girders, and continuous for all loads for structural steel girders. Structural steel shall be A709 (50 kilo pound per square inch [ksi] minimum yield strength) weathering steel for the I-75 bridges and Spring Creek Road bridges, and either I-girders or tub girders may be used. The girder types on the pre-stressed beam bridges shall match the existing type (bridge widening only). The minimum final concrete beam strength shall be 5,000 pounds per square inch (psi).

The new bridges and bridge widenings shall be designed for HL-93 live loading. The bridge design shall include 35 pounds per square foot (psf) for a future wearing surface.

AMS STD-595 color No. 36440. except the top and traffic face of the parapets which shall be white, AMS STD 595 Color No. 37886.

Drilled shafts shall be constructed according to Special Provision 625 Drilled Shaft Specifications.

The bridges shall be constructed while maintaining the minimum number of lanes open to traffic during construction as specified in this RFP. The minimum vertical and horizontal clearances shall be maintained during construction as specified in this RFP and TDOT's Standard Specifications for Road and Bridge Construction.

Temporary rolling road blocks, lane closures, and detours will be permitted during the setting of beams for the bridges. This RFP includes details and submittal requirements for temporary traffic disruptions.

Bridges shall be designed and detailed according to current TDOT Structures Policies.

On mainline I-75 bridges and ramps, a special split barrier could be used to account for the difference in elevation between the northbound and southbound bridges. In order to utilize split barriers, they shall be approved by the Department prior to construction and detailed on the bridge drawings where used.

Bridge 4, Widening I-75 Over South Chickamauga Creek

The golf cart path and greenway shall have adequate protection for pedestrians, proper lighting, and remaining open at all times during project duration. The Design Builder shall field verify the location of all elements of existing bridge before geometry is developed on the widened portion. Permanent under bridge lighting is required on the proposed bridge widening to properly light the greenway and the golf paths. The entire bridge deck and approach slabs for Bridge 4 shall receive a thin epoxy overlay friction course topping.

○NOISE WALLS

The Design-Builder shall be responsible for the design and construction of Noise Barrier Walls as per the NEPA document, the Noise Barrier Evaluation dated May 30, 2018, and plans. The noise barrier walls shall be designed using the AASHTO LRFD Bridge Design Specifications, Eighth Edition (2017), Section 15. The Noise Barrier Evaluation includes the preliminary noise barrier design information based on the functional plans. The FHWA TNM files are included in the Reference Documents and should be used by the Design-Builder to assess proposed design changes. TDOT will use the TNM files to evaluate any modifications to the noise barrier proposed by the Design-Builder.

The Design-Builder shall ensure that all proposed work is completed within existing right-of-way limits utilizing any measures necessary. If the Design Builder deems that ROW and/or easement acquisitions are unavoidable, the Design Builder ~~will~~shall be responsible for all ROW and easement activities including but not limited to appraisals, appraisal reviews, and acquisitions.

The top of wall elevation shall not be less than the top of wall elevation as shown in the noise analysis. The bottom of the wall shall not provide any gaps between the wall and the final grade except as required to accommodate drainage.

Ground-mounted barriers and barriers on bridges shall be connected to ensure no gaps

The traffic face of the walls shall be ~~absorptive where designated in the plans~~, reflective and meet the following requirements: ~~See Special Provision 718NB for specifications and testing requirements.~~

- Concrete formliners shall be used to achieve the specified pattern and texture on both the highway and community sides of the barrier. Methods that involve rolling of any kind to achieve the specified pattern and texture ~~will~~shall not be permitted.
- A minimum 1-inch depth of reveal at joints shall be achieved on both the highway and community sides of the noise barrier.
- Top noise barrier panels shall include a 12-inch wide smooth band across the top of each panel on both sides.
- All posts shall be cut flush with the highest adjacent panel.
- The formliners for both the highway and community sides of the noise barrier shall be approved by the TDOT Environmental Division (Tammy Sellers, 615.741.5367), TDOT Structures Division (Houston Walker, 615.741.3351), and TDOT Region 2 prior to the manufacture of the noise wall panels.
- The highway side of the noise barrier shall be Custom Rock Pattern #1102 Rectangular Cut Stone or an approved equal. Four custom form liners, each with a unique pattern, (5' X 10') shall be developed with 20" tall coursing and 2" average joint relief.
- The highway side of the noise barrier (including posts) shall be texture coated to match other structures.

- ~~At a later date, TDOT Region 2 will identify the~~The formliner ~~that will be~~ used on the community side ~~from the list below:~~ shall be Random Cut Stone #1106 manufactured by Custom Rock or an approved equal.
 - ~~Random Cut Stone #1106 manufactured by Custom Rock (or an approved equal)~~
 - ~~Rustic Ashlar #1103 manufactured by Custom Rock (or and approved equal)~~
- ~~At a later date, Region 2 will specify the Federal Standard Color to be used for the~~ community side of the noise barrier (including posts). The community side of the noise barrier (including posts) shall be texture coated using Federal Standard Color 36373.
- Texture coating shall be applied to ensure all panels and posts appear uniform in color. Several applications shall be applied to ensure all color uniformity. The Design-Builder shall obtain approval from TDOT Region 2 that the noise barrier surfaces are uniform in color before ceasing texture coating operations.
- The Design-Builder shall cast a sample barrier panel with the approved formliners and colors. If the sample meets the requirements of this provision, TDOT will approve the panel and this panel shall serve as a standard for acceptance of subsequent noise barrier panels. If accepted, the demonstration panel can be incorporated into the completed project.
- The demonstration panel shall be delivered to the project site. The delivery location shall be approved in advance by the TDOT Region 2 Construction Division (423.510.1217).
- The Design-Builder shall insure all panels are protected during all aspects of truck loading/unloading and transport to the project installation location.
- The panels shall be flush with one another; gaps between barrier panels shall not be permitted.
- The horizontal joints between panels shall line up from one bay of panels to the next. Horizontal joints shall have tongue-and-groove configurations.
- No gaps shall exist between the base of the barrier panels and the ground.
- Prior to installation, the Design-Builder shall inspect delivered products for any defects.
- Panels that exhibit deficiencies or damage after installation shall be replaced or repaired by the Design-Builder at the discretion of TDOT and to the satisfaction of TDOT at the expense of the Design-Builder. Deficiencies include, but are not limited to, crumbling, cracking, crazing, scaling, spalling, efflorescence and segregation.
- After installation, the Design-Builder shall remove dirt from panels with water.

The location of the posts shall consider the location of any drainage structures, utilities, or other obstructions that would interfere with post placement.

The new noise walls shall be constructed using concrete posts and concrete panels. ~~The concrete used in the posts and panels must have a compressive strength of at least 3,000 psi.~~ The post spacing

○MAINTENANCE OF COMMUNICATION AND ELECTRICAL POWER TO ITS DEVICES

The Design-Builder shall ensure that no loss of power or communications between existing ITS field devices and the Transportation Management Center will occur during construction.

The work may cause the decommissioning of portions of the existing ITS system within the Project limits. The Design-Builder ~~will~~shall be responsible for any temporary power and communications that may be necessary to provide continual communications to all non-decommissioned ITS field devices within the project limits.

The Design-Builder shall implement a Maintenance of Communication (MOC) plan (detailing work to be performed, schedule of work, and a strategy for minimizing downtime) to preserve the ITS operations during the Project construction phase. The MOC plan shall be submitted to TDOT Traffic Operations Division for the Review and Acceptance prior to any change to the existing communication system, decommissioning of existing ITS field devices and supporting equipment, and temporary ITS relocations and/or installations.

The Liquidated Damages associated with temporary loss of power and/or connectivity of each ITS field device and supporting equipment due to construction, installation, integration with the temporary communications systems, or relocation shall be per Special Provision 108B.

○ADDITIONAL REQUIREMENTS

The Design-Builder is required to perform system testing prior to any planned construction activity that would cause a temporary loss of connectivity. The testing is required to determine system wide impacts for mitigation practices that can be deployed.

The Design-Builder shall use specific or compatible ITS software and hardware components to ensure networking and device connectivity and compatibility.

○SUBMITTAL REQUIREMENTS

All ITS submittals, made as part of the project submittal program, shall be concurred with by the Traffic Operation Division.

The Department shall concur with the placement and location of all ITS field devices, structures and support pole locations prior to purchasing, construction or installation.

The Design-Builder shall submit all ITS designs/plans (ITS devices, support equipment, and support structures) to the TDOT Design Division, TDOT Traffic Operations Division, and TDOT Structures Division for concurrence prior to ordering materials or beginning construction/installation. Permitting for utility work shall follow the same process as outlined in Section 9.

In addition to the requirements set forth in Section 17.2.6 of Special Provision 725, as-built project plans shall also be submitted in PDF and DGN formats. The Design-Builder shall provide the TDOT Traffic Operations Division with a survey using Tennessee State Plane Coordinates showing the as-built location of all ITS related items along with any design calculations.

○ **TITLE REPORTS AND CLOSINGS**

The Design-Builder shall provide a current title report (no older than one hundred and eighty (180) days) for each parcel at the time of the initial offer to landowner. Each title examination report shall be prepared by a Department's approved title company (each of the Department's Regional ROW Offices has a list of approved title firms). The Design-Builder ~~will~~shall furnish an original and three legible copies of a title report, including summary of 5 years sale history, on a form to be provided by the Department, designated as ROW Form-49, with copies of all recorded deeds, liens, selloffs, easements, subdivision plats, divorce decrees, wills, judgments, and other pertinent documents attached, for each numbered tract on the ROW plan. The Design-Builder ~~will~~shall furnish one updating of the title report; the process of updating the title report ~~will~~shall be performed as part of the closing.

The following terms and conditions ~~will~~shall also apply:

- Preliminary reports of title are required on all tracts for which a taking or an acquisition is shown on the acquisition table.
- Title insurance is not required.
- An original and three (3) legible copies of the "Preliminary Report of Title" (Form 49) are to be submitted. All attachments must accompany the original and all three (3) copies.
- Reports must include information on all contiguous parcels of land which form a single tract under the same ownership.
- In addition to the information to be provided on the R.O.W. Form 49, each preliminary report of title shall contain the tax map, and parcel number for the particular tract as well as the civil district in which the tract is located. In addition, include documentation of all Environmental Liens if they apply.
- The Design-Builder ~~will~~shall furnish the correct mailing address of the property owner for each tract number. If the ROW plan is revised so to add additional tracts from which there will be an acquisition as shown by the acquisition table, all services covered by this agreement are to be provided for those additional tracts.
- Facsimile of title report ~~will~~shall not be accepted.
- Completion and filing of Form 1099 published by the Internal Revenue Service, is required in connection with closing of ROW acquisition.
- Copies of Tax Maps showing all tracts are to be included. These maps are to be complete, full size sheets whenever possible.
- Copies of subdivision plots are to be included when the only deed description of an individual parcel consists of a lot number in the mentioned subdivision.
- Please number the pages of each "Preliminary Report of Title".
- If any instrument is not legible on the provided copy, (attachments) then a typed legible instrument must accompany illegible copies.

The Design-Builder ~~will~~shall close all negotiated tracts on the Project. This service ~~will~~shall include:

- updating the title report to the time of closing;
- the preparation of the warranty deed and any releases;
- the preparation of a closing statement (ROW Form-24 provided by the Department); and
- the preparation of the deed transmittal statement (ROW Form-29 provided by the Department).
- the preparation of the Tax Proration Form
- the preparation of the closing tract map
- the preparation of the W-9 form
- the preparation of the closing log form (ROW Form 17A provided by the Department)

The Design Builder is responsible for the arrangement of and making of such disbursements as may be necessary to cause the removal of property taxes, judgments and instruments constituting liens for money owed, and the recording of the warranty deed.

The Department will be responsible for the reimbursement to the Design-Builder for the recording of releases and/or partial releases and the recording of any other required releases for liens or encumbrances and all cost associated with obtaining any releases and any other such documents.

The Design-Builder agrees to discuss time and location for each proposed closing with the prospective grantor(s) and within reason to accomplish same in accordance with the grantor(s)' advice. Normal closings are expected to take place within 45 days after the seller's acknowledgement of sale price and conditions (ROW form 30-A) is executed. Extenuating circumstances requiring more than 45 days ~~will~~shall be reported by letter (or by FAX) no later than the 45th day from the date of the executed agreement of sale with a request for an extension. Requests for extensions beyond the normal accepted time will be considered on a case by case basis. Within 24 hours after closing, the Design-Builder ~~will~~shall notify the Regional Transportation Manager 2 of this fact. All closings are to be done by personal contact, at a time and place that is convenient to the landowner. Where a closing by mail is requested, the written consent of the Department is required, except when the closing involves Out-of-State property owners.

○ APPRAISAL AND APPRAISAL REVIEWS

The Design-Builder shall prepare appraisals in accordance with TDOT's Guidelines for Appraisers, Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (the "Uniform Act"), the Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally-Assisted Programs (Part 24 of title 49 CFR), and the Uniform Standards for Professional Appraisal Practice (USPAP). Appraisal and Related Service shall include all or parts of the following: real estate appraisal, real estate appraisal review, real estate consultation, pre-trial conference, deposition, and court testimony, as further defined.

The Design-Builder shall complete all appraisal services and work product to the standards set forth herein. Failure on the part of the Design-Builder to complete each assignment according to said standards by the agreed upon due date shall be considered a material breach of this Contract.

The Design-Builder shall maintain accurate parcel files and, at the termination of the work on the project, turn over to the Department all relocation and negotiation files, appraisal and appraisal review files, and any other pertinent acquisition files, records or reports. All files shall be documented in accordance with the applicable State and Federal requirements. During the work on the project, the Design-Builder shall make all such files available, upon demand, for inspection by the Department and/or by the FHWA, when applicable.

The Design-Builder shall submit a project specific Conceptual Stage Relocation Plan and an Acquisition Stage Relocation Plan for the Department's Review and Acceptance. The plan shall identify a prioritized schedule of ROW activities including but not limited to appraisal, appraisal review, the specific parcels to be acquired and all relocations. The plan shall allow for the orderly relocation of displaced persons based on time frames not less than those provided by the Uniform Act and/or the

Department's ROW Procedures Manual. This plan shall be updated as necessary during the life of the Project.

The Design-Builder shall make the necessary relocation survey and promptly prepare and submit all required relocation documents in accordance with State and Federal regulations. The Design-Builder shall perform all relocations in accordance with the Uniform Act and the Department's ROW Procedures Manual as applicable.

The Design-Builder shall submit bi-monthly status reports to the Department's ROW Division to manage and track the acquisition process. The status report must include but not be limited to the appraisal, appraisal review, and acquisition and relocation assistance status of all parcels. The Department's standard appraisal, appraisal review, acquisition and relocation assistance and property management forms and documents ~~will~~shall be used as applicable.

The Design-Builder shall provide necessary property management services during the period of the Design-Builder's work. Those property management services include, but are not limited to: private property owner utility adjustment cost estimates, salvage appraisals on improvements being acquired, moving cost determination, including the moving of on-premise signs and outdoor advertising devices, and determination and collection of rent after the "90 day" notice to vacate has expired.

The Design-Builder shall coordinate all work through the State's Regional ROW Transportation Manager 2 or his designated representative.

The Design-Builder shall recommend tracts for condemnation. When the Design-Builder recommends a tract for condemnation, the request for condemnation must have the necessary supporting documentation attached to properly completed forms as indicated by the Regional ROW Office. The Regional ROW Office will check these forms and process this information to obtain a voucher. In general all voucher requests for any payment will be handled in this manner.

The Design-Builder shall conduct any public meetings as requested by the Department and as required by the Department's ROW procedures and practices

The Design Builder shall meet and coordinate with public officials of governmental agencies and civic groups as required or as requested by the State.

The Department will be responsible for the costs associated with the payment to property owners for negotiated settlements, administrative settlements, and relocation benefits. The Department is also responsible for the costs associated with the payment to be deposited with the court in condemnation cases. In addition, any payments agreed to by the property owner and the Attorney General's Office during the condemnation process either by settlement or through the courts including court costs and any mediation expenses is the responsibility of the Department. The Design-Builder ~~will~~shall be responsible for disbursement of these payments and providing indefeasible title to the Department. All payments will be made in accordance with the policies and procedures established in the Department's ROW Procedures Manual.

The Design-Builder shall prepare, obtain execution of, and record documents conveying title to such properties to the Department and deliver all executed and recorded general warranty deeds to the Department. For all property purchased in conjunction with the Project, title ~~will~~shall be acquired in fee simple (except for the acquisition of slope, construction or permanent drainage easements, in lieu of fee simple title, with respect to any portion of the ROW, which must be concurred with by the Department's Design Division) and shall be conveyed to the Department, Grantee, by a Department-approved general warranty deed, free and clear of all liens and encumbrances except encumbrances expressly permitted by the Department in writing in advance. All easements shall be acquired in the name of the Department.

Because these acquisitions are being made on behalf of the Department, the Department shall make the ultimate determination in each case as to whether settlement is appropriate or whether the filing of a condemnation action is necessary, taking into consideration the recommendations of the Design-Builder. When the Department authorizes the filing of condemnation, the Design-Builder shall prepare all required documents necessary to file and forwarded to the appropriate Department Regional ROW Office.

The Design-Builder ~~will~~shall provide the necessary staff and resources as directed by the Department to work with the Department and the Attorney General's Office throughout the entire condemnation process until the property is acquired by settlement, by deed, or by Final Consent Judgment executed by the Department and the appropriate court. The Design-Builder ~~will~~shall provide updated appraisals (i.e., appraisal reports effective as of the date of possession) and expert testimony supporting condemnation proceedings upon request by the Department and/or the Attorney General's Office.

The Design-Builder ~~will~~shall be responsible for all contacts with landowners for ROW and construction items and shall be responsible for properly setting all ROW monuments associated with the Project.

The Design-Builder shall maintain adequate access to all occupied properties to ensure emergency and personal vehicle access. Utility service must be available to all occupied properties at all times prior to and until relocation is complete.

During the acquisition process and for a period of three (3) years after final payment is made to the Design-Builder for any phase of the work, and until the Department has indefeasible title to the property, all Project documents and records not previously delivered to the Department, including but not limited to design and engineering costs, construction costs, costs of acquisition of ROW, and all documents and records necessary to determine compliance with the laws relating to the acquisition of ROW and the costs of relocation of utilities, shall be maintained and made available

to the Department for inspection or audit. Throughout the design, acquisition and construction phases of the Project, copies of all documents/correspondence shall be submitted to both the Department Headquarters Office and the respective Department's Regional Office.

The Design-Builder ~~will~~shall ensure no open burning will occur within 1,000 feet of an occupied dwelling.

The Design-Builder shall maintain a sufficient buffer or hold off zone around parcels which have not been acquired and/or occupied properties to ensure compliance with ROW procedures prior to starting construction activities in these affected areas. There should be no construction- related activities within the hold off zone until the property is acquired and/or vacated. The Department will provide written notification before the contractor can enter the hold off zone.

Fidelity Bond: The Design Builder shall furnish a fidelity bond in the amount of \$250,000.00 with the State being made the insured for the period of time from the first offer to the owners until all tracts have a recorded deed or vouchers submitted for condemnation, in such form as approved by the State. The bond shall indicate the State's ROW project number (both Federal and State numbers, if applicable).

8. UTILITIES

As defined in CI/ASCE 38-02, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, the Department has performed a utility quality level B subsurface utility explorations (SUE) for this Project. With the exception of the locations listed in section titled “Coordination Responsibilities”, this information is provided to the Design-Builder for use as preliminary estimate of the horizontal and vertical locations of the existing utilities within the Project limits.

A utilities base map of existing utility facilities is provided for reference only on the Project website and reflects the most current information available to the Department. Utilities that may potentially be in conflict with the Project are depicted in the appropriate rainbow color.

○ *UTILITY INVESTIGATIONS*

The Design-Builder shall be responsible for identifying any utility conflicts coordinating with the utilities in the design of the relocated facilities, and preparing construction plans for the relocation of the utility facilities as required to accommodate the proposed Project design. Exact locations shall be determined in the field by contacting the utility companies involved and additional SUE investigations as necessary. Notification by calling the Tennessee One Call System, Inc., at 1-800-351-1111 as required by TCA 65-31-106 ~~will~~shall be required.

The Design-Builder shall make all reasonable efforts to design the Project to avoid conflicts with utilities, and minimize impacts where conflicts cannot be avoided.

The Design-Builder shall at all times be responsible for verifying all information related to the survey information as to the location (both vertical and horizontal of the Utilities). The providing of information by the Department shall not relieve the Design-Builder of this obligation, nor transfer any of that responsibility to the Department.

○ *GENERAL REQUIREMENTS*

The Design-Builder shall be familiar with 1680-6-1 Rules and Regulations for Accommodating Utilities within Highway Rights-of-Way, Tennessee Code Annotated (TCA) Part 8 Relocation of Utilities 54-5-801 through 54-5-856, and 23 CFR Part 645 “Utilities”. Adherence to the above referenced regulations and procedures are mandatory.

Utility facility relocations ~~will~~shall require the proposed plans to be submitted to the Department as an Application and Utility Use and Occupancy Agreement for review and issuance of permits for the accommodation of utilities within highway right-of-way. The Design Builder with the consent of the utility, can make that submittal on behalf of the utility after the review and approval by the utility of the utility relocation plans.

The Design-Builder must utilize a firm which is prequalified with the Department to perform utility coordination services and the Design Builder must adhere to TDOT policy #301-01 “Standard Procurement of Engineering and Technical Services”.

Immediately after submittal of the accepted final Definitive Design Plans, the Design-Builder **willshall** use the “Local Government Guidelines for the Management of Federal and State-Funded Transportation Projects”, issued by the Program Development and Administration Division Chapter 6.2 as a guide to utility coordination. In compliance with the statute (TCA 54-5-854), **which requires** a minimum of 120 -165 calendar days **willshall** be included in the Critical Path Method Schedule for Utility Investigation.

The Design-Builder shall utilize a single dedicated person responsible for managing all utility coordination and required concurrence with the TDOT Utility Office. The Utility Coordination Manager shall have the following knowledge, skills, and abilities:

- A minimum of 4 years of experience performing utility coordination in accordance with TDOT standards, policies, and procedures.
- Knowledge of the Department plans production process and utility coordination practices.
- Knowledge of aforementioned rules, regulations, and codes.

○COORDINATION RESPONSIBILITIES

Prior to submitting the bid, the Design-Builder **willshall** be solely responsible for contacting owners of all affected utilities in order to determine the extent to which utility relocations and/or adjustments will have upon the schedule of work for the Project. While some work may be required in the vicinity of utility facilities that will remain in place, other utility facilities may need to be adjusted concurrently with the Design-Builder’s operations.

The Design-Builder shall be responsible for confirming the utility locations, confirming the type of facilities, identifying the utility owners and determining the cost responsibilities in order to coordinate the relocation of any utilities in conflict with the Project with respect to the “General Requirements” section.

The Design-Builder shall notify each individual utility owner of their plan of operation in the area of the utilities. Prior to commencing work, the Design-Builder shall contact the utility owners and request them to properly locate their respective utility on the ground. This notification shall be given at least three (3) business days prior to commencement of operations around the utility in accordance with TCA 65-31-106.

The Design-Builder shall coordinate the relocation or adjustment of the utilities in accordance with the RFP. The Department will process and certify all compensable utilities. The Design-Builder shall process and certify all non-compensable utilities for potential conflict and/or relocations. The Department will be the approving authority for all utility permits, compensable agreements and acceptance of utility relocation plans.

The following Utilities have been identified by the Department as having facilities within the Project corridor for which the Department contemplates an adjustment, protection, or relocation is possible.

they cannot furnish evidence of prior rights- of-way or compensable interest (non-compensable utilities) in their facilities. The Design-Builder shall be responsible for all costs associated with utility relocations due to haul roads and/or any other temporary conditions resulting from the Design-Builder's methods of operation or sequence of work.

If the Design-Builder elects to make arrangements with a utility company to incorporate a new utility installation or relocation as part of the highway construction, the utility work done by the Design-Builder and the associated costs for the work shall be negotiated and agreed upon between the Design-Builder and the utility company.

If the Design-Builder is requested, in writing, by an entity to relocate, upgrade or incorporate new facilities as part of the highway construction, designs shall be coordinated with the utility owner, and the Department. The associated design and construction costs shall be negotiated and agreed upon between the Design-Builder and the utility company. Environmental permitting for utility work construction shall follow the same process as outlined in Section 9. Any and all design permits for utility facilities, such as water and sewer permits from TDEC, ~~will~~shall remain the responsibility of the utility to obtain and provide to the Design-Builder.

No additional compensation or time shall be granted for any delays, inconveniences, or damage sustained by the Design-Builder or its Subcontractors due to interference from utilities or the operation of relocating utilities.

○ADDITIONAL REQUIREMENTS

The Design-Builder shall accommodate utility adjustments, reconstruction, new installation and routine maintenance work by others that may be underway or take place during the progress of the contract.

In the event of a utility conflict, the Design-Builder shall request that the utility company submit relocation plans (plans to be provided by the Design-Builder to Utility Owners) that show existing utilities and proposed utility relocations.

The Department will be the approving authority for all utility permits, agreements and acceptance of plans.

The Department Utility Office must execute approved agreements on Design-Build highway projects. The Utility Relocation Agreements (Cost Agreement) and encroachment permit agreements are available from the Department.

Sampling, testing, monitoring and reporting shall be performed by the Design-Builder in accordance with standard industry practices for water, wastewater, oil, and gas and in accordance with the Utility Owners standard specifications and requirements.

○CONSTRUCTION REQUIREMENTS

The Design-Builder shall provide all necessary protective measures to safeguard existing utilities from damage during construction of this Project. In the event that special equipment is required to work over and around the utilities, the Design-Builder ~~will~~shall be required to furnish such equipment.

9. ENVIRONMENTAL

The NEPA document has been approved by FHWA and is included on the Project Website. The project commitment sheets and the study area are referenced in these documents. The Design-Builder shall refer to the NEPA document for a complete description of the environmental commitments for the Project.

The Design-Builder shall adhere to all project commitments and requirements included in the NEPA document. If the Design-Builder's design footprint extends beyond the study area and/or changes to impacts to identified resources, the Design-Builder ~~will~~shall be responsible for the additional environmental technical studies and re-evaluation of the NEPA document. . If the proposed project does not go to construction within 3 years of the approval date of the NEPA document, the Design-Builder ~~will~~shall be responsible for the NEPA document re-evaluation.

No additional time will be allotted to the Project schedule for the Design-Builder's preparation of the NEPA document re-evaluation, TDOT Environmental Division staff's review and concurrence of the NEPA document re-evaluation, agency coordination, and subsequent FHWA approval of the NEPA document re-evaluation.

○ ENVIRONMENTAL BOUNDARIES

The Design-Builder is responsible to make sure all features from the Environmental Boundaries Report (EBR), provided by the Department's Region 2 Environmental Tech Office, are field verified. The Design-Builder shall be responsible for any mitigation for impacts to environmental features included in the EBR or additional features identified prior to and during construction. The Environmental Boundaries Report must be completed in accordance with Department practices; the Design-Builder shall be responsible for obtaining any necessary Documentation Standards from the TDOT Environmental Division.

For impacts to any streams, springs, wetlands, sinkholes or other water resource features identified during construction not included in the original EBR, it ~~will~~shall be the responsibility of the Design-Builder to provide the data sheets and forms listed below to the Department's Region 2, Environmental Tech Office for review prior to submittal to the regulatory agencies:

Streams

- Hydrologic Determination Field Data Sheet (Version 1.4)
 - Ecology Water Resources Field Data Sheet
 - Tennessee Division of Water Resources Moderate Habitat Assessment Field Data Sheet
- A location map, marked up plan sheets, and a U.S. Geological Survey (USGS) Quad map showing the proposed stream(s) using Department-provided map templates

- Photo summary of each feature including photo views of the location of the proposed alteration, upstream, downstream, and along the centerline of the Project.

Wetlands

- Wetland Determination Data Form (U.S. Army Corps of Engineers, (USACE)) – Eastern Mountain and Piedmont Region: Version 2.0
- Tennessee Division of Water Resources: Tennessee Rapid Assessment Methodology (TRAM) documentation for wetlands including: TRAM Decision Key, TRAM Outstanding Natural Resource Water or Exceptional Tennessee Water Decision Table, appropriate HGM field data forms (if applicable) or Non-HGM field data forms (if applicable) for the wetland type being assessed, and TRAM Quantitative Summary Table.
- A location map, marked up plan sheets, and a USGS Quad map showing the proposed wetland(s) using Department-provided map templates.
- Photo summary of each feature including photo views of the location of the proposed alteration and wetland boundaries.

This determination shall be completed by a Tennessee Qualified Hydrologic Professional (TN-QHP). The Tennessee Qualified Hydrologic Professional (TN-QHP) Certification must be submitted along with the Hydrologic Determination Field Data Sheet for the individual preparing the stream data sheets and forms.

All additional environmental field studies are to be performed by Design-Builder’s personnel with the required qualifications.

State or Federal Endangered/Threatened Species

Due to concerns for spawning populations of the federally threatened snail darter (Percina tanasi), no work will be allowed in Spring Creek, West Chickamauga Creek, or South Chickamauga Creek during the period from February 1 through April 30 during all years of construction.

Due to concerns for the state threatened Chickamauga crayfish (Cambarus extraneus), the Department will coordinate with TWRA staff to conduct sweeps/surveys prior to any in-stream work. The Design-Builder shall provide at least twenty-one (21) calendar days advance notice to the Region 2 Environmental Tech Office.

If the Design-Builder makes changes to the plans, construction methodology, and/or ROW; this will immediately require additional review(s) of the proposed changes by the U.S. Fish and Wildlife Service (USFWS), Tennessee Wildlife Resources Agency (TWRA), and the Tennessee Department of Environment and Conservation (TDEC) Division of Natural Areas. The Design-Builder shall contact the Department’s Region 2 Environmental Tech Office prior to any coordination. If TWRA or USFWS requires any species surveys, sweeps, or transplants, the Department will require the Design-Builder to perform the work. The Design-Builder must provide the following to the Department’s Region 2 Environmental Tech Office before starting coordination with the USFWS and TWRA.

- Surveys ~~will~~shall be conducted as appropriate, depending on the species. The Design- Builder’s biologist shall prepare a sampling plan as recommended by the USFWS, TWRA, and/or TDEC

Division of Natural Areas. The plan shall include (at a minimum) the techniques, equipment, analytical techniques or metrics (e.g., IBI, TMI), time frame, staff qualifications, and the appropriate collection permits identification numbers (if applicable).

- A sweep is generally associated with fish, mussels, or crayfish; and is typically conducted immediately prior to commencement of construction work in the water. The sweep is performed the same day as installation of the coffer dams or when the work is being done in the water. A plan describing the methods for conducting the sweep **willshall** be required. All sweep methods and procedures must be coordinated with USFWS and TWRA prior to the sweep.
- A translocation plan, if applicable, shall be submitted to the USFWS (for Federal- listed plants) and the TDEC Division of Natural Areas (for State-listed plants) for approval. This **willshall** include, at a minimum, a description of the translocation site including the ownership of the parcel, the technique for moving the plants, the proposed relocation site, the time frame for the move, long term protection strategies at the translocation site, and the qualifications of the staff involved.

The Design-Builder shall (in consultation with the Department) allow time in the CPM for the Department's Region 2 Environmental Tech Office to coordinate with TWRA, USFWS, and the TDEC Division of Natural Areas, if required.

Migratory Birds

The Design-Builder shall perform all construction work in observance of the Migratory Bird Treaty Act (MBTA) of 1918 (last amended in 1998) and the USFWS/TDOT Memorandum of Agreement outlining procedures for addressing cliff and barn swallow nesting sites found on Department projects. MBTA of 1918 (amended 1998) provides protections to all migratory birds, with the exception of pigeons and starlings.

Cliff swallows (Petrochelidon pyrrhonota) and barn swallows (Hirundo rustica) nests, eggs, or birds (young and adults) **willshall** not be disturbed between April 15 and July 31. From August 1 to April 14, nests may be removed or destroyed, and measures may be implemented to prevent future nest building at the site (e.g., closing off area using netting).

Rare Plant Species

If impacts to the rare plant species listed on the Species Form of the EBR or their habitats are unavoidable, the plans must include measures to translocate the species to a suitable, high-quality mitigation site as noted above. Due to the uncommonly high concentration of rare plant species in the wetlands around the project, the Design-Builder must submit the plans to the Department's Region 2 Environmental Tech Office for coordination with TDEC's Division of Natural Areas for their Review and Approval prior to commencing work or translocation in these areas.

Other Natural Resources

The Design-Builder shall ensure identification, survey and monitoring of other natural resources such as sinkholes, caves or specialized habitats. The Design-Builder shall coordinate with the Department's Region 2 Environmental Tech Office for coordination with regulatory agencies (i.e. TDEC) when necessary and obtain any necessary permits for modifications to the natural resources (i.e. TDEC Underground Injection Control Permit, etc.).

The Department's Region 2 Environmental Tech Office and Headquarters Environmental Division Permitting Section shall be invited to any meeting between the Design-Builder and the respective regulatory agency to discuss issues related to the application for (or refusal of) a permit. The Design-Builder shall inform the Department a minimum of ten (10) business days in advance of the time and location such a meeting is to take place.

The Design-Builder shall represent the Department in any proceedings relating to reservations, objections, appeals and/or applications for preliminary injunctions initiated by others against the permit application or by itself against the permit decision. In such proceedings, the Design-Builder shall do everything in its power to defend the submitted application.

If any regulatory agency rejects or denies the permit application, it is the Design-Builder's responsibility to make the necessary revisions to ensure the permit is approved. If revisions are required to obtain permits, there should be scheduled reviews of the revisions by the Department's Regional Environmental Tech Office and upon request, the Headquarters Environmental Division Permitting Section to ensure regulatory practices are consistent. The Design-Builder ~~will~~shall be responsible for preparing designs and proposing construction methods that are permissible. All permits required for a particular construction activity ~~will~~shall be acquired prior to commencing the particular construction activity. All costs and delays associated with incomplete permit packages, agency rejection, agency denials, agency processing time, or any permit violations ~~will~~shall be the responsibility of the Design-Builder, and will not be considered sufficient reason for time extension.

The Design-Builder shall provide the Department with a copy of the draft permit decision and a copy of the final permit immediately upon receipt.

The Design-Builder shall plan, implement, monitor and maintain all applicable Erosion Prevention and Sediment Control (EPSC) measures and Best Management Practices (BMPs) in accordance with all TDOT standards during construction.

The Design-Builder shall bear all cost and risks associated with applying for, obtaining and complying with permits.

Permit Application Package Contents

The permit application package (applicable for USACE §404 and TDEC ARAPs) shall include, but not be limited to, the following information.:

- Signed application letter to the TDEC Division of Water Resources, Permits Section and USACE listing all water quality impacts.
- The signed application letter shall indicate the following:
 - Alternatives for each impact to environmental features;
 - Proposed methods utilized by the Design-Builder to minimize impacts to each environmental feature; and
 - Proposed mitigation for impacts to environmental features (if required).
- Labeled USGS color quadrangle map. The map shall have the following information shown:
 - Impact areas labeled by permit type;

- A copy of the State Historic Preservation Office (SHPO) letter (Architectural & Archaeological).
- Mitigation plan/plans for all streams and wetlands (if applicable).
- Half-size copy of the bridge layout(s) (if applicable).
- Half-size set of plans showing all environmental features. The plans shall be highlighted according to the following guidelines:
 - New culvert construction (extensions included) shall be highlighted in orange on the proposed layout.
 - Existing culverts shall be highlighted in blue on the present layout (blue on the proposed layout if sections are remaining).
 - Stream inlet and outlet protection measures and channel transitions shall also be quantified, labeled on the plans, and recorded in the impact table.
 - Streams/springs shall be highlighted in blue on the present and proposed layout.
 - Wetlands shall be highlighted on present layout (green for permanent impacts and yellow for temporary impacts). Be sure to label plans accordingly.
 - Bank stabilization, outfall structures, and sinkholes should be highlighted in pink on proposed layout.

Any temporary construction measures, including de-watering, construction access, haul roads, EPSC measures, temporary crossings, stream diversions, etc. shall be addressed in the permit application. The Design-Builder shall clearly indicate the location of and impacts from haul roads on jurisdictional areas. The Design-Builder shall identify all proposed borrow and waste sites and provide all clearance documentation per the Waste and Borrow Manual (May 17, 2017 edition):

https://www.tn.gov/content/dam/tn/tdot/construction/old_web_page/WasteBorrowManual.pdf

These details shall be included in the permit application data. Further, the Design-Builder shall describe the methods of construction of all structures.

NPDES Permit Specific Requirements

A TDEC National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) for construction stormwater runoff is required for this Project. It ~~will~~shall be the responsibility of the Design-Builder to develop final EPSC sheets, a Storm Water Pollution Prevention Plan (SWPPP) and obtain the NPDES CGP for the Project.

The Design-Builder shall prepare a SWPPP, Documentation and Permits Binder and a Notice of Intent (NOI) using the Department's most current format to be approved by the Department prior to submittal of the NPDES CGP to TDEC. A copy of the SWPPP template used by the Department to develop SWPPPs and the Documentation and Permits Binder can be obtained from the Department's Environmental Division, Ecology and Permits Office.

<https://www.tn.gov/tdot/environmental-home/environmental-ecology-and-permits-office/environmental-ecology-and-permits-environmental-permit.html>

- The Tennessee Water Quality Control Act (T.C.A. §69-3-101, et. seq.) and all implementing regulations, including without limitation the Rules of the Tennessee Department of Environment and Conservation (TDEC) governing National Pollutant Discharge Elimination System (NPDES) permits in Chapter 1200-4-10, and Aquatic Resource Alteration Permits in Chapter 1200-4-7; Class V Injection Well Permits for work in or near sinkholes;
- Section 26a of the Tennessee Valley Authority (TVA) Act of 1933 as amended (49 Stat 1079, 16 U. S. C. sec. 831y1.) and all implementing regulations, including without limitation the regulations of the Tennessee Valley Authority governing construction in the Tennessee River System in 18 C.F.R., Part 1304.

Permit Register

The Design-Builder shall administer a permit register and provide an updated permit register in every progress report. The permit register shall include an overview of all permits required of the Project.

The permit register requires each permit to be indicated as follows:

- Name and address of the granting authority;
- Purpose of the permit;
- Reference to the document in which the permit conditions are defined;
- Status of permit;
- Date by which the authorization of the specific permit is anticipated;
- Permit conditions relevant for the Work;
- Date by which the permit is required (milestone);
- How the Design-Builder ensures that he shall comply with the permit requirements and conditions; and
- Validity and the expiry date (if any) of the permit.

ONATIONAL ENVIRONMENTAL POLICY ACT (NEPA) DOCUMENT

The Design-Builder shall review, and adhere to all approved NEPA documents and technical reports; specifically any environmental commitments listed on the "Green Sheet" of the approved NEPA documents. These commitments are to be taken into account throughout the design and construction process. All commitments listed with respect to their technical area are to be fulfilled during construction activities and/or prior to completion of the Project.

The NEPA document, including the "Green Sheet" environmental commitments are provided on the Project website.

Should any environmental features within the NEPA study area, not addressed in the NEPA document be uncovered during construction activities, all construction activities ~~will~~shall stop

immediately in that area and the Design-Builder ~~will~~shall contact the TDOT Environmental Analysis Office for consultation. All technical study activities must be completed in accordance with Department practices; the Design-Builder shall be responsible for obtaining any necessary Documentation Standards from the TDOT Environmental Analysis Office.

In accordance with the NEPA, a re-evaluation(s) of the approved document may be required to address any additional ROW and/or easements not studied under the original footprint of the proposed project or changes to the Project design that were not covered under the approved NEPA document. The re-evaluation(s) may take place at any time during the development of the Project. Depending on the magnitude of the design changes required, the re-evaluation may require review and approval by FHWA; however, any minor changes may be documented, reviewed and concurred with by the Department's Environmental Division.

Should any changes to the design of the project occur, the Design-Builder shall provide the Environmental Division with a notification and copy of the revised plans. The Design-Builder ~~will~~shall be responsible for any technical studies and the NEPA document re-evaluation required.

○DISPOSAL OF MATERIALS

Design-Builder shall not dispose of any material within interchange areas located within the Project limits. This includes the I-75/ Ringgold Road interchange and the Welcome Center. All disposal activities shall be in accordance with the TDOT Waste and Borrow Manual (May 15, 2017 edition) located at:

https://www.tn.gov/content/dam/tn/tdot/construction/old_web_page/WasteBorrowManual.pdf

Borrow and waste disposal areas shall be located in non-wetland areas and above the 100-year, Federal Emergency Management Agency floodplain. Borrow and waste disposal areas shall not affect any Waters of the State/U.S. unless these areas are specifically covered by an ARAP, §404, and/or NPDES permit, obtained solely by the Design-Builder.

○DEPARTMENT INSPECTIONS

The Department will review and monitor the Project (Quality Assurance Inspections), including all waste and borrow areas, to ensure compliance with all applicable environmental regulations and stormwater management activities throughout the duration of the Project.

If at any time, the Design-Builder is not in compliance with any applicable permit regulations, all non-compliance items must be addressed by the Design-Builder within 24 hours of such identification. The Department has the authority to suspend work until such time as the deficiencies have been corrected.

The Design-Builder shall not be granted any cost or time compensation for any work suspensions associated with non-compliance. Any monetary fees and/or fines associated with any violations, assessed by regulatory agencies, shall be the responsibility of the Design-Builder.

○EROSION PREVENTION AND SEDIMENT CONTROL (EPSC)

All EPSC designs and implementation shall be the responsibility of the Design-Builder.

Sod shall be used for permanent stabilization and be placed at locations to prevent damage to adjacent facilities and property due to erosion on all newly graded cut and fill slopes as work progresses.

- Pre-construction vegetative ground cover shall not be destroyed, removed or disturbed (i.e. clearing and grubbing initiated) more than 14 calendar days prior to grading or earth moving activities unless the area is mulched, seeded with mulch or other temporary cover is applied.
- Clearing, grubbing, and other disturbances to riparian vegetation shall be limited to the minimum necessary for slope construction and equipment operations. Existing vegetation, including stream and wetland buffers (unless permitted), should be preserved to the maximum extent possible. Unnecessary vegetation removal is prohibited.

Temporary stabilization shall be initiated within 14 calendar days when construction activities on a portion of the site are temporarily ceased and earth disturbing activities ~~will~~shall not resume until after 14 calendar days. Permanent stabilization measures in disturbed areas shall be initiated within 14 calendar days after final grading of any phase of construction.

Steep slopes shall be temporarily stabilized not later than 7 calendar days after construction activity on the slope has temporarily or permanently ceased. Steep slopes are defined as natural or created slopes of 35% grade or greater, regardless of height.

Permanent stabilization ~~will~~shall replace temporary measures as soon as practicable. Priority shall be given to finishing operations and permanent EPSC measures over temporary EPSC measures.

Inspection, repair, and maintenance of EPSC structures shall be performed on a regular basis and sediment shall be removed from sediment control structures when the design capacity has been reduced by fifty percent (50%). During sediment removal, the Design-Builder shall take care to ensure that structural components of EPSC structures are not damaged and thus made ineffective. If damage does occur, the Design-Builder shall repair the structures at their own expense.

EPSC controls shall be inspected according to permit requirements to verify measures have been installed and maintained in accordance with TDOT standard drawings, specifications, and good engineering practices. EPSC inspections shall be documented on the TDOT EPSC inspection report and a copy of each inspection report shall be provided to the Department.

Sediment removed from sediment control structures shall be placed and be treated in a manner so that the sediment is contained within the Project limits and does not migrate onto adjacent properties and into Waters of the State/United States.

The Design-Builder shall establish and maintain a comprehensive and proactive method to inspect and prevent the off-site migration or deposit of sediment off the Project limits (e.g. R.O.W., easements, etc.), into Waters of the State/United States, or onto roadways used by the general public. If sediment escapes the construction site, off-site accumulations of sediment that have not reached a stream must be removed at a frequency sufficient to minimize off-site impacts (e.g., fugitive sediment that has escaped the construction site and has collected in a street must be removed so that it is not subsequently washed into storm sewers and streams by the next rain and/or so that it does not pose a safety hazard to users of public streets). Arrangements concerning removal of sediment on adjoining property must be settled with the adjoining property owner before removal of sediment.

The Design-Builder shall be fully responsible for maintenance as required by the Department's Standard Specification for Road and Bridge Construction, section 104.05 Maintenance During Construction. The Design-Builder ~~will~~shall be responsible for all components of the transportation system within construction limits to include, but not limited to, asphalt roadway, concrete roadway, signing, ITS, and guardrail until final acceptance of the Project by the Department.

ROW Mowing & Litter Removal

The Design-Builder shall deliver a ROW Mowing & Litter Removal service to provide a consistent vegetation height and a clean non-littered appearance from the date of the Design-Builder's executed contract with the Department until Project completion and acceptance by the Department..

See Special Provision 806 regarding Contract Mowing, Special Provision 719A regarding Removal and Disposal of Litter, and Special Provision 107AQ regarding Air Quality for Mowing for further details.

It shall be the Design-Builder's responsibility to mow and pick up litter on the full ROW from fence to fence including the median and on top of all bluffs and elevated sections of each Mowing and Litter Cycle.

Annually, there will be a minimum of four (4) Mowing & six (6) Litter Cycles. The Department shall direct the Design-Builder with the exact dates for the annual Mowing & Litter Cycle.

Acceptance of the Project

Upon Acceptance of the Project, the Department will assume responsibility for the operation and maintenance of the entire Project. Nothing contained herein shall otherwise limit any warranty obligations of the Design-Builder with respect to any Defect or non-conforming Work.

○MAINTENANCE OF TRAFFIC

The interchange construction and closures shall be phased in accordance with Special Provision 108B. Access to all side roads shall be maintained during construction.

Definitions

- Road Closure: Complete removal of traffic from a section of roadway using a signed detour route.
- Lane Closure: Reduction in the current number of lanes provided to traffic
- Rolling Road Block: Temporarily delaying traffic for a limited amount of time without stopping traffic or providing a detour.

General Requirements

The objective is to ensure a strategic plan for traffic management on the Project, to minimize lane/road closure, and cause the least interference with traffic.

The Design-Builder shall:

- Develop a Transportation Management Plan including a Traffic Control System that addresses major aspects of the work for individual construction areas, phases and stages including

temporary traffic control, transportation and information strategies. The Transportation Management Plan shall be in accordance with TDOT Standard Specifications for Road and Bridge Construction, TDOT Standard Drawings, TDOT Standard Traffic Operations Drawings, TDOT Traffic Design Manual, TDOT Design Guidelines, TDOT Work Zone Safety and Mobility Manual, ATSSA Quality Guidelines for Temporary Traffic Control Devices and Features (Current Edition), and the latest edition of the Manual of Uniform Traffic Control Devices.

- Use Traffic Control materials from the Department's Qualified Products List (QPL) (<https://www.tn.gov/tdot/materials-and-tests/research---product-evaluation-and-qualified-products-list.html>)
- The Design-Builder shall insure drainage spread across all traffic lanes does not exceed allowable spread. Design-Builder shall provide drainage/spread calculations for all phases of traffic control phasing.

The Transportation Management Plan **willshall** describe in detail all accommodations for traffic access and flow during all stages of construction for the life of the Project. The plan shall include the following:

- Detailed proposed sequencing plan that includes each step of the project including all major traffic shifts or changes, minor shifts or changes, closures, alternate traffic patterns.
- Overall goals of the sequencing plan and how the plan aligns with the Project Critical Path.
- Plans for providing Queue Protection/~~Smart Work Zone~~ during operations requiring temporary lane closures, temporary road closures, rolling roadblocks, traffic pacing, and setting up or removing long-term lane shifts.
- Conceptual construction staging diagrams (scale: 1 inch = 200 feet) including lane configuration and traffic management of the Interstate, State Routes, and local streets during the different stages of construction. Staging areas within the project limits shall be approved by the Department.
- Narrative description of how Design-Builder will schedule and sequence the construction to minimize impacts on the environment, communities and traveling public while still providing acceptable construction performance.
- Brief description of the laydown, recycling, staging, disposal areas, waste and borrow pits, and maintenance locations to be used during construction.
- Description of how the ROW and adjacent roads and properties will be maintained and protected, including the intended measures to be used to mitigate and minimize noise, vibration, light, dust, erosion/run-off and local road damage.

Temporary Lane/Road closure

The Design-Builder **willshall** maintain the existing numbers of lanes on I-24, I-75, and all interstate-to-interstate ramps throughout construction except for Department-approved night or weekend lane or roadway closures except as noted below. Minimum lane widths **willshall** be eleven (11) feet. Minimum inside and outside shoulder widths **willshall** be two (2) feet.

Road closures will only be allowed on I-24 ramps, I-75 ramps, and Spring Creek Road Bridge. Road closures will only be allowed from Friday at 10:00 PM until Monday at 4:00 AM. The Design-Builder **willshall** utilize local uniformed police officers when detouring Interstate Traffic at intersections to assist in flagging.

Rolling road blocks will only be allowed at night from 9:00 PM until 6:00 AM with a maximum duration of thirty (30) minutes.

All temporary lane closures and road closures must be approved by the Department in advance. For lane closures on I-24, I-75 and ramps, request for approval must be sent to the Department seven (7) calendar days in advance of the proposed lane closure. Requests for road closures of I-75 ramps and I-24 ramps must be sent to the Department twenty-one (21) calendar days in advance of the proposed closure. Road closures of I-75 ramps and I-24 ramps will be allowed on weekends only.

For local street closures, requests for approval must be sent to the Department, the City of Chattanooga, City of East Ridge, and others as described below. Requests for road closures must also include proposed detour routes and detour signing details. Local streets (non-State Routes) will not be allowed as detour routes for I-24 and I-75 traffic.

No less than seven (7) days prior to the closure of the road, the Design-Builder **willshall** notify the following individuals or agencies completely describing the affected roads and the approximate duration of the construction: these parties include, but are not limited to: i) local law enforcement office, ii) local fire department, iii) ambulance service, iv) U.S. Postal Service, v) local road superintendent, vi) railroad company (if applicable), vi) the City of Chattanooga and Hamilton County's Parks and Recreation Department (if applicable), vii) Hamilton County Public Works, viii) Chattanooga Airport, ix) Parkridge East Hospital, x) local school superintendent, xi) TDOT's Region 2 Traffic Management Center (TMC), and xii) Georgia Department of Transportation's Traffic Management Center.

There will be periods when the Design-Builder will not be allowed to have any type of closures due to holidays as specified in subsection 104.04 of the Standard Specification and during major events. Major events and known periods when lanes cannot be closed include, but are not limited to: Riverbend, 2018 SEC Championship, and Chattanooga marathons/triathlons that use SR29 and/or SR153. The Department may deny any request for lane closures.

The Design-Builder **willshall** notify the Department and the local governmental agency responsible for traffic control maintenance at least seven (7) days in advance of any cold planing activity at signalized intersections where detector loops are on the pavement. The maintaining agency will then be responsible for disconnecting the loop detectors and making any necessary timing adjustments in the signal controller prior to the construction.

Temporary Marking, Detours, Lane Shifts and Median Cross-overs

Temporary marking **willshall** adhere to guidance outlined in Section IV of current edition of the Department's Design Division Roadway Design Guidelines for pavement markings except as noted below. The minimum temporary pavement marking width **willshall** be 8-inches. Temporary pavement markings to be utilized for less than seven (7) working days may be painted. Temporary pavement markings to be utilized for seven (7) working days or more shall be spray thermoplastic or tape.

Temporary pavement line markings on intermediate layers of pavement **will** be reflective tape or reflectorized paint installed to permanent standards at the end of each day's work. Short, unmarked sections will not be allowed.

The temporary pavement marking on detours, lane shifts and median cross-overs **will** be installed and maintained to the same standards as for permanent markings on the main roadway. These markings **will** be in place prior to allowing traffic onto the pavement.

Before opening detours, lane shifts and/or median cross-overs to traffic, the transitional markings on the existing roadway must be in place. All existing markings in the area of these transitional markings **will** be obliterated and all existing raised pavement markers **will** be removed to eliminate conflicting markings.

All temporary lane shifts and detours **will** be paved, striped, signed and the vertical panels are to be in place before it is opened to traffic.

Existing median cross-overs designated "Official Use Only" **will** be maintained unless approved otherwise by the Department.

Contrast striping **will** be used for temporary striping on concrete pavement/structures located on ramps and along I-75.

All pavement marking removal on final surfaces shall be accomplished by water blasting or another non-marring method. Any damage to the pavement surface caused by the selected method shall be removed and replaced at the contractor's expense.

Temporary Signage

All temporary signage shall be in accordance with TDOT Standard Specifications for Road and Bridge Construction, TDOT Standard Drawings, TDOT Standard Traffic Operations Drawings, TDOT Traffic Design Manual, TDOT Design Guidelines, TDOT Work Zone Safety and Mobility Manual, and the latest edition of the Manual of Uniform Traffic Control Devices.

Changeable Message Signs

Changeable Message Signs **will** be used in advance of changed roadway conditions such as lane closures, road closures, lane shifts, or detour routes. The locations of these Changeable Message signs shall be reviewed by the Department prior to implementation. Portable changeable message signs should be used as a supplement to and not as a substitute for conventional signs and pavement markings. Portable changeable message sign trailers should be delineated on a permanent basis by affixing retroreflective material, known as conspicuity material, in a continuous line on the face of the trailer as seen by oncoming road users.

Emergency Signage

All existing "emergency reference markers" and "hospital signs" shall be maintained within full view of the motoring public throughout all phases of construction.

- If the difference in elevation is eliminated or decreased to 2 inches or less by the end of each workday, cones may be used during daylight hours in lieu of drums, barricades or other approved protective devices mentioned in the first list item, provided warning signs are erected. Warning signs (uneven lanes and/or shoulder drop-off) shall be placed in advance of and throughout the exposed area. Maximum spacing between signs shall be 2,000 feet with a minimum of two (2) signs per exposed area. Where uneven pavement is encountered, signs shall be placed on each side of the roadway.
- When the difference in elevation is between the through traffic lane and the shoulder and the elevation difference is less than 3.5 inches, the Design-Builder may use warning signs and/or protective devices as applicable and concurred with by the Department. See first list item regarding use of drums, barricades or other approved protective devices. Warning signs (uneven lanes and/or shoulder drop-off) ~~will~~shall be placed in advance of and throughout the exposed area. Maximum spacing between signs shall be 2,000 feet with a minimum of two (2) signs per exposed area. Where uneven pavement is encountered, signs shall be placed on each side of the roadway.

In these situations, the Design-Builder shall limit his operations to one work zone not exceeding 2 miles in length unless otherwise noted on the plans or concurred with by the Department. Once the Design-Builder begins work in a work zone, a continuous operation shall be maintained until the difference in elevation is eliminated. Simultaneous work on separate roadways of divided highways will be considered independently in regard to restriction of work zone activity.

- Differences in elevation between adjacent roadway elements greater than 6 inches but not exceeding 18 inches;
 - The Design-Builder shall accomplish separation by drums, barricades or other approved devices in accordance with the following:
 - Where posted speeds are 50 mph or greater, spacing of the protective devices shall not exceed 100 feet.
 - Where posted speeds are less than 50 mph, the maximum spacing of the protective devices in feet shall not exceed twice the posted speed in miles per hour.

In order to use this method, the Design-Builder must reduce the difference in elevation to 6 inches or less by the end of the workday that the condition is created.

- The Design-Builder shall provide drums, barricades or other approved separation devices as specified in the first list item, and construct a stone wedge with a 4:1 slope, or flatter, to eliminate the vertical offset if the lower elevation is at or below subgrade at the end of each day.
- The Design-Builder shall provide drums, barricades or other approved separation devices as specified in the first list item and if the lower elevation is base stone or asphalt pavement, placement of subsequent layers of pavement must begin the next work day and progress continuously until the difference in elevation is eliminated or reduced to six inches or less.

- The Design-Builder shall provide separation by portable barrier rail.

For the preceding three list items, the Design-Builder shall use the shoulder drop-off warning sign with plaque (W8-17 and W8-17p). It shall be placed in advance of and throughout the exposed area. Maximum spacing between the signs shall be 2,000 feet with a minimum of two (2) signs per exposed area. In these situations, the Design-Builder shall limit his operations to one work zone not exceeding 1 mile in length unless otherwise noted on the plans or concurred with by the Department. Once the Design-Builder begins work in a work zone, a continuous operation shall be maintained until the difference is eliminated. Simultaneous work on separate roadways of divided highways will be considered independently in regard to restriction of work zone activity.

- Differences in elevation between adjacent roadway elements greater than 18 inches, separation ~~will~~shall be provided by use of portable barrier rail.

In this situation the Design-Builder shall limit his operations to one work zone not exceeding 1 mile in length unless otherwise noted on the plans or concurred with by the Department. Once the Design-Builder begins work in a work zone, a continuous operation shall be maintained until the difference in elevation is eliminated. Simultaneous work on separate roadways of divided highways will be considered independently in regard to restriction of work zone activity.

Difference in elevation is within 30 feet of the nearest traffic lane being used by traffic caused by grading, excavation for utilities, drainage structures, undercutting, etc., differing situations shall be handled as follows:

- Difference in elevation is within 8 feet of the nearest traffic lane with difference in elevation greater than 3/4 inch and not exceeding 2 inches:
 - Warning signs (uneven lanes and/or shoulder drop-off) shall be placed in advance of and throughout the exposed area. Maximum spacing between signs shall be 2,000 feet with a minimum of two (2) signs per exposed area. Where uneven pavement is encountered, signs shall be placed on each side of the roadway.
- Difference in elevation is within 8 feet of the nearest traffic lane with difference in elevation greater than 2 inches and not exceeding 6 inches:
 - Separation shall be accomplished by drums, barricades or other approved devices in accordance with the following:
 - Where posted speeds are 50 mph or greater, spacing of the protective devices shall not exceed 100 feet.
 - Where posted speeds are less than 50 mph, the maximum spacing of the protective devices in feet shall not exceed twice the posted speed in miles per hour.
- Difference in elevation is within 8 feet of the nearest traffic lane with difference in elevation greater than 6 inches: