



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

CONSTRUCTION DIVISION
SUITE 700, JAMES K. POLK BUILDING
505 DEADERICK STREET
NASHVILLE, TENNESSEE 37243-1402
(615) 741-2414

CLAY BRIGHT
COMMISSIONER

BILL LEE
GOVERNOR

May 31, 2019

Re: ADDENDUM #1
Contract No.: DB1802
County: Polk

To Whom It May Concern:

This addendum revises the RFP Contract Book 1 and 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,

Lia Obaid, P.E.
Assistant Director of Construction
Construction Division

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

US-64 (SR-40) over Ocoee River Bridge

Polk County- TENNESSEE

CONTRACT NUMBER: DB1802



April 12, 2019

Addendum #1 May 31, 2019

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: US-64 (SR-40) over Ocoee River Bridge

This project will consist of the construction of a new bridge carrying State Route (SR) 40 / US 64 over the Ocoee River (FEMA regulated) on a new alignment. The project shall include construction of the new 3-lane roadway and bridge, intersection improvements, construction of a haul road, utility coordination and relocations, removal of portions of the existing roadway, right-of-way (ROW) acquisition, environmental permitting, and demolition of the existing bridge. Traffic will be maintained on the existing roadway and bridge. Refer to Section 10.3 Temporary Lane / Road Closures in RFP Book 3 for lane closure restrictions.

Additionally the Design-Builder shall be responsible for:

- Easements required for the construction of the Project. Any easement required to construct the Project shall be in the name of Tennessee Department of Transportation.
- Coordinating the construction/ relocation of private utilities with the appropriate owners, **except that TDOT will perform the utility coordination in the preparation of the utilities' relocation plans and contracts.**
- Development and installation of the Traffic Control and Pavement Marking Plans.
- All erosion prevention and sediment control designs and implementation.
- Preparing all documents necessary for to obtain the environmental permits. Should the Design-Builder's activities be in violation of the environmental permits, law and/or regulations and therefore cause fines and/or penalties to be assessed against the Department, said fines and/or penalties will be deducted from monies due the Design-Builder.
- Following all reference guidance as stated in **Design-Build Standard Guidance.**
- Specific Technical requirements as stated in **Contract Book 3 (Project Specific Information).**
- Coordination and communication with all stakeholders, including but not limited to:
 - Tennessee Department of Transportation (Headquarters Construction, Region 2, and Structures Division)
 - Polk County
 - Tennessee Wildlife Resources Agency (TWRA)
 - Local Property Owners
 - Local Businesses
 - Tennessee Valley Authority (TVA)

reached by five (5) Calendar Days prior to the Proposal Due Date, the product shall be deemed rejected.

e. QUESTIONS

The Design-Builders may provide questions on RFP provisions, Contract provisions, and specifications that the Design-Builder considers unclear or incomplete. To be considered, the questions must identify the unclear language or omission, or the specific discrepancies between identified provisions that result in ambiguity. All requests shall be submitted to the Department Alternative Contracting Assistant Director and will only be accepted in the format of Form QR in electronic format by e-mail (lia.obaid@tn.gov) or fax. Any questions to addenda issued after the question deadline will be considered and answers issued if time allows.

f. REQUESTS FOR CHANGE OF CONTRACT TERMS OR SPECIFICATIONS

The Design-Builders may submit a request for change of Contract terms or specifications setting out the language for which change is sought and indicating the document title, page, and subsection where the language is located. To be considered, the request must include the reason for the requested change, supported by factual documentation, and the proposed change. All requests shall be submitted to the Department Alternative Contracting Assistant Director and will only be accepted in the format of Form QR in electronic format using MS Word by e-mail (lia.obaid@tn.gov) or fax.

g. PROHIBITED DESIGN-BUILDER COMMUNICATIONS

No member of Design-Builder's organization (employees, agents, Principal Participants, the Designer, Key Personnel or the Technical Manager) may communicate with members of another Design-Builder's organization to give, receive, or exchange information, or to communicate inducements, that constitute anti-competitive conduct in connection with this procurement.

The Design-Builders shall not contact stakeholder staff regarding the RFP content or the requirements for the Project. Stakeholder staff includes employees of the Department, city(ies) and county(ies) in which the Project or any part of it are located.

Prohibited communications do not include contact with regulatory/county/city officials for the limited purpose of obtaining information regarding available detour routes, ~~and~~ conditions associated with such use or regulatory/county/city guidelines, **and city/county owned utilities.**

The Design-Builder shall not contact the regulatory agencies directly. Any questions the Design-Builder may have for the regulatory agencies during the proposal phase shall be sent to TDOT who will communicate these to the agencies.

5. PROCUREMENT SCHEDULE/SUBMITTAL DEADLINES

The Procurement Schedule and submittal deadlines are set out below. The Department will not consider requests on any submittal received by the Department after the deadline for its submittal date stated below. The Department will not consider requests on any submittals pertaining to an Addendum after the deadline established in the Addendum.

Deadline for Submittal of Alternate Technical Concepts	<i>On or before</i> May 31 June 28, 2019 4:00 p.m., CT.
Deadline for Response to Alternate Technical Concepts	June 21 July 19, 2019 4:00 p.m., CT.
Deadline for Submittal of Initial Right-Of-Way Acquisition (Exhibit)	June 28, 2019
Deadline for Aesthetic Bridge Design and Initial Right-of-Way Submittal	August 16, 2019
Deadline for Response to Aesthetic Bridge Design and Initial Right-Of-Way Acquisition	July 8 August 30, 2019
Deadline for Submittal of Question Requests, and Requests for QPL Determination	July 26 September 6, 2019 4:00 p.m., CT.
Anticipated Deadline for Issuance of Last Addendum	August 9 September 20, 2019 4:00 p.m., CT.
Technical Proposal and Price Proposal Due Date and Time	August 23 October 18, 2019 4:00 p.m., CT.
Price Proposal Opening	September 13 November 1, 2019 9:00a.m., CT.
Anticipated Award of Design-Build contract, or rejection of all proposal	<i>On or before</i> October 4 November 15, 2019
Anticipated Issuance of Initial Notice to Proceed	October 25 December 6, 2019

The Department will not consider any late Proposals. Proposals received after the Proposal Due Date will be returned to the unopened. The Department will not consider any Proposal modifications submitted after the Proposal Due Date. Nor will the Department acknowledge Proposal withdrawals submitted after the Proposal Due Date. Any such attempted withdrawal will be ineffective.

**DESIGN-BUILD
RFP CONTRACT BOOK 3
PROJECT SPECIFIC INFORMATION**

TENNESSEE DEPARTMENT OF TRANSPORTATION

**STATE ROUTE 40 / US 64, BRIDGE OVER OCOEE RIVER
POLK COUNTY- TENNESSEE**

CONTRACT NUMBER: DB1802



April 12, 2019

Addendum #1 May 31, 2019

1.2 PROJECT GOALS

The following goals have been established for the Project (**not listed in any specific order**):

- Minimize inconvenience to the public during construction.
- Provide a management system or approach that ensures the requirements of the Project will be met or exceeded.
- Provide a high-quality project that minimizes future maintenance.
- Provide a solution consistent with the Department's Roadway Design Standards.
- Adhere to local, state, and federal environmental regulations and/or permits that are required in executing and/or completing the Project.
- Incorporate Best Management Practices (BMPs) to control sediment, storm water runoff/discharge, or other environmental parameters that are established for the Project.
- Implement innovative solutions to maximize the return on taxpayer investment by reducing costs or improving quality of the transportation system.
- Complete construction as quickly as possible and/or not later than October 30, 2022.
- Incorporate safety and positive drainage into all aspects of design and construction with the ultimate goal of zero incidents and accidents.
- Provide a visually pleasing finished product.

1.3 DEPARTMENT PROVIDED MATERIALS

Plans and/or the Department supplied material are available for download on the Department's project website:

<https://www.tn.gov/tdot/tdot-construction-division/transportation-construction-alternative-contracting/design-build-project---sr-40-bridge.html>

- Survey Data ~~File in Microstation~~ Files including Microstation files;
- The NEPA documentation was processed as a D List Categorical Exclusion (CE) under 23 CFR 771.117(d) approved on March 13, 2019;
- NEPA Environmental Commitments – Green Sheet dated March 11, 2019;
- Roadway Preliminary (30%) Plans (March 25, 2019) [the preliminary (30%) plans are supplied for information only, the scope of the project listed in the RFP takes precedence.];
- Existing Bridge Plans;
- **Bridge Inspection Report;**
- **Bridge Repair Plans 2019;**
- Asbestos Survey Report dated December 2016
- Preliminary Hydraulic Grade Approval Letter, dated September 21, 2018;
- HEC-RAS Hydraulic Model Files (Note: The model is provided for informational purposes only, a new model, prepared and stamped by the Design-Builder, is required);
- Bridge Preliminary (30%) Plans (for informational purposes only)
- **Utilities Contact List;**

- Ocoee Utility District letter dated April 10, 2019;
- Preliminary Plans in dgn format and sheet files shall be available to the contractor after the CAD Disclaimer form (provided on the project website) is submitted to TDOT;
- Traffic Data developed by the Department’s Project Planning Division, dated November 15, 2018;
- Design-Build Preliminary Geotechnical Reports, dated November 7, 2018;
- Pavement design (Note: Alternative pavement design will not be allowed), dated ~~November 15, 2018~~ March 5, 2019;
- TVA supplied water generation table below Dam #1 (with water elevations), from 2003 to 2018;
- 2019 Recreational Release Calendar for Ocoee Dam #1 (Design-Builder shall obtain the latest information);
- 2019 Recreational Release Calendar for Ocoee Dam #2 (Design-Builder shall obtain the latest information);
- State Historic Preservation Office (SHPO) letter of opinion that there are no National Register of Historic Places (NRHP) listed or eligible archaeological properties affected, dated June 26, 2018;
- State Historic Preservation Office (SHPO) letter of opinion that there are no National Register of Historic Places (NRHP) listed or eligible historical/architectural properties affected, dated July 31, 2018;
- Coast Guard letter of determination that this section of the Ocoee is not a waterway over which the Coast Guard exercises jurisdiction for bridge administration purposes and therefore a Coast Guard bridge permit is not required for this project, dated October 1, 2018;
- Bridge renderings, demonstrating the desired appearance of the SR 40 / US 64 Bridge over the Ocoee River, including aesthetic treatments, **native model file from Sketchup (Endscape, the rendering program within Sketchup, outputs directly to PNG files that are provided)**;
- Pylon Renderings, demonstrating the desired appearance of the pylon signs on SR 40 / US 64, including aesthetic treatments along with example Forest Service pylon and plans for informational purposes;
- Ocoee River and emblem and formwork dimensions for the two pier faces are provided;
- Example maintenance road gate detail;
- TDOT 2017 Waste and Borrow Manual (May 15, 2017 edition); and
- **CAD Disclaimer Form.**

Except as provided by the Department above, the Design-Builder shall verify existing survey and provide all update surveys, mapping, plans, verification of existing utilities, investigation, and analysis required for completion of the work.

The Design-Builder shall adhere to all commitments stated in the environmental documents. The Design-Builder shall acknowledge that materials furnished by the Department are preliminary and provided solely to assist the Design-Builder in the development of the project design. The Design-Builder shall be fully and totally responsible for the accuracy and completeness of all work performed under this contract and shall hold the Department harmless and shall be fully liable for any additional costs and all claims against the Department which may arise due to errors, omissions and negligence of the Design-Builder in performing the work required by this contract.

2.7 RECORDS MANAGEMENT PLAN

The Design-Builder shall describe procedures for managing and maintaining Project record documents in accordance with Sections 5.2.11 and Chapter 7 of the *DB Standard Guidance* and the project-specific requirements herein.

The Department will perform a combination of Audits, Reviews, Inspections etc. to assess whether the Design-Builder's integrated project management is functioning properly and determine whether its records and information are reliable and up to date.

Upon completion of the Project, the Design-Builder shall provide the Alternative Contracting Office a transmittal letter, an electronic copy (CAD and signed PDF's) of the As-Built drawings, and final foundation type, including footing elevations and lengths of individual piles, prior to final payment of funds to the Design-Builder. In addition, the Design-Builder shall provide TDOT Structures Division a final as-built set of plans for all structures (bridges, walls, foundations, etc.). The plans shall be delivered on USB flash drive (each sheet an individual PDF file).

The Tennessee licensed Professional Engineer in charge of the development of the Project plans shall place their seal, including signature and date, on the right side of the title sheet. All plans sheets shall contain the seal, including signature and date, of the Professional Engineer in charge of its development. Certified digital signatures shall be required for all plan submittals (refer to Section 4 of the TDOT Design Guidelines).

The As-Built Plans and the Design-Builder Specifications following construction completion shall incorporate any changes to the Readiness-for-Construction Design Review Plans and Specifications, changes made during construction as well as all utility locations within ROW as described in the *DB Standard Guidance*.

3.0 ROADWAY SCOPE OF WORK

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 American Association of State Highway and Transportation Officials (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.

3.1 DESIGN REQUIREMENTS

The proposed horizontal and vertical alignments of SR 40 / US 64 shall be designed and constructed to meet or exceed a 50-mph design speed for a Rural Principal Arterial **and rolling terrain for a 2-lane facility**.

Traffic lanes on SR 40 / US 64 shall be 12 feet wide (see TDOT Typical Sections Standard Drawing RD11-TS-3).

The two-way left-turn lane on SR 40 / US 64 shall be 12 feet wide.

The shoulders on SR 40 / US 64 shall be 10 feet wide (8 feet paved).

Traffic lane widths on side roads shall be as follows: Welcome Valley Road 10 feet, Hildabrand Road 12 feet, Cookson Creek Road 12 feet and maintenance road 9 feet (see TDOT Typical Sections Standard Drawings RD11-TS-1 and RD11-TS-1A).

The shoulders on all side roads shall be 2 feet wide (0 feet paved).

The minimum clear zone along SR 40 / US 64 shall be 20 feet for cut slopes and 28 feet for fill slopes.

Welcome Valley Road's approach to SR 40 / US 64 shall be realigned as shown in the preliminary (30%) plans to meet all applicable sight distance requirements.

River Bend Drive shall utilize existing SR 40 / US 64 to access relocated SR 40 / US 64 as shown in the preliminary (30%) plans. All driveway or intersection connections to SR 40 / US 64 shall be designed to meet minimum sight distance requirements.

Proposed ROW line shall be set at 10 feet (minimum) outside of the toe of proposed slope along SR 40 / US 64. The Design-Builder shall maintain the minimum offset (or greater) with any adjustments to the SR 40 / US 64 alignment. **The ROW line shall be set as shown on the preliminary (30%) plans adjacent to the maintenance road. No land disturbance is allowed greater than 10 feet outside of planned slope lines.**

All existing permanent signage within the project limits shall be replaced.

Pyritic / acid producing rock has not been identified within the project area. Should it be identified during construction, the Design-Builder shall follow all requirements found in Special Provision 107L *Potentially Acid Producing Materials*. **The Design-Builder is responsible for all costs for mitigating pyritic material.**

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 deems that additional ROW is needed outside of the proposed ROW shown on the TDOT-provided preliminary (30%) plans (studied in the approved NEPA document), they shall be responsible for any and all additional environmental technical studies and re-evaluation of the NEPA document (See Figures 2, 2A & 2B - NEPA Study Area Map). The Design-Builder is responsible for all ROW appraisals and acquisitions, Move-In State (MIS) utilities relocation and any permits necessary. Any increase in ROW by the Design-Builder must be approved by TDOT in the proposal phase and shall not require relocations. **The Design-Builder is required to submit an Initial Right-Of-Way Acquisition Exhibit for approval in accordance with the schedule in RFP Contract Book 1. In addition to the conceptual plans required in Response Category IV in RFP Contract Book 1, the Design-Builder shall also submit ROW Acquisition sheets which shall be in the format of the Right-of-Way Acquisition and Property Map sheets in the Roadway Preliminary (30%) Plans provided by the Department.**

The Design-Builder shall identify the need for any special roadway design details (i.e. any special drainage structures, rock embankment, 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* and *TDOT Instructional Bulletins (IBs)* applicable on the date the RFP is issued 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 shall provide hydraulic calculations (including spread calculations) to the Department.

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.

TDOT will perform the utility coordination **in the design phase** for this project **as specified in Section 7.0, Item 1**. The Design-Builder shall verify the location of all utilities. Water and sewer are Move-In State (MIS). Design-Builder shall refer to the utility scope of work **in Section 7.0** for MIS requirements.

The Design-Builder shall conduct and submit a load rating analysis for the existing bridge if the use of the existing bridge for construction activities exceeds normal highway loading. The load rating is to be submitted in AASHTOWare Bridge Rating software or a format to be concurred with by the Department. If the load rating analysis results in a substandard load capacity, the Design-Builder shall be responsible for any remedial action required on the bridge or modify their construction means and methods to ensure that any portion of the bridge that will be open to live loads has sufficient load capacity.

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

4.1 SR 40 / US 64 BRIDGE OVER OCOEE RIVER DESIGN REQUIREMENTS

The new bridge shall be designed and detailed 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 as well as the current practices and policies of the TDOT Structures Division.

The Design-Builder shall reference and adhere to the Department's Standard Specifications for Road and Bridge Construction (January 1, 2015 edition) for construction materials and methods.

Structural steel girders shall be designed continuous for all loads and shall be haunched as depicted on the bridge renderings. Structural steel shall be A709 Grade 50W. ~~Post-tensioned cast-in-place or segmental concrete shall be designed continuous for all loads and shall be haunched comparable to that depicted on the bridge renderings. Precast concrete beams shall be designed continuous for live loads.~~ Concrete for the bridge deck shall be Class ~~"D"~~ "DS" ($f'_c = 4000$ psi) and meet the requirements of the Standard Specifications. Concrete for substructures shall be Class "A" ($f'_c = 3000$ psi) and meet the requirements of the Standard Specifications. ~~Class A concrete in pavement at bridge ends shall have surface aggregate in accordance with Article 903.24 of the Specification.~~ Other types of concrete required by the design from the Design-Build Team shall meet the minimum design strength requirements and also the requirements of the Standard Specifications or any applicable Supplemental Specification or Special Provision.

The SR 40 / US 64 Bridge over the Ocoee River shall be designed for HL-93 live loading. The bridge design shall include 35 pounds per square foot (psf) for a future wearing surface.

The bridge rail shall be a concrete open rail crash tested to meet a 50-mph design speed. It shall include the Tri-Star emblem as shown on the TDOT Standard Drawing STD-8-6. The bridge preliminary provided by TDOT shows standard rail STD-11-4 (included in Reference Material located on the project website) which can be used for speeds of 50 mph when a TL-3 rated guardrail transition is used. The Design-Builder may submit an ATC for an alternative open concrete rail for approval. ~~An open concrete rail is required for aesthetics to provide a view of the river through the rail.~~

The Design-Builder shall perform a hydraulic analysis for bridge deck drainage and shall meet the criteria in the TDOT *Design Procedures for Hydraulic Structures*.

The Design Builder shall adhere to all permit, FEMA, and hydraulic design criteria when designing bridges, culverts and culvert extensions. Design Builder shall use Drainage Manual found on TDOT Design Division website, and Design procedures for Hydraulic Structures 2012 found on TDOT Structure Division website. Design Builder shall use FHWA scour publication HEC-18, and FHWA's Hydraulic Engineering Circular 21 "Design of Bridge Deck Drainage" and Hydraulic Engineering Circular 22, "Urban Drainage Design

Manual”. Hydraulic designs for structures with a 50-year flow rate higher than 500 cubic feet per second (cfs) shall include a HEC-RAS model of the ‘no-bridge’, existing structure and proposed structure conditions for flood events up to the 500-year flood. The Design-Builder shall submit a hydraulic design to TDOT for approval; this design shall be sealed by a Professional Engineer licensed in Tennessee. The bridge hydraulic design shall meet the FEMA “No-rise” requirement (i.e., the proposed 100-year flood elevation is equal to or less than the existing). No ATC will be considered by the Department that creates the need for a Federal Emergency Management Agency (FEMA) Conditional Letter of Map Revision (CLOMR) or Letter of Map Revision (LOMR), **including the placement of fill within the FEMA 530-foot wide floodway at the bridge. Excavation below natural ground elevation for the purpose of flood storage or adding hydraulic capacity to the bridge shall not be allowed.**

The Design-Builder shall submit shop drawings in accordance with the requirements set forth in the Standard Specifications for Road and Bridge Construction for bridge components, erection plans and calculations for concurrence by the Department. For demolition of the existing SR 40 / US 64 Bridge over the Ocoee River, the Design-Builder shall submit demolition plans and calculations for concurrence by the Department. The shop drawings, erection plans, and demolition plans shall be submitted in a timely manner allowing ten (10) business days for the Department’s review.

Should the Design-Builder elect to use drilled shafts, they shall be constructed according to Special Provision 625 Drilled Shaft Specifications.

The bridge shall be constructed while maintaining the minimum number of lanes open to traffic during construction as specified in this RFP.

The new structure shall be wide enough to incorporate the full roadway width as presented in the functional plans (three 12-foot lanes and 10-foot shoulders). The new structure shall provide at least ~~the same~~ **24’-0” minimum** vertical clearance over the river ~~as the existing structure~~ measured from the Normal Water Level elevation of 714.90 shown on the Bridge Preliminary Layout and shall apply for the entire width of the river channel from bank to bank. The bearings for the girders shall be seated above the 100-year flood elevation of 735.20. Piers 1 and 2 shall be no closer to the river than the stations shown on the Bridge Preliminary Layout. The Design-Builder shall provide any sheeting or shoring necessary to protect the existing bank from sloughing into the river during excavation for pier construction.

The SR 40 / US 64 Bridge’s main span shall completely span the Ocoee River with no pier foundations in the river (must span top of bank to top of bank). No ATC will be considered by the Department that places a pier in the Ocoee River or creates the need for CLOMR/LOMR. **The Design-Builder may provide a different span arrangement which must be presented in the Bridge Aesthetics Submittal stating that the submitted span arrangement meets the hydraulic requirements. TDOT can approve the span arrangement on the condition that the hydraulics are approved in the design process. No uplift at the abutment is allowed.**

4.2 SR 40 / US 64 BRIDGE OVER OCOEE RIVER AESTHETICS - SIGNATURE BRIDGE

The SR 40 / US 64 Bridge over the Ocoee River is considered a gateway to the region. Aesthetic features are therefore included in this RFP to enhance the appearance of the bridge and are described below. Design-Builders shall submit their conceptual plans and specifications for aesthetic features as ~~an ATC~~ **a Bridge Aesthetics Submittal** for approval during ~~the~~ procurement phase **including any changes deviating from the RFP. ATCs for Changes in** aesthetic features **from the approved Final Bridge Aesthetics submittal** will not be allowed after the successful Design-Builder is selected.

The Design-Builder’s Bridge Aesthetics Submittal shall include but not be limited to:

- Bridge length supported by hydraulic analysis**

- Span arrangement and lengths
- Superstructure cross-section
- Open concrete bridge rail
- Beam dimensions
- Haunch dimensions
- Pier 1 and 2 dimensions
- Pier 3 shape and dimensions
- Stone facing
- Ocoee symbol
- Pylons

For the Draft Bridge Aesthetics Submittal, the Design-Builder may submit alternatives of a particular aesthetic item, and TDOT will approve or disapprove each alternative of that aesthetic item. After TDOT's review of the Design-Builder's Draft Bridge Aesthetic submittal, all Design-Builders shall submit for approval a Final Bridge Aesthetics Submittal in accordance with the schedule in RFP Book 1 which shall include renderings with a view on the river, a bird's-eye view and a view of the face of pier with the Ocoee symbol adjacent to the river (similar to the renderings provided in the Reference Material). All Design-Builders must submit the Final Bridge Aesthetics submittal with renderings even if they don't change any of the aesthetic features as shown on the TDOT bridge renderings.

The Design-Builder shall provide the bridge beams ~~have been~~ depicted in the bridge renderings ~~as which are~~ haunched weathering steel girders; ~~an~~ no ATC may be submitted for approval using other beam designs and materials. ~~However, all beams shall be made of the same material for the full length of the bridge (e.g., shorter spans cannot be concrete beams and the main span steel girders).~~ All beams in the bridge cross section shall be identical in depth with the same haunch dimensions. The parabolic haunch shall extend 25% into the river span from the pier with a ratio of maximum girder depth to minimum girder depth of 1.6. The haunch into the adjacent span shall be the same length as in the river span.

All exposed concrete surfaces shall receive an applied texture coated finish of Mountain Grey (AMS STD-595 color No. 36440), except that the top and the side of the bridge rail facing traffic shall receive a white finish (AMS STD-595 color No. 37886).

The Design-Builder is to provide an accent lighting system to consist of bridge rail mounted lighting to provide a wall wash effect on the street side of the bridge railing as well as up-wash lighting for signs to be installed on the pylons at the four corners of the bridge. The lighting system is to consist of photo-controlled LED lights supplied by a single control center to be installed at one end of the bridge, 2-inch conduit with appropriate junction boxes and conductors to be installed in the top rail of the bridge rail. The light style and color are to be selected to blend with the bridge rail and **must be** approved by the Department. ~~The lighting of the bridge rail shall be continuous light without dark spots as depicted in the bridge renderings.~~

~~A pier shape has been provided in the bridge renderings. An ATC for a different pier shape may be submitted to TDOT for approval; however, any pier shape must meet the Department's intent of providing an aesthetically pleasing signature bridge and must incorporate the rock wall at the base. TDOT is the sole judge of what is aesthetically acceptable, and their decision is final. The formwork with the inlay of the Ocoee River symbol and the rock wall at the base of the pier as shown on the bridge renderings must be incorporated in the proposed pier. The inlay of the Ocoee River symbol shall be (AMS STD-595 color No. 35240) Blue paint with Grey overtones. The Design-Builder shall use the hammerhead pier type and shape shown in the bridge renderings and bridge preliminary for Piers 1 and 2 adjacent to the river. The radius of the pier cantilever and the dimensions of the inlay of the Ocoee River symbol may be modified to fit the column height from the top of the masonry wall to the bottom of the pier cap. If the symbol dimensions~~

must be reduced from those provided in the Reference Material, the symbol shall be no further than 2-feet from the bottom of cap and top of the masonry wall. The Design Builder may use a different concrete pier shape at Pier 3 except that a pile supported bent cap is not allowed. The formwork with the inlay of the Ocoee River symbol and the rock wall at the base of the pier as shown on the bridge renderings must be incorporated in Piers 1 and 2. The inlay of the Ocoee River symbol shall be 2-inches in depth and painted Blue with Grey overtones (AMS STD-595 color No. 35240). The Design-Builder shall provide a mock-up of the rock wall for approval prior to construction.

Pylon signs shall be constructed at all four corners of the bridge as shown on the bridge renderings. Pylon renderings are provided to demonstrate the desired appearance including aesthetic treatments and approximate dimensions. The proposed pylons are similar to the existing pylon signs along SR 40. The Design-Builder shall submit for TDOT's approval pylon construction plans and material details. **Up-lighting for the pylons must be similar in style and compliment the bridge rail accent lighting.**

All guardrail (including guardrail terminal, anchor and hardware) shall be brown powder coated and MASH TL-3 compliant.

The Design Builder shall accommodate the Ocoee Utility District's water line to be attached to the new bridge. The water line and hanger system shall be installed between bridge girders to be hidden from view. The water line and hanger system details will be provided by the utility through TDOT. **A letter from Ocoee Utility District stating their intentions for this project is included in the reference material.**

4.3 REMOVAL OF EXISTING STRUCTURE

During demolition of the existing bridge deck over the Ocoee River, a protection shield shall be erected from the underside of the bridge over the river to catch falling debris from falling into the river **and to protect river traffic**. The protection shield shall be supported from girders or beams. The deck over the river shall be removed by cutting it in sections and lifting each section out. The protection shield shall be designed, with supporting calculations, for a minimum of 50 pounds per square foot plus the weight of the equipment, debris, personnel, and other loads to be carried. Large pieces of deck shall not be allowed to fall on the protection shield. The Contractor shall submit detailed plans, with supporting calculations, of the protection shield and environmental protection for approval prior to the start of demolition. These plans and calculations shall be sealed by a Professional Engineer licensed in Tennessee.

Blasting will not be permitted to demolish the existing bridge piers in the Ocoee River without prior approval of the detailed plan by TDOT and by the permitting and natural resources agencies.

If blasting is used for the demolition of the existing bridge, a blasting plan will be required and need to be included with permit application package submitted to the regulatory agencies. Please refer to Section 8.10, Permitting, for additional information.

4.4 RETAINING WALLS

Retaining walls are not anticipated. If the Design-Builder utilizes retaining walls, they shall be built in accordance with Special Provision 624, Retaining Walls. The exposed face of the retaining wall shall have a cut stone form finish approved by TDOT. The addition of a retaining wall shall be submitted through an ATC. **MSE walls that can be partially inundated are not allowed.**

Fidelity Bond

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).

Condemnations

Property acquisition requiring condemnation shall be handled by the State Attorney General's Office. TDOT has no control over the timeframe for the condemnation proceedings. The Design-Builder shall anticipate time for condemnation proceedings. The Design-Builder is solely at-risk for any delays for right-of-entry associated with condemnation proceedings.

7.0 UTILITY SCOPE OF WORK

1. The project is a Chapter 86 project. Reimbursement will be subject to TDOT 340-07 policy administration. The project utility coordination will be performed by TDOT, inclusive of submitting plans, receiving, reviewing, and approving responses, reimbursement agreements, easement agreements, and authorization to proceed with utility relocation. **The Design-Builder may coordinate with utilities as needed prior to the proposal and during development of the Design-Builder's ROW Plans. The Design-Builder shall coordinate with utilities during construction.**
2. Move-In State utility relocation work is only to be accomplished if a MIS Contract is executed by both TDOT and the Utility. These MIS contracts will require that the utility provide the detailed construction plans, construction specifications and quantities, collectively known as the "B-Date Package" no later than 30 days after the utility receives the fully executed contract back from the Department. The Department will revise the Design-Builder Contract to include the MIS work per Standard Specification 109.04.
3. Immediately after submittal of the accepted final Definitive Design Plans to TDOT, TDOT will begin the utility coordination according to the statute (TCA 54-5-854) which requires the utility to respond within 120 -165 Calendar Days. The Design Builder will include the TDOT coordination in their CPM for Utility Investigation.
4. The Design-Builder shall be responsible for all costs associated with utility relocations due to revisions to the definitive plans after submittal to the utility for coordination with respect to haul roads and/or any other temporary conditions resulting from the Design-Builder's methods of operation or sequence of work.
5. Some adjustment of utility facilities will be required due to the Design-Builder design. The Design-Builder shall be responsible for identifying any utility conflicts/relocations ~~and from the~~ utility construction plans. Exact locations shall be determined in the field by contacting the utility companies involved. Notification by calling the Tennessee One Call System, Inc., at 1-800-351-1111 as required by TCA 65-31-106 will be required.
6. Prior to submitting the proposal, the Design-Builder shall 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 'around' utility facilities that will remain in place, other utility facilities may need to be adjusted concurrently with the

10.2 TEMPORARY RIVER TRAFFIC CLOSURES

With TDOT's prior approval, the Design-Builder may temporarily close the river at the project site to recreational users for short durations during beam erection and bridge demolition activities. A full closure shall be no more than 10 consecutive days when work warranting a full closure is being performed. No full closures are allowed during peak season of March 1 through Labor Day. During peak season the Design-Builder may have a temporary closure of no more than 30 minutes. The Design-Builder shall develop a plan to notify river traffic of closures, temporarily hold river traffic and notify river traffic of when it is safe to proceed. This plan shall be pre-approved by TDOT. For both full and temporary closures, warning / notification signs pre-approved by TDOT shall be placed by the Design-Builder above and below the bridge site within the ROW and at all public boat ramps/boat access points located upstream to Ocoee Dam #1 (Parksville Dam). A minimum of 10 feet of vertical clearance shall be provided over recreational traffic at all times during construction.

If the Design-Builder elects to utilize a barge, jetty, or a haul road for construction purposes, warning / notification / directional signs pre-approved by TDOT shall be placed by the Design-Builder above and below the bridge site within the ROW and at all public boat ramps/boat access points located upstream to Ocoee Dam #1 (Parksville Dam).

To accommodate the recreational river users, no river closures shall occur when Ocoee Dam #1 is releasing water on Tuesday, Wednesday, Saturday and Sunday during the months of June through August. It is the Design-Builder's responsibility to confirm dates of water releases.

The Design-Builder shall coordinate river closures and signing with the TWRA and State Parks.

10.3 TEMPORARY LANE / ROAD CLOSURES

Two (2) travel lanes (each a minimum of 11-foot wide) shall be maintained along SR 40 / US 64 during construction except for short term closures for beam erection and demolition (with prior approval by TDOT.) Additionally, to accommodate the recreational boaters and the local whitewater rafting industry, no lane closures nor road closures along SR 40 / US 64 are allowed on days when Ocoee Dam #2 is releasing water, which will be the days with the highest motor vehicle volume passing through this project to get to the whitewater area. The 2019 water release calendar from TVA is provided below. It is the Design-Builder's responsibility to confirm dates of water releases and obtaining future years calendars. See Special Provision 108B for Liquidated Damages.

APPENDIX A: ENGINEERING ANALYSIS PAVEMENT DESIGN

DATE: 03/04/19 FULL DEPTH DESIGN FOR SR-40 ROUTE: SR-40
 COUNTY: POLK PROJ NO: 70068-3211-94 FED PROJ NO: BR-NH/APD-40(37)
 DESCRIPTION: SR-40 (US-64) BRIDGE OVER OCOEE RIVER, LM 3.12 (DESIGN BUILD) (IA)

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ROADWAY DESIGN	REGION I
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DESCRIPTION	THICKNESS
411-02.10 ACS (PG70-22) GR "D"	1.25
307-02.08 AC MIX(PG70-22)GR "B-M2"	2.25
307-02.01 AC MIX(PG70-22)GR "A"	3.00
303-01 MINERAL AGG BASE GRADING "D"	10.00
=====	=====
TOTALS	16.50
=====	=====

SHOULDER DESIGN

=====	=====
DESCRIPTION	THICKNESS
411-01.07 ACS (PG64-22) GR "E"	1.50
303-01 MINERAL AGG BASE GRADING "D"	15.00
=====	=====
TOTALS	16.50
=====	=====

REMARKS: 1) COLD PLANE 1.25" FROM EXISTING PAVEMENT AND OVERLAY USING 1.25" OF "D" MIX,
 TO TIE-IN POINTS ~~WHERE NEEDED~~