



**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

CONSTRUCTION DIVISION
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BUTCH ELEY
DEPUTY GOVERNOR &
COMMISSIONER OF TRANSPORTATION

BILL LEE
GOVERNOR

September 14, 2022

Re: ADDENDUM #5
Contract No.: DB2101
County: Hamilton

To Whom It May Concern:

This addendum revises the RFP Contract 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,

Clayton Markham, P.E.
CE Manager 2, Alternative Contracting

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

TENNESSEE DEPARTMENT OF TRANSPORTATION

I-75 Interchange Modification at I-24, Phase 2 (IA)

Hamilton County- TENNESSEE

CONTRACT NUMBER: DB2101



May 27, 2022

Addendum #1 July 8, 2022

Addendum #2 July 27, 2022

Addendum 3 August 12, 2022

Addendum #5 September 14, 2022

performed by the Design-Builder. When the Design-Builder utilizes any item in the table below, he must provide the Department with an invoice detailing the location, purpose, and quantity used, for tracking purposes. Failure to provide invoices throughout the progress of the Project may result in non-payment for overrun quantities. Prices below shall include all necessary equipment, materials labor and incidentals for work complete in place.

ITEM	TYPE	UNIT	UNIT PRICE	QUANTITY
Uniformed Police Officer	As specified by Special Provision 712DB-PO	HOUR	\$60	Hours exceeding 20,000
Temporary Traffic Control	Changeable Message Sign (CMS) Unit	EACH	\$6,500	Signs exceeding 15 Note: CMS for PSWZ not included in quantity.
Concrete Repairs	FULL DEPTH PCC PAVEMENT REPAIR	C.Y.	\$750	Quantity that exceeds 2,000 C.Y.
	HOT APPLIED FIBER-POLYMER PATCHING MATERIAL	POUND	\$4.50	Quantity that exceeds 6500 POUNDS

Design Requirements

Reference DB Standard Guidance: § 9.2.6, 9.2.7 & 2.11.2 The proposed horizontal and vertical alignments of I-75 and I-24 shall be designed and constructed to meet or exceed a minimum 60-mph design speed for a rolling urban freeway. TDOT Design Standards supersede Green Book requirements where applicable.

All proposed ramps shall be designed and constructed to meet or exceed a minimum 45 mph design speed and crossroads shall be designed and constructed to meet or exceed a minimum 30 mph design speed for rolling urban freeway. On-ramps that merge into mainline lanes (do not become a continuous lane) shall be designed in accordance with the minimum acceleration length required in the Green Book. In cases where sight distance may be limited by an obstruction between the ramp and the mainline lanes, the minimum length shall be increased to include stopping sight distance as required by the Green Book once the obstruction is cleared plus the minimum acceleration length required.

All ramps: Traffic lanes on ramps with 2 or more lanes shall be 12 ft. wide. Traffic lanes on one-lane ramps shall be 16 ft. wide. Outside shoulders shall be a minimum of 6 ft. wide (stabilized) **for single lane ramps or 10 ft. wide (stabilized) for dual lane ramps**, and inside shoulders shall be a minimum of 4 ft. wide (stabilized) **for single lane ramps or 6 ft. wide (stabilized) for dual lane ramps. 2 additional ft (unstabilized) shall be added to all shoulder widths unless they are adjacent to concrete barrier rail.**

I-24: Typical section shall consist of 12-ft inside shoulders **(fully stabilized to face of the concrete barrier)**, 12-ft traffic lanes (one lane draining toward the median barrier with total number of lanes as shown in the Functional Plans), and 12-ft outside shoulder (10-ft stabilized if open shoulder and full width stabilized if adjacent to concrete barrier rail) except in areas where a design exception has been previously approved at the Belvoir Avenue underpass.

Terraces: Existing pavement shall be milled and repaved from S. Germantown Rd to Spring Creek Rd, except the Belvoir Ave intersections. Milling depth shall be a minimum of 1.25". Existing profile and cross slopes can be matched unless required as part of the Design-Builder's construction. Full depth pavement replacement, subgrade repair, and drainage repair will be required in certain locations as shown in the below table.

Location	Approx. Beg STA	Approx. End STA	Repair
North Terrace	90+15	95+70	Full depth pavement replacement and resolve drainage issues. Water ponds on right side of road at bottom of sag.
North of I-24 WB	100+55	102+60	Fix drainage issues at along N. Terrace. Remove/upgrade existing area drainage
North Terrace	104+70	114+85	Full depth pavement replacement, left lane
North Terrace	140+70	144+10	Full depth pavement replacement, left lane
South Terrace	606+50	608+60	Replace guardrail

All local roads and terraces: All disturbed storm sewer manhole lids will be reset to be flush with the pavement in accordance with City of Chattanooga standards. Adjustments to other utilities will be made by the utility company. Existing catch basin grates shall be replaced with bicycle/pedestrian safe grates.

S. Moore Road: Bridge and approach typical sections (between the bridge ends and the Terraces) shall consist of 5 @ 11-ft. traffic lanes, 5-ft. bicycle lane with a 6-ft. buffer (paved shoulder) on both sides of the roadway, and 6-ft. sidewalk on both sides of the roadway. The roadway typical section beyond the Terraces will transition back to the existing conditions using the Department accepted AASHTO *Policy on Geometric Design of Highways and Streets* criteria for tapers/transitions.

McBrien Road: Bridge and approach typical sections (between the bridge ends and the Terraces) shall consist of 4 @ 11-ft. traffic lane, 5-ft. bicycle lane with a 6- ft. buffer (paved shoulder) on both sides of the roadway, and 6-ft. sidewalk on both sides of the roadway. The roadway typical section beyond the Terraces will transition back to the existing conditions using the Department accepted AASHTO *Policy on Geometric Design of Highways and Streets* criteria for tapers/transitions.

I-75: Typical section for widening only shall consist of existing 11-ft inside shoulder (**fully stabilized to the face of the concrete barrier rail**), 12-ft traffic lanes (total number of lanes as shown in the Functional Plans), 12-ft outside shoulder (10-ft stabilized if open shoulder and full width stabilized if adjacent to concrete barrier rail). Reconstructed roadway for profile changes: Inside shoulder shall be 11-ft wide (**fully stabilized to the face of the concrete barrier rail**), 5 travel lanes shall be 12-ft wide (maximum of two lanes draining toward the median barrier) and outside shoulder shall be 12-ft wide (10-ft stabilized).

Vertical clearances over roadways for all alignments (entire roadway width including the full shoulder width) shall have a 16 ft., 6 in. minimum vertical clearance and all overhead sign

Design Requirements

All drainage analysis and design shall be in accordance with the Department's Drainage Manual.

The Design-Builder shall use a 50-year design storm for all new (and existing to remain) storm sewer systems in accordance with the Department's Drainage Manual. However, any new box culverts must be designed with a minimum of 5' vertical height for maintenance purposes. **For any structure with a Q_{50} that exceeds 500 cfs, the Design Procedures for Hydraulic Structures, 2012, shall be followed.**

All drainage systems shall be designed to convey the 50-year storm without overtopping of any existing or proposed drainage or transportation elements.

The Design-Builder shall design culvert outfalls, channels and ditches within the Project limits in accordance with requirements of the Drainage Manual. Appropriate energy dissipation devices shall be designed at culvert outlets to prevent scouring and appropriate channel linings shall be designed such that erosion within and downstream of the channels and ditches is minimized. Energy dissipation devices shall be designed to fit within the existing right-of-way.

The Design-Builder shall provide aggregate pipe underdrains as specified in the pavement design and shall provide appropriate outlets for the underdrains as specified by the TDOT Standard Drawings.

The Design-Builder shall re-grade existing ditches to remain in-place and disturbed by construction by creating a straight-line profile along the centerline of the channel, as measured along the flow line.

The Design-Builder shall re-establish drainage in situations where sedimentation has changed the flow line from the existing profile. No Work should be done to Waters of the State or US, which might appear to be a ditch, without proper permits.

The Design-Builder shall provide erosion control for the construction Project per the guidelines specified in the Department's Drainage Manual.

The Design-Builder shall design the drainage system to accommodate construction staging. **Spread requirements for temporary traffic control may be reduced to a 5-year storm event, however, permanent conditions must meet the requirements of the Department's Drainage manual.** The design shall include temporary erosion control, sediment basins, and other BMPs needed to satisfy NPDES, local municipality, and other regulatory requirements. All environmental approval commitments related to drainage design and erosion control shall be included as "notes" on the plans for each stage of construction.

Existing Drainage Systems

The Design-Builder shall obtain the Department's acceptance to utilize any existing stormwater system (any and all pipes, structures, ditches, detention/retention systems, or any other component necessary for the conveyance of stormwater) within or outside of the Project limits.

The design of stormwater management facilities shall be compatible with existing or any known proposed improvements to drainage systems on adjacent properties and shall preserve existing drainage patterns wherever possible.

If existing drainage patterns must be altered due to a temporary or permanent aspect of the design of the Project, the Design-Builder shall provide documentation of any/all impacts to downstream and/or adjacent properties and/or road crossings for approval prior to alteration of existing drainage patterns. Survey data shall be collected for all downstream/adjacent

properties that are impacted, such as road crossing information, structure damage elevations, and channel cross sections (at a minimum), and shall be used in support of hydraulic calculations for the offsite drainage systems. Engineering analyses and certifications shall be provided to the Department and the local jurisdiction for approval prior to performing the alteration.

The Design-Builder shall acquire all applicable municipal drainage plans, watershed management plans, and records of citizen concerns. The Design-Builder shall acquire all pertinent existing storm drain plans, bridge hydraulic studies, and/or survey data, including data for all culverts, drainage systems, storm sewer systems, and bridge sites within the Project limits. The Design-Builder shall also identify existing drainage areas and calculate the estimated runoff to the highway drainage system. The Design-Builder shall analyze existing storm drainage systems, culverts (boxes and cross pipes), and open channels impacted or affected by the Project design.

Damage to existing infrastructure due to the Design-Builder's operation shall be immediately repaired to maintain existing system capacity and TDOT's Drainage Manual requirements at all times. This permanent repair shall be at the Design-Builder's expense.

The use of blind junctions and/or non-accessible structures shall not be allowed unless otherwise approved in writing by the Department. Manholes shall not be allowed in paved areas unless otherwise approved in writing by the Department. The Design-Builder shall not install and/or utilize longitudinal storm sewer pipes under travel lanes unless otherwise approved in writing by the Department. If no modification or upgrading of the existing stormwater management system is required, the Design-Builder shall, at a minimum, maintain the existing system. This maintenance includes, but is not limited to, silt removal from any pipe, ditch, or structure, and removal of any debris prior to the use of any existing stormwater system. This maintenance shall be at the Design-Builder's expense.

If documentation is not available for certain components of the existing drainage system within the Project limits and these components are planned to remain in place, the Design-Builder shall investigate and video record or photograph these components to determine condition, size, material, location, and other pertinent information.

There are existing floodwalls within the project limits along the north side of I-24 at approximately STA 143+50 to STA 179+00 owned and maintained by the City of Chattanooga. The Design-Builder shall not impact these floodwalls or their functionality either during construction or in the final condition. If the walls or their functionality are impacted, re-certification with FEMA will be required by the Design-Builder.

The Design-Builder shall replace all drainage structures along I-24 for Segment 1 from station 74+00 to station 179+00 for a complete, operational drainage system designed in accordance with TDOT's Drainage Manual. The following pipes may be retained and reused in the new system: STA 91+98 - 30" RCP, STA 99+52 - 36" RCP, STA 142+44 - 24" RCP, STA 145+02 - 24" RCP, STA 155+34 - DBL 8x7 RCBC, STA 175+78 (westbound roadway) - 48" RCP, STA 176+52 (eastbound roadway) - 48" RCP and Ramp O STA 3008+80 - DBL 8x7 RCBC, unless pipes are deemed hydraulically or structurally deficient. **Existing drainage structures that will not be retained for the ultimate, permanent drainage system shall be either fully removed or completely filled with flowable fill.**

The Design-Builder can use the existing ~~cross~~ drainage structures for Segment 2 unless corrugated metal pipe (CMP) is existing or if the existing ~~cross~~ drainage structures are deemed

Project include a field-run topographic survey of the existing horizontal and vertical alignments, storm pipe inverts, and pipe material type.

Floodplain Requirements

The Project will impact multiple FEMA-regulated special flood hazard areas (SFHAs) situated within two separate participating FEMA Communities: East Ridge and Chattanooga. The Design- Builder shall design the Project to follow FEMA regulations in FEMA- regulated floodplains, according to requirements listed in Code of Federal Regulations (CFR) Parts 59, 60, 65, and 70. This design may include but is not limited to: bridge structures over streams, lengthening culverts over streams, increasing the tie slope, and/or utilizing retaining walls to reduce fill in the floodplain.

Where regulatory floodways exist, the Design-Builder shall design the Project to meet conditions of CFR Part 60.3 and 65.12, which state that encroachments to regulatory floodways must not cause increases to Base Flood Elevations (BFEs), floodway elevations, or floodway widths greater than 0.00 feet. If encroachments occur within regulatory floodways, an Engineering Analysis and No-Rise Certification shall be submitted to the local jurisdictions and the Department for review and approval. If grade changes occur that will increase BFEs, then a hydraulic analysis and floodplain impact report shall be submitted to the Department and local jurisdictions for review prior to RFC plans. 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 six months in the schedule for FEMA approval of any required CLOMR review. ~~Regardless of whether a CLOMR is required, the Design-Builder 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. A completed Spring Creek Tributary Floodplain Feasibility has been included in the reference materials.~~

The Design-Builder shall not store excavated material, equipment, cleared debris, construction debris, etc. within defined floodplains as shown on the latest FEMA maps.

Existing floodwalls within the Project limits shall remain undisturbed by the Design-Builder. If damage or modifications are made to existing floodwalls, the walls shall be repaired or replaced at the Design-Builder's expense. If the Design-Builder is uncertain of the presence of floodwalls at a given location within the Project limits, then the local Floodplain Administrator shall be contacted for a determination.

There are existing floodwalls within the project limits along the north side of I-24 at approximately STA 143+50 to STA 179+00 owned and maintained by the City of Chattanooga. The Design-Builder shall not impact these floodwalls or their functionality either during construction or in the final condition. If the walls or their functionality are impacted, re-certification with FEMA will be required by the Design-Builder.

The Department has not, nor will the Department, procure permits for the Design-Builder. The Design-Builder shall determine all of the permits required in order to perform the work. **Aquatic Organism Passage (AOP) was not required for the double barrel 8x7 box culvert extension near STA 153+34 on I-24 at the time of preliminary coordination by TDOT. If AOP is required based on the design shown in the Functional Plans prior to construction, it will be considered a changed condition.**

The Design-Builder shall be solely responsible for and obtain any necessary building, demolition, grading, and environmental permits or approvals, including but not limited to archaeology, ecology, historical, hazardous materials, air and noise, TVA 26a, TDEC ARAP/401, USACE Section 404, and TDEC National Pollution Discharge Elimination System (NPDES) permits, from federal, state and/or local agencies regarding any material and staging areas and the operation of any project- dedicated asphalt and/or concrete plants, and any waste or borrow areas that will be used. Any such permits shall be supplied to the Department's Region 2 Environmental Tech Office prior to the commencement of activities in the permitted area(s).

The Design-Builder is responsible, under the laws and regulations listed above, to avoid and minimize, to the maximum extent practicable, impacts to Waters of the State and/or Waters of the U.S. when designing and constructing the project. Avoidance and minimization of impacts are beneficial to the Design-Builder because such actions avoid or reduce the amount of compensatory mitigation that may be required to obtain water quality permits prior to construction.

If environmental permits are necessary prior to completion of the Definitive Design Plans, the Design Builder shall contact the Department's Alternative Contracting Office immediately for guidance.

The Department's Region 2 Environmental Tech Office and Headquarters Environmental Division Permitting Section shall be included in all correspondence and/or negotiations with agencies.

The Design-Builder shall obtain and pay for all regulatory permits as required by applicable laws, the plans, or contract specifications. This includes stormwater discharges associated with construction support activities including, but not limited to: equipment staging yards, material storage areas, excess excavated materials disposal, demolition disposal (waste) areas, and borrow areas. These areas are to be addressed in accordance with the TDOT Waste and Borrow Manual (May 15, 2017 Version). The Design-Builder shall be cognizant of and adhere to the requirements of the various permits that will be necessary for construction and operation of the Project.

Applying for and Obtaining Permits

The Design-Builder shall be responsible for preparing all documents (permit application package) and attending all public meetings necessary to obtain the environmental permits required for the construction of this Project. The Design-Builder shall use Permittee Bill of Rights TCA 69-3-141 in determining the number of days for the review of submissions and resubmissions of all relevant permitting documents to TDEC.

The Design-Builder shall acquire information and prepare permit drawings/sketches that reflect the impacts and minimization efforts resulting from the Design-Builder's design of this Project. If water quality permits are required, there shall be scheduled reviews of permissible plans, application, and permit conditions by the Department's Region 2 Environmental Tech

- Overall goals of the sequencing plan and how the plan aligns with the Project Critical Path.
- Plans for providing Queue Protection 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 shall maintain a minimum of 3 lanes in each direction on I-24 and I-75 throughout construction except for Department-approved night or weekend lane or roadway closures as noted below and in the Special Provision 108B. Failure to meet the below requirements will result in Liquidated Damages as specified in Special Provision 108B.

Within Segment 1, on I-24, the Design-Builder will be allowed to rent one lane for a single period of a maximum duration of 9 days in each direction for reconstruction purposes. A minimum of 2 lanes shall be open at all times in all directions. If the Design-Builder does not use all days bid, they will not be allowed any additional closures for unused days. The cost for renting the lane for a day or any portion thereof shall be \$50,000. The lane rental cost of **\$50,000** shall be Time Value (C) used for the calculation of selection.

Within Segment 1, on I-24, the Design-Builder will be allowed two complete roadway closures over a weekend in each direction for reconstructing the mainline at the tie ins at S Germantown Road. The Design-Builder shall provide a detour for I-24 with a minimum of 2 lanes in each direction. A total of 4 complete roadway closures over a weekend will be allowed at no cost to the Design-Builder.

Within Segment 1, the Design-Builder must maintain one (1) entrance ramp to I-24 and one (1) exit ramp from I-24 in each direction between S. Germantown Rd. and Spring Creek Rd.

Within Segment 2, on I-75, the Design-Builder will be allowed a total of 10 weekend lane closures in a single direction to restrict traffic to 2 lanes. These weekend lane closures are for construction purposes as deemed appropriate by the Design-Builder and will be provided at no cost to the Design-Builder.

Minimum lane widths shall be eleven (11) feet. Minimum inside and outside shoulder widths shall be two (2) feet. **No traffic shall be allowed to travel on a pavement layer that is an A-Mix.**

The Design-Builder will be allowed to temporarily close S. Moore Rd. and McBrien Rd. in order to construct new bridges over I-24 at these locations. The Design-Builder shall only be allowed to close one of these bridges at a time and shall construct each bridge in a continuous manner until the roadway can be reopened to unimpeded traffic flow. The Design-Builder shall only close the portion of S. Moore Rd. and McBrien Rd. necessary to construct the new bridges.

Rolling roadblocks for operations specified in the Special Provision 108B other than blasting will only be allowed 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. **For ramp closures, the Design-Builder shall furnish closure timeframes, work schedules and supporting documentation, including at a minimum the benefits, impacts and mitigation strategies, for approval by the Department.** Requests for road closures of S. Moore Rd. and McBrien Rd. must be sent to the Department twenty-one (21) calendar days in advance of the proposed closure. For local street closures, requests for approval must be sent twenty-one (21) calendar days in advance of the proposed closure 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. No less than seven (7) days prior to the closure of the road, the Design-Builder shall 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) City of Chattanooga and East Ridge Public Works, vi) railroad company (if applicable), vii) the City of Chattanooga and Hamilton County's Parks and Recreation Department (if applicable), viii) Hamilton County Public Works, ix) Chattanooga Airport, x) Parkridge East Hospital, xi) local school superintendent, xii) TDOT's Region 2 Traffic Management Center (TMC), and xiii) 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, Ironman Triathlon, and various Chattanooga marathons/triathlons that use SR29 and/or SR153. The Department may deny any request for lane closures.

The Design-Builder shall 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 in 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.

All detour plans shall be approved by the Department prior to being implemented.

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

Temporary marking shall 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 shall be 6-inches.