

#### TENNESSEE DEPARTMENT OF TRANSPORTATION

# Design-Build Book 2 Contract Industry Review Draft

#### Gallatin Pike (SR-6) Safety Project

Gallatin Pike: (Walton to Wiley) and (Liberty to Northside)

Davidson County, Tennessee

Project Identification Number (PIN): 125526.09 (Walton to Wiley) and 132524.00 (Liberty to Northside)

State Project Number: 19025-1233-94 and 19025-3233-94 (Walton to Wiley) and 19S006-F1-006 and

19S006-F3-006 (Liberty to Northside)

Federal Project Number: HSIP-6(145) (Walton to Wiley) and HSIP-6(155) (Liberty to Northside)

Contract# DB2504

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#### **DESIGN-BUILD CONTRACT**

**This Design-Build Contract** is entered into by and between the State of Tennessee, acting by and through the Department of Transportation (the "Department") and [Enter name of Design-Builder] (the "Design-Builder"), (collectively, the "Parties") as of the Effective Date of the Contract.

#### **RECITALS**

**WHEREAS**, the Department requires the improvements for the project known as the Gallatin Pike (SR-6) Safety Design-Build Project (the "Project") more particularly described in **Book 3 (Project Specific Information)**. The Project will be funded with federal dollars, thereby requiring that the Design-Builder adheres to all pertinent state, federal, and local requirements; and

WHEREAS, the Parties intend for the Contract to be a lump-sum Contract, obligating the Design-Builder to perform all work necessary to complete the Project by the deadlines specified herein, for the Contract Amount, subject only to certain specified limited exceptions. To allow the Department to budget for the Project and to reduce the risk of cost overruns, the Contract includes restrictions affecting the Design-Builder's ability to make claims for an increase to the Contract Amount or an extension of the Completion Deadlines. The Department may require additional related work within the general vicinity of the Project, which, if required, shall be included in the Project and added to the Contract by Change Order; and

WHEREAS, the Department requires a Design-Builder competent to perform all work necessary to complete the Project in accordance with the terms and conditions of the Contract and able to do so within the Contract Time allocated herein. If the Design-Builder fails to complete the Project within the time limitations set forth in the Contract, then the Department will suffer substantial losses and damages. The Contract therefore provides that a deduction shall be made from monies due the Design-Builder, not as a penalty, but as Liquidated Damages, as stated in Book 3 (Project Specific Information), if such completion is delayed; and

**WHEREAS**, Design-Builder asserts that it is competent and prepared to perform all work necessary to complete the Project in accordance with the terms and conditions of the Contract, and that it is able to do so within the Contract Time allotted herein; and

**WHEREAS**, the Department is authorized under Section 54-1-119 of the Tennessee Code Annotated to enter into this Contract.

**NOW, THEREFORE**, in consideration of the mutual promises contained herein, and for other good and valuable consideration, the Department and the Design-Builder agree as follows.

#### **AGREEMENT**

## 1 GENERAL CONTRACT PROVISIONS, DEFINED TERMS, AND GENERAL SCOPE OF WORK

#### 1.1 Incorporation of Recitals

The foregoing Recitals incorporated herein and made a part hereof for all purposes as if fully set forth constitute additional promises or representations and warranties of the Parties.

#### 1.2 Contract Documents

The Contract Documents, made a part hereof for all purposes as if fully set forth, are intended to reflect the complete understanding of the Parties concerning their respective rights and responsibilities under the Contract.

#### 1.3 Effective Date

The Contract shall become effective on the date on which each Party has signed this Contract and all approvals have been obtained (the "Effective Date").

#### 1.4 The Contract

The Contract, which includes this **Book 2 (Design-Build Contract)** and all other Contract Documents, forms the entire agreement between the Parties.

#### 1.5 Defined Terms and Acronyms

Defined terms and acronyms utilized in this **Book 2 (Design-Build Contract)**, **Book 3 (Project Specific Information)**, and in the other Contract Documents are either set forth in the Department's *Design-Build Standard Guidance*, or defined in the text accompanying the term.

#### 1.6 Applicable Version of Law or Standard

All work shall be performed pursuant to the applicable law and in accordance with the standards in effect at the time of the RFP issuance, including addenda, unless otherwise specified in the Contract or by amendment.

#### 1.7 Minimum Contract Requirements

#### 1.7.1 Department Supplied

Among the Contract, the Department has mandated certain Contract requirements from which the Design-Builder may not deviate in the scope of the work, except as instructed by the Department. The Department has also established certain minimum Contract requirements that set a minimum standard of performance or quality that the Design-Builder must meet or exceed in performance of the Contract.

#### 1.7.2 Design-Builder Supplied

The Design-Builder has established certain minimum Contract requirements located in Exhibit A (Design-Builder's Technical Proposal), consisting of those provisions of its Proposal that meet or exceed minimum

Contract requirements established by the Department and upon which the Department has relied in awarding the Contract to the Design-Builder.

Any non-standard Department specification or provision shall be considered the Design-Builder-supplied Contract provisions and requires Department Review and Approval, which will obligate the Design-Builder within this the Contract.

#### 1.7.3 Management Plans

Pursuant to the *Design-Build Standard Guidance* and Section 2 of **Book 3 (Project Specific Information)**, the Design-Builder shall submit a Project Management Plan (PMP).

#### 1.8 Right-of-Way/Utility Coordination Services

Right-of-Way (ROW) acquisition and utility coordination services are expected under this Contract. **Book 3** (**Project Specific Information**) provides additional information on ROW and utility coordination services needed to complete the Project.

#### 1.9 Design Services

The design services required under the Contract shall include, at a minimum, each of the following:

- Performance of all design services, including, but not limited, to all services and Work detailed in Book 3 (Project Specific Information); and
- Performance of all other engineering design services required under the Contract and/or otherwise necessary to complete the work in accordance with all Contract requirements.

All Design Documents and Design Reviews shall be provided by the Design-Builder and performed in accordance with the Design Review schedule established in the Critical Path Method (CPM) Schedule, and in accordance with all Contract requirements.

All design services to be performed under the Contract are appurtenant to construction services being provided by the Design-Builder.

#### 1.9.1 License Requirements; Standard of Care

Whether the Design-Builder is a design professional, has a design professional as a member or on staff, or will otherwise provide an outside source to perform the services of a design professional, all design services (whether constituting the practice of architecture, the practice of engineering, the practice of surveying, or the practice of other design services) referred to in this Contract shall be provided by duly licensed and competent design professionals employed or otherwise retained by the Design-Builder.

The design professionals currently designated to provide such design services are listed in Subsection 3.4. All design services shall be performed by a design professional of the appropriate professional discipline in accordance with the degree of skill and care ordinarily used by competent practitioners of the same professional discipline under similar circumstances, taking into consideration the contemporary state of the practice and the project conditions.

#### 1.9.2 Design Documents

The Design-Builder shall generate and provide to the Department all Design Documents. The Design-Builder shall make a comprehensive design check and Design Review at the following five (5) stages of design development, stated in more detail within *Design-Build Standard Guidance*:

Definitive design;

- Interim design;
- Readiness-for-Construction Plans, Readiness-for-Construction Specification, and quantity estimates;
- Working Plans; and
- As-Built Plans.

#### 1.9.2.1 READINESS-FOR-CONSTRUCTION PLANS AND SPECIFICATIONS

Upon completion of the Definitive Design Reviews, Working Plan Design Reviews, Interim Design Reviews (if any), and Readiness-for-Construction Design Reviews, as specified in the *Design-Build Standard Guidance*, the Design-Builder shall finalize the Readiness-for Construction Plans and Specifications. In performing these services, the Design-Builder shall meet the following requirements:

- Readiness-for-Construction Plans and Specifications shall comply with all applicable Laws and all Contract requirements.
- Readiness-for-Construction Plans and Specifications shall be a complete, fully coordinated, integrated package, without any significant modifications or further clarifications required.
- The Design-Builder shall file all documents required for the approval of Authorities having jurisdiction over the Project, shall obtain all necessary permits not obtained by the Department, and shall pay for all associated fees, including application, filing, plan review, and appeal fees.
- The Design-Builder shall provide the Department with written certification and all Design Documents required for the Readiness-for-Construction certification, in accordance with *Design-Build Standard Guidance*.
- The Design-Builder shall submit to the Department all documentation and Design Quality Records required under the Design-Build Standard Guidance.
- The Design-Builder shall submit to the Department As-Built Plans and the Design-Builder Specifications, compiled and organized in accordance with all Contract requirements that incorporate all changes in the design and construction of the Project.
- The Design-Builder shall prepare and deliver to the Department all As-Built Plans, the Design-Builder Specifications, and other Design Documents, information, and data required under the Contract to be provided to the Department.

#### 1.9.2.2 VALUE ENGINEERING COST PROPOSALS

During development of the Design Documents, the Design-Builder and the Department may collaborate on identifying, evaluating, and implementing value engineering cost proposal (VECP) options in accordance with the *Design-Build Standard Guidance*. The Design-Builder's development of the Design Documents and completion of the Readiness-for-Construction Plans and Specifications shall not preclude further identification and implementation by the Design-Builder and the Department of additional cost reduction options during construction. VECPs adopted by the Department will be implemented through Change Orders pursuant to the *Design-Build Standard Guidance*.

#### 1.10 Construction Services

The construction services required under the Contract shall include, at a minimum, each of the following:

 Performance of all construction services, including, but not limited to, all services and Work detailed in Book 3 (Project Specific Information);

- Protection of environmental resources, including plant and animal life and associated habitats; and
- Performance of all other construction services required under the Contract and/or otherwise necessary to complete the work in accordance with all Contract requirements.

The Design-Builder shall provide all necessary work to furnish to the Department complete, fully functional road improvements specified in the *Design-Build Standard Guidance*, capable of being fully utilized for the purposes described in the Contract and constructed in compliance with all Contract requirements. The Design-Builder shall perform the construction services as follows:

- The Design-Builder shall supervise and administer all construction activities in accordance with Contract requirements.
- In the event of the existence of any dispute between the Parties under the Contract, the Design-Builder shall continue to perform in accordance with the Contract terms and seek resolution in accordance with the Design-Build Standard Guidance.
- The construction work shall be of good quality, free from faults and defects, and in conformance with all Contract requirements. At its own expense, the Design-Builder shall correct construction work that does not conform to these requirements.
- The Design-Builder shall utilize new materials and equipment in the work, unless otherwise specified in the Contract.
- The Design-Builder shall pay all taxes, fees, and costs associated with the acquisition of tools, equipment, materials, and the performance of the work, in accordance with the Design-Build Standard Guidance.
- The Design-Builder shall keep the work location and its vicinity free from accumulation of waste materials and rubbish caused by the Design-Builder's operations.
- The Design-Builder shall deliver to the Department all notices regarding completion of the work
  pursuant to *Design-Build Standard Guidance*, including notifying the Department when the work or
  an agreed upon portion thereof has been completed.
- The Design-Builder shall maintain, on the work location, a copy of all approved Management Plans, environmental permits, approved design documents, project records, the entire Contract, and any other document required in accordance with the *Design-Build Standard Guidance*.
- As the Project constitutes "Highway construction" utilizing Federal funds, the Design-Builder shall
  comply with any federal requirements and appropriate Department Special Provisions as provided
  by the Design-Build Standard Guidance and Book 3 (Project Specific Information), respectively.
- Consistent with the Design-Build Standard Guidance, the Design-Builder shall be fully responsible for initiating, maintaining, and supervising safety precautions and programs in connection with the work, including, but not limited to, taking reasonable precautions to ensure the safety of, and prevention of damage, injury, or loss to:
  - Employees of the Department present on or in the vicinity of a work location, employees of the Design-Builder and other persons performing work on or in the vicinity of a work location, and other persons, including the traveling public, who may be affected;
  - o Materials and equipment to be incorporated into the Project;
  - Portions of the Project under construction or completed; and
  - Other property within or adjacent to a work location.

The Design-Builder shall be liable for damage to or loss of property at work locations and on private property affected by the Design-Builder's activities, pursuant to the *Design-Build Standard Guidance*. This subparagraph shall in no way affect the applicability or coverage of the bonds and insurance required under Section 7 of this Contract.

#### 1.11 Quality Management Services

Quality Management services shall include performance, at a minimum, of all activities and obligations, including preparation of all documentation, described in the *Design-Build Standard Guidance*, and as otherwise necessary to ensure that the work is performed in accordance with all Contract requirements.

#### 1.12 Project Management Services

Project management services shall be integrated with the design services and construction services described herein and in **Book 3 (Project Specific Information)** and shall include, at a minimum, the following:

- Project Controls (including Risk Management, Scheduling, Design and Construction Quality Management, Reporting and Document Management).
- Design and construction management;
- Contract management;
- Safety management; and
- Traffic management.

#### 2 GENERAL STANDARDS FOR PERFORMANCE OF THE WORK

#### 2.1 Good Faith

The Design-Builder shall provide and perform all design services, Quality Management, project management, and construction services in good faith and as expeditiously as is consistent with the applicable standards of skill and care ordinarily exercised by members of the profession under similar conditions and circumstances and of the orderly prosecution of the work.

#### 2.2 Performance Standards

Where specific performance standards for any aspect of the work have been established in the Department Special Provisions as stated in Appendix B, pursuant to **Book 3 (Project Specific Information)**, the work shall be performed so as to meet or exceed such standards.

#### 2.3 Critical Path Method (CPM) Schedule

The CPM Schedule establishes the schedule and deadlines for Contract performance, with which the Design-Builder must comply. The CPM Schedule, as it may be modified during the course of the Project pursuant to the *Design-Build Standard Guidance* and **Book 3 (Project Specific Information)** shall anticipate and accommodate such periods of time as may be required for the Department's review of Design Documents, and for approval by Authorities having jurisdiction over the Project of any required submissions, including but not limited to, applications for permits and environmental impact evaluations. Since time is of the essence in the Design-Builder's successful completion of its assignment, the Design-Builder agrees to begin work on each work location immediately after receiving authorization from the Department to proceed with its work efforts.

#### 2.4 Review and Comment, or Acceptance

The Department's consideration, Review and Comment, or Acceptance of any matters, or the Department's authorization of any action, will not be deemed or construed as relieving the Design-Builder of its sole responsibility for, and its complete and exclusive control over, the means, methods, sequences, and techniques for performance of the work in accordance with the terms of the Contract.

#### 2.5 Extra Work to be Provided by the Design-Builder

The Design-Builder shall perform Extra Work in accordance with the Design-Build Standard Guidance.

#### 3 RELATIONSHIP AND ROLES OF THE PARTIES

#### 3.1 Independent Entity

The Design-Builder is an independent entity and not an officer, employee, or agent of the Department.

#### 3.2 Department Representative and Contact Information

The Department's representative for this Project is:

|          |  | Jonathan Vogel, P.E    | :<br>         |
|----------|--|------------------------|---------------|
| _        | Region 3 -                             | Alternative Delivery R | epresentative |
| Address: | Tennessee Department of Transportation |                        |               |
|          | 6601 Centennial Blvd., Building A      |                        |               |
| _        |  | Nashville, TN 37209    | )             |
| E-mail:  |  | jonathan.vogel@tn.ge   | ov            |
| Work #:  | N/A                                    | Cell #:                | 615-308-0678  |

#### 3.3 Design-Builder Representative

The Design-Builder's representative for this Project is:

|              | [Enter Design Builder's Project Manager Name] |  |  |  |
|--------------|---|--|--|--|
|              | Design-Builder's Project Manager              |  |  |  |
| Address:     | [Enter Design-Builder Name]                   |  |  |  |
|              | [Enter address line 2, Physical Address]      |  |  |  |
|              | [Enter City, State, and Zip Code]             |  |  |  |
| E-mail:      | [Enter e-mail address]                        |  |  |  |
| Telephone #: | [XXX-XXX-XXXX] Cell #: [XXX-XXX-XXXX]         |  |  |  |

#### 3.4 Key Personnel and Design Professionals

The Design-Builder's Key Personnel, Design Professionals, shall perform the functions established under the Contract for the duration of the Contract and are listed below.

#### 3.4.1 Key Personnel

| Design-Builder's Project Management Personnel (Level "1" Personnel) shall consist of the following: |  |  |  |
|---|--|--|--|
| Design-Builder Project Manager:   |  |  |  |
| Design Manager:   |  |  |  |
| Construction Manager:   |  |  |  |

#### 3.5 Substitution of Key Personnel and/or Design-Professionals

The Parties agree that each Key Personnel, Design Professional, and Subcontractor is unique, and that the Department has relied upon their qualifications in selecting the Design-Builder to perform the Contract. Therefore, the Design-Builder shall not replace any Key Personnel or Design Professional during the term of the Contract. Notwithstanding the foregoing, in those limited circumstances in which the Department elects to consider substitutions, the process shall be governed by the provisions of the *Design-Build Standard Guidance*.

In the event the Department approves a substitution request, the Department retains the right to strictly enforce this Section 3.5 in the event of future requests for substitution. No individual substitution approval or pattern of substitution approvals shall constitute a waiver of this requirement. Should the Department, in its sole discretion, elect to authorize a substitution, such authorization shall not relieve the Design-Builder of its sole responsibility under the Contract to complete all work and deliver the Project in accordance with all Contract requirements.

#### 4 DATE OF COMMENCEMENT AND COMPLETION OF SERVICES

#### 4.1 Time for Performance

The Contract shall take effect on the Effective Date and shall be performed by the Parties according to its terms, unless earlier terminated, until Final Acceptance by the Department in accordance with the *Design-Build Standard Guidance*.

#### 4.2 Commencement of Services

The Design-Builder is authorized to commence the work within the Contract for post-award submittals pursuant to the *Design-Build Standard Guidance*. The Design-Builder shall not perform any services beyond post-award submittal until the issuance of first Notice to Proceed (NTP) and for each subsequent phase requiring a Review and Approval NTP.

#### 4.3 Completion Dates

The Design-Builder shall complete all work to be done under the Contract, except for punch list and plant/vegetation establishment, by [Enter date based on proposed B:Calendar Days but not later than Enter Date] (the "Contract Completion Date").

#### 5 COMPENSATION

#### 5.1 Contract Amount

The Department agrees to compensate the Design-Builder for all work performed under the Contract for a fixed price of \$[Enter Contract Amount] (the "Contract Amount"). The Contract Amount includes the entire

cost of completing the Project in accordance with all Contract requirements as contemplated by the Parties under the Contract, and further includes all contingencies and the Design-Builder's overhead and profit.

#### 5.2 Progress Payments

The Department shall make progress payments to the Design-Builder in accordance with the *Design-Build Standard Guidance*. Progress payments shall be based upon the Design-Builder's Schedule of Items, which shall include the cost of all work. The Department's payment of progress payments shall not be deemed by either Party to constitute Acceptance or Approval of any Pay Item covered by such payment, or a waiver of a claim or demand for repair of any defects therein.

#### 5.3 Adjustments to the Contract Amount

The Contract Amount shall only be adjusted through issuance of properly authorized Change Orders.

#### 5.4 Payments for Extra Work

The Department will make payments for Extra Work in accordance with the provisions of the *Design-Build Standard Guidance*.

#### 5.5 Deductions from Monies Due

The Department may deduct from monies due or to become due the Design-Builder, as follows:

- Amounts representing price adjustments authorized under the provisions specified in Book 3 (Project Specific Information);
- Amounts representing recoupment of damages, including, but not limited to, Liquidated Damages as stated in Book 3 (Project Specific Information);
- Amounts assessed by Authorities (e.g., fines and penalties) for which the Design-Builder is responsible under the terms or the Contract or by law;
- Amounts the Department is compelled by court order or other legal mandate to withhold and/or tender to Authorities or third parties; and
- Any other amounts authorized under the Contract or by law to be deducted.

#### 6 CHANGES IN THE WORK

Changed work and Extra Work shall be authorized by the Department only under the circumstances set forth in, and pursuant to the terms of, the *Design-Build Standard Guidance*. The Design-Builder shall not begin performance of any Changed work or Extra Work until the Department has issued a properly authorized Change Order, and the Design-Builder shall perform all such work strictly in accordance with the terms of the Change Order.

#### 7 INSURANCE AND BONDING REQUIREMENTS

#### 7.1 Insurance Requirements

During the term of the Contract, the Design-Builder shall maintain in full force, at its own expense and from insurers holding a current certificate of authority to transact the business of insurance in the State of Tennessee, all of the insurance coverages required under the *Design-Build Standard Guidance* and this Section 7.1.

- Commercial General Liability: The Design-Builder agrees to maintain commercial general liability insurance to be no less than \$1,000,000 per occurrence, \$2,000,000 general aggregate limit, and \$2,000,000 completed operations aggregate.
- Professional Liability: The Design-Builder, being an independent contractor, agrees to maintain
  professional liability (errors and omissions) insurance in such an amount (\$1,000,000 minimum) and
  form as are agreeable to the Department.
- Railroad Protective Insurance: Not Required.
- Automobile Liability Insurance: The Design-Builder agrees to maintain automotive liability
  insurance to be a combined single limit per policy period of not less than \$1,000,000 per accident or
  shall be scheduled under the excess or umbrella liability policies. Subcontractors' policies shall have
  a combined single limit of no less than \$1,000,000 per accident.
- Worker's Compensation: The Design-Builder agrees to maintain and shall require all Subcontractors (of all tiers) to obtain and maintain a policy or policies of insurance providing workers' compensation statutory benefits and employer's liability in conformance with the laws of the State.
- Umbrella or Excess Liability Insurance: The Design-Builder agrees to maintain an umbrella or excess liability insurance to provide total per occurrence and aggregate limits of not less than \$2,000,000 (including limits provided in any primary policy), that will provide bodily injury, personal injury and property damage liability coverage at least as broad as the primary coverages set forth above, including commercial general liability in excess of the amounts set forth herein.

#### 7.2 Bonding Requirements

During the term of the Contract, the Design-Builder shall maintain in full force, at its own expense and from Sureties licensed to do business in Tennessee and listed on the United States Department of the Treasury Financial Management Service list of approved bonding companies (Circular 570), Performance and Payment Bonds in the full Contract Amount. The Parties understand and agree that the obligation of the Design-Builder's Surety for the faithful performance of the Contract shall include not only all construction, but also the performance of all design services under the Contract.

#### 7.3 Indemnification

The Design-Builder shall, at all times, observe and comply with all applicable federal, state and local laws, ordinances and regulations and shall indemnify and hold harmless the State of Tennessee and all of its officers, agents and servants against any claim of liability or assessment of fines or penalties arising from or based upon the Design-Builder's and/or its employees' or agents' violations of any such law ordinance or regulation.

The Design-Builder shall hold harmless and indemnify the Department for all claims and damages which result from the failure of the Design-Builder to perform its engineering and design duties in conformance with the reasonable standard of care within the State of Tennessee. Said indemnification shall include, but not be limited to, costs for the redesign of plans and the preparations of new specifications as well as the costs for repairs to the construction work itself.

The Design-Builder shall be responsible for any and all injury or damage to persons or to property arising from the prosecution of the work and due to any act, omission, neglect or misconduct in its manner or method of prosecuting the work or due to its non-execution of the work or due to defective work or materials. The Design-Builder shall indemnify and hold harmless the State, the Department, and all of its officers,

agents, and employees from all suits, actions or claims of any character arising from the Design Builder's acts or omissions in the prosecution of the work, use of unacceptable materials in constructing the work, infringement of patent, trademark or copyright, or claims for Workers' Compensation.

If any such suit, action or claim is filed, the Department may retain from the monies due to the Design-Builder under this Contract a sum deemed sufficient by the Department to protect the Department from loss therefrom. Upon resolution of the suit, action or claim, any remaining retained funds will be released.

These requirements of indemnification shall be a continuing obligation of the Design-Builder and shall survive the termination of the Contract regardless of cause.

#### 8 OWNERSHIP AND USE OF WORK PRODUCT OF THE DESIGN

All Work Product of the Design-Builder arising from performance of the Contract shall be the exclusive property of the Department, as more particularly provided for under the *Design-Build Standard Guidance*.

Plans, specifications, and any maps prepared or obtained under the terms of this Contract shall be delivered to and become the property of the Department pursuant to the *Design-Build Standard Guidance*. Basic design notes and sketches, charts, computations, all original drawings, and other data prepared or obtained under this Contract shall be made available, upon request, to the Department without restriction or limitation of their use.

#### 9 PROJECT RECORDS

#### 9.1 Financial and Other Project Records

The Design-Builder shall maintain complete Project Records as described in the *Design-Build Standard Guidance*, in the manner required under the terms of the Contract. The Design-Builder shall keep full and detailed accounts and exercise such controls as may be necessary for proper financial management of the Project. The accounting and control systems shall be satisfactory to the Department.

#### 9.2 Record Retention Period

The Design-Builder shall retain and preserve all Project Records in accordance with the process described in the *Design-Build Standard Guidance* and for a period of 5 years after final payment, or for such longer period as may be required by law (the "Record Retention Period").

#### 9.3 Access to Records

The Department, the Department's representatives, and FHWA (if applicable) shall be afforded reasonable and regular access to the Project Records for the duration of the Contract and the Record Retention Period. This requirement to make Project Records available to the Department shall be a continuing obligation of the Design-Builder and shall survive the termination of the Contract regardless of cause.

#### 9.4 Subcontract Record Retention Requirements

The Design-Builder shall require each Subcontractor to retain its Project Records for the Record Retention Period, and to provide equivalent access to Project Records to the Department, the Department's representatives, and FHWA (if applicable). The Design-Builder shall require each Subcontractor to include in lower-tier subcontracts the same Project Record retention and access requirements.

#### 9.5 Location

The Design-Builder shall maintain all Project Records at the locations required under the terms of the Contract for the duration of the Contract. Subsequent to Contract completion, the Project Records shall be maintained for the Record Retention Period with suitable security, protection against damage and casualty loss, and access to the Department and FHWA (if applicable).

#### 10 TERMINATION OR SUSPENSION

#### 10.1 Termination for Convenience and No Fault; Payment

The Contract may be terminated for convenience by the Department in accordance with Department Standard Specifications, as amended. In such case, the Department will make payment in accordance with the *Design-Build Standard Guidance*. However, the amount to be paid to the Design-Builder shall in no event exceed the Contract Amount.

#### 10.2 Termination for Cause; Amounts Payable

The Contract may be terminated by the Department for default in accordance with Department Standard Specifications, as amended, and the *Design-Build Standard Guidance*. In addition to the acts listed in the above documents the following shall also be considered defaults for which the Contract may be terminated:

- The Design-Builder or its Design Professionals no longer hold the licenses or certificates required to perform the work or any portion thereof;
- The Design-Builder so fails to perform any agreed-upon portion of the work or Contract item or applicable standard of care as to materially affect the Design-Builder's performance under the Contract in accordance with its terms, and such breach, default, or failure is not cured within the requirements of the *Design-Build Standard Guidance*; or
- The Design-Builder made knowing or reckless misrepresentations, concealed facts, or failed to disclose information in Design-Builder's Proposal. Such shall constitute fraudulent inducements and shall entitle the Department to recover reliance damages, in addition to any other available remedies to which it may show itself entitled.

In case of termination for cause, the Department will make payment consistent with the payment provisions included in the *Design-Build Standard Guidance* and at the Department's option, including payment for materials left on hand, in accordance with Department Standard Specifications, as amended.

#### 10.3 Contract Notice of Contract Termination

The Department may terminate the Contract, in whole or in part, immediately upon notice to the Design-Builder, or at such later date as the Department may establish in such notice, in accordance with Department Standard Specifications, as amended.

#### 10.4 Quality of the Work

In the event of the Department's termination of the Contract, regardless of reason, the Design-Builder shall remain responsible for the quality of the work performed through the date of termination.

#### 10.5 Litigation

In the event of litigation instigated by the Design-Builder in accordance with the Contract or by the Department for breach of contract or fraudulent inducement, the Department may pursue both recoupment and set-off in addition to its other available remedies.

#### 11 ENUMERATION OF CONTRACT

The Contract includes the following:

- 1. BOOK 2 (DESIGN-BUILD CONTRACT);
- 2. BOOK 3 (PROJECT SPECIFIC INFORMATION);
- 3. DESIGN-BUILD STANDARD GUIDANCE AND ADDENDUM;
- 4. THE DEPARTMENT STANDARD SPECIFICATIONS;
- 5. THE DEPARTMENT SUPPLEMENTAL SPECIFICATIONS;
- 6. THE DEPARTMENT DESIGN GUIDELINES AND ADDENDUM;
- 7. THE DEPARTMENT CONSTRUCTION CIRCLULAR LETTERS:
- 8. THE DEPARTMENT STANDARD DRAWINGS;
- 9. THE DEPARTMENT MATERIAL AND TEST STANDARD OPERATING PROCEDURES;
- 10. EXHIBIT A (TECHNICAL PROPOSAL);
- 11. CHANGE ORDERS;
- 12. FORCE ACCOUNT WORK ORDERS;
- 13. WRITTEN ORDERS AND AUTHORIZATIONS ISSUED BY THE DEPARTMENT;
- 14. ALL OTHER PROGRAMMATIC PLANS OR ANY OTHER DOCUMENTS; IN ANY FORM, REQUIRED TO BE SUBMITTED TO THE DEPARTMENT PURSUANT TO THE TERMS OF APPLICABLE CONTRACT.
- 15. ALL MATERIAL INCLUDED BY REFERENCE IN ANY OF THE ABOVE DOCUMENTS.

#### 12 ORDER OF PRECEDENCE

All Contract Documents are intended to be complementary. Conflicts, if any, will be resolved utilizing the following descending order of precedence.

- 1. BOOK 3 (PROJECT SPECIFIC INFORMATION) AND ADDENDA;
- 2. BOOK 2 (DESIGN-BUILD CONTRACT), including the Special Provisions listed in Appendix B;
- 3. THE DEPARTMENT SUPPLEMENTAL SPECIFICATIONS;
- 4. THE DEPARTMENT STANDARD SPECIFICATIONS;
- 5. THE DEPARTMENT DESIGN GUIDELINES AND ADDENDUM;
- 6. THE DEPARTMENT STANDARD DRAWINGS;
- 7. DESIGN-BUILD STANDARD GUIDANCE;
- 8. THE DEPARTMENT CONSTRUCTION CIRCLULAR LETTERS;

- 9. ALL OTHER PROGRAMMATIC PLANS OR ANY OTHER CONTRACT DOCUMENTS;
- 10. ALL MATERIAL INCLUDED BY REFERENCE IN ANY OF THE ABOVE DOCUMENTS.

#### 13 DESIGN-BUILDER CERTIFICATIONS AND DISCLOSURES

#### 13.1 Nondiscrimination

The Design-Builder shall follow the nondiscrimination provisions as provided in this **Book 2 (Design-Build Contract)**.

#### 13.2 DBE Compliance

The Design-Builder shall follow the DBE provisions as provided in the Special Provisions provided in this Book 2 (Design-Build Contract). The Design-Builder shall comply with the Department DBE requirements in the Design-Build Standard Guidance and 49 Code of Federal Regulations (CFR) Part 26 and shall require that all Subcontractors so comply with the noted requirements. The Design-Builder shall include the Department DBE requirements in all subcontracts.

#### 13.3 Illegal Immigrants

The Design-Builder shall attest to the Illegal Immigrant provisions as provided in Form AT in Appendix C. The Contract includes a completed/executed Form AT in Appendix C.

# 13.4 Certification Regarding Debarment, Suspension, and Other Responsibility Matters – Primary Covered Transactions

The Design-Builder shall follow the debarment, suspension, and other responsibility matters provisions as provided in this **Book 2 (Design-Build Contract)**.

#### 13.5 Certification for Grants, Loans, and Cooperative Agreements

The Contract includes a completed/executed Form LC in Appendix C.

The Design-Builder agrees that if any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any federal agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Contract, the Design-Builder shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

#### 13.6 Goals and Targets

There is a DBE Utilization Goal of five and five tenths percent (5.5%) for this Project. If a goal is stated, the Design-Builder shall follow the DBE provisions as provided in **Book 2 (Design-Build Contract)**. The Design-Builder shall exercise all necessary and reasonable steps and good faith efforts to ensure that DBEs participate in at least the percent of the total project cost set forth above as the goal.

#### 14 MISCELLANEOUS PROVISIONS

#### 14.1 Employment of Department Workers

The Design-Builder shall not engage, on a full, part-time, or other basis during the period of this Contract, any professional or technical personnel who are or have been at any time during the period of the Contract

in the employ of the Department, except regularly retired employees, without the written consent of the Department.

#### 14.2 Covenant Against Contingent Fees

The Design-Builder warrants that it has not employed or retained any company or person other than a bona fide employee working solely for the Design-Builder to solicit or secure this Contract, and that it has not paid or agreed to pay any company or person, other than a bona fide employee working solely for the Design-Builder, any fee, commission, percentage, brokerage fee, gifts, or any other consideration, contingent upon or resulting from the award or making of this Contract. For breach or violation of this warranty, the Department shall have the right to deduct from the Contract Amount or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gifts, or contingent fee.

#### 14.3 Energy Policy and Conservation Act

Under this Contract, the Design-Builder shall give due consideration to and, as applicable, comply with the standards, orders, and requirements relating to energy efficiency contained in the Department energy conservation plans issued in compliance with the Energy Policy and Conservation Act (P.L. 94-165).

#### 14.4 Additional Employment Regulations

The Design-Builder shall comply with the Vocational Rehabilitation Act of 1973 as approved by Congress on September 26, 1973, herein incorporated by reference, which prohibits employment discrimination against physically handicapped persons. Further, the Design-Builder shall comply with Section 2012 of the Vietnam Era Veterans Readjustment Act of 1974 which requires the Design-Builder to take affirmative action to employ and advance in employment qualified veterans of the Vietnam Era.

#### 14.5 Copyrighting

The Design-Builder shall be prohibited from copyrighting any papers, reports, forms, or other material which is a part of any work under this Contract without written approval from the Department. Publication rights to any documents produced are reserved by the Department.

#### 14.6 Governing Law; Jurisdiction; Venue

The Design-Builder is assumed to be familiar with and observe and comply with those federal, state, and local laws, ordinances, and regulations in any manner affecting the conduct of the work and those instructions and prohibitive orders issued by the Department and federal government regarding fortifications, military, and naval establishments and other areas. The Design-Builder shall observe and comply with those laws, ordinances, regulations, instructions, and orders in effect as of the date of this Contract.

This Contract shall be governed by and construed in accordance with the laws of the State of Tennessee. The Design-Builder agrees that it will be subject to the exclusive jurisdiction of the courts of the State of Tennessee in actions that may arise under this Contract. The Design-Builder acknowledges and agrees that any rights or claims against the Department or its employees hereunder, and any remedies arising there from, shall be subject to and limited to those rights and remedies, if any, available under TCA § 9-8-101 through 9-8-407.

#### 14.7 Contract Interpretation

Notwithstanding anything in the Contract to the contrary, no field explanations or interpretations provided by the Department at any meetings, and no comments by the Department on Design Documents or Construction Documents, shall be deemed, construed or interpreted to (a) amend, supersede or alter the

terms, requirements, limitations or meaning of any Contract Document or (b) release or relieve the Design-Builder from full responsibility for the design of the Project in accordance with the Contract. However, written interpretive engineering decisions from the designated Department contact person(s) pursuant to the Contract may be relied upon to provide information and interpretations of ambiguous or uncertain requirements set forth in the Contract.

#### 14.8 Notices

Notices to be given hereunder shall be given in writing by personal delivery, facsimile, e-mailing or mailing the same, postage prepaid, to the Design-Builder or the Department at the addresses or numbers set forth in Sections 3.2 and 3.3, or as either Party may hereafter indicate pursuant to this Section. Any notice delivered by facsimile and email shall be deemed to be received when confirmation of successful transmission is generated by the transmitting machine. Any notice so mailed, personally delivered, facsimile or e-mail transmission shall be the sole responsibility of the Design-Builder to track and confirm receipt by the Department and shall be confirmed by telephone notice to the Department for the Project. Any notice shall be effective as to the Design-Builder upon delivery into the possession of one of the Design-Builder's designated management personnel, and as to the Department, upon delivery to the Department. Regular, day-to-day communications may be transmitted through one of the methods set forth above, in person, by e-mail, or by other similar electronic transmission.

#### 14.9 Disclosure of Tax Identification Number

The Design-Builder shall provide its federal tax identification number to the Department. The tax identification number provided pursuant to this authority will be used for the administration of state, federal, and local tax law.

#### 14.10 Severability

The Parties agree that if any term or provision of the Contract is declared by a court of competent jurisdiction to be illegal or otherwise invalid, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the Parties shall be construed and enforced as if the Contract did not contain the particular term or provision held to be invalid.

#### 14.11 No Waiver

The failure of the Department to enforce any provision of the Contract shall not constitute a waiver by the Department of that provision or any other provision of the Contract.

#### 14.12 Media Contacts; Confidentiality

Unless otherwise specifically authorized in writing, the Design-Builder shall provide no news release, press release, or any other statement to a member of the news media regarding this Project without the Department's prior written authorization. The Design-Builder shall require this clause within all Subcontractors agreements.

#### 14.13 Organizational Conflicts of Interest

The Design-Builder shall identify all relevant facts relating to past, present, or planned interest(s) of the Design-Builder's (including the Major Participants, proposed Design-Builder members, and their respective chief executives, directors, and Key Personnel) which may result, or could be viewed as, an organizational conflict of interest in connection with this Project.

The Design-Builder shall disclose:

- 1. Any current contractual relationships with the Department (including identification of the Department contract number and project manager);
- 2. Present or planned contractual or employment relationships with any current Department employee;
- 3. Any current relationships between the Major Participants, Key Personnel, and/or Design Professionals of the Design-Builder on other Department projects (including identification of the Department contract number and project manager); and
- 4. Any other circumstances that might be considered to create a financial interest in the Contract by any current Department employee if the Design-Builder is awarded the Contract.

The Design-Builder must also disclose any current contractual relationships where the Design-Builder is a joint venture. The foregoing is provided by way of example and shall not constitute a limitation on the disclosure obligations.

For any fact, relationship, or circumstance disclosed in this Section 14.13, the Design-Builder must identify steps that have been or will be taken to avoid, neutralize, or mitigate any organizational conflicts of interest.

All Organizational Conflicts of Interest shall be addressed on Form COI in Appendix C.

#### 14.14 The Department's Insurance

The State of Tennessee is self-insured, and such insurance shall cover the Department's operations and activities under the Contract.

#### 14.15 Joint Ventures and Partnerships

If the Design-Builder is a joint venture or a partnership, each joint venture member or partner is executing this Contract on behalf of both itself and the Design-Builder, and each joint venture member or partner and Design-Builder shall be jointly and severally liable under this Contract.

#### 14.16 Merger Clause

The Contract constitutes the entire Contract between the Parties on the subject matter addressed herein. The terms of this Contract cannot be waived or amended, in any manner whatsoever, except by written instrument signed by the Parties and containing all required State of Tennessee approvals. Any waiver, if made, shall be effective only in the specific instance and for the specific purpose given. There are no understandings, agreements, or representations, oral or written, regarding this Contract except as contained or incorporated by reference herein.

**THIS CONTRACT** is executed in three (3) original copies, of which one is to be delivered to the Design-Builder, and the remainder to the Department.

The Design-Builder's authorized representative, by his/her signature below, hereby acknowledges that he/she has read this Contract, understands it, and can affirm that the Design-Builder agrees to be bound by its terms and conditions. This Contract may be executed in several counterparts, each of which shall be an original, and all of which shall constitute but one and the same instrument.

| <b>IN WITNESS WHEREOF</b> , the P Effective Date. | Parties have executed this Contract, wh        | nich shall be effective as of the   |
|---|--|-------------------------------------|
| Design-Builder Name:                              |  |                                     |
|   |  |                                     |
| Company Officer Signature                         | Printed Name and Title                         | Date                                |
|   |  |                                     |
| De  | State of Tennessee epartment of Transportation |                                     |
| This Contract is accepted this                    | day of   | _ , , and                           |
| Is effective on the                               | day of   | ,                                   |
|   | Will Reid, Co                                  | ommissioner                         |
|   | -  | eneral Counsel<br>Form and Legality |

#### **APPENDIX A**

#### SUPPLEMENTAL SPECIFICATIONS TO THE STANDARD SPECIFICATIONS

The following, revised as noted, incorporates the Supplemental Specifications by reference for bidding and Project design and construction purposes. These Supplemental Specifications may be obtained from the Department's website at:

#### https://www.tn.gov/tdot/tdot-construction-division.html

Supplemental Specifications to the Standard Specifications Revision Date

| Supplemental Specification to Section 100 | <br>01/08/2025 |
|---|----------------|
| Supplemental Specification to Section 200 | <br>07/14/2025 |
| Supplemental Specification to Section 300 | <br>08/28/2024 |
| Supplemental Specification to Section 400 | <br>12/26/2024 |
| Supplemental Specification to Section 500 | <br>12/27/2023 |
| Supplemental Specification to Section 600 | <br>01/08/2025 |
| Supplemental Specification to Section 700 | <br>12/26/2024 |
| Supplemental Specification to Section 900 | <br>12/26/2024 |

#### **APPENDIX B**

#### SPECIAL PROVISIONS

The following table incorporates the Special Provisions by reference for bidding and Project design and construction purposes. These Special Provisions may be obtained from the Department's website at:

 $\frac{\text{https://www.tn.gov/tdot/tdot-construction-division/transportation-construction-division-resources/construction-special-provisions.html}{}$ 

Except for the Special Provisions following this table, the date of the Department's last RFP addendum shall establish the "revision date" for each of the listed Special Provisions.

| Title                        | SP# |
|------------------------------|-----|
| In development for final RFP |     |
|                              |     |
|                              |     |

<u>SP108B</u>

Page 1 of 1

<u>STATE</u> <u>OF</u> <u>TENNESSEE</u>

September 16, 2025 County: Davidson Contract No. DB2504

#### **SPECIAL PROVISION**

#### **REGARDING**

#### LANE CLOSURE AND PROJECT COMPLETION LIQUIDATED DAMAGES

All temporary lane closures for the Project must be approved in advance by the Department and local agency (as applicable). Requests for temporary lane closure approvals must be sent at least seven (7) calendar days in advance of the closure date.

Lane closures shall only be allowed between 9:00 AM and 3:00 PM daily and 8:00 PM and 5:00 AM nightly. For each hour, or portion thereof, in which a lane is closed to traffic outside of these allowances, the Design-Builder will be charged \$1,000.00 per hour (or portion thereof) per lane, not as penalty, but as liquidated damage.

No lane closures will be allowed during Holidays or Holiday weekends in accordance with Section 101.03 of the TDOT Standard Specifications, as directed by the Department.

All lane closures and operations must be coordinated with other construction contracts in the area and additionally meet the requirements of Section 10.4.4 of Book 3.

The Project shall be completed in its entirety, except for the plant establishment and punch list (defined as a listing of instructions for correction of unsatisfactory work, in whole or in part, after an inspection by the Department prior to final acceptance and clean-up not requiring lane closures), on or before the **Contract Completion Date**. For each calendar day after the Contract Completion Date, that all Work specified in the Project is not complete, a sum of \$1,000.00 per day shall be deducted from monies due the Design-Builder, not as a penalty, but as liquidated damages. The liquidated damage deductions specified in Subsection 108.09 of the Standard Specifications, as amended, for failure to complete the Project on or before the Contract Completion Date, shall not apply to this Project.

Where provisions of this Special Provision conflict with Subsection 108.09 of the Standard Specifications, as amended, this Special Provision prevails.

<u>SP712U</u> <u>SP712U</u>

Page 1 of 2

<u>STATE</u> <u>OF</u> <u>TENNESSEE</u>

September 16, 2025 County: Davidson Contract No. DB2504

#### **SPECIAL PROVISION**

#### **REGARDING**

#### PAYMENT FOR UNIFORMED LAW ENFORCEMENT OFFICER

#### **Description**

This work consists of the use and payment for Uniformed Law Enforcement Officer in the urban counties of Shelby, Davidson, Knox, and Hamilton.

#### **Construction**

As specified in **712.04.B**, when requested by the Design-Builder and approved by the Department (including the Regional Safety Coordinator or Regional Operations Office) through development of the Design-Builder's TMP and temporary traffic control (TTC) strategies and plans, a Tennessee Highway Patrol (THP) Trooper may be provided to enforce motor vehicle laws and otherwise assist in securing the public safety. Submit requests for the THP at least 48 hours in advance of the requested time of service.

When a THP Trooper is not available, the Design-Builder may provide a Uniformed Law Enforcement Officer if approved by the Department (including the Regional Safety Coordinator or Regional Operations Office). All Uniformed Law Enforcement Officers shall provide a marked Federal, State, County, City, or Metropolitan government law enforcement vehicle equipped with blue lights and have the authority to write traffic tickets and make arrests within the project site. The Uniformed Law Enforcement Officer shall maintain a detailed written log of enforcement activities and shall submit the log to the Design-Builder and Department for verification each month.

All Uniformed Law Enforcement Officers working on Department projects shall have training from a Peace Officer Standards and Training (POST) certified police training academy in the State of Tennessee and an additional 4 hours of FHWA approved work zone training. Submit records of this training to the Design-Builder and Department.

<u>SP712U</u> <u>SP712U</u>

Page 2 of 2

#### **Method of Measurement**

The Department will pay for Uniformed Law Enforcement Officers from a Departmentestablished allowance (beyond the Contract Amount) at a per hour rate for the total hours present on the Project. No compensation will be made for drive time.

The Design-Builder shall submit a request for reimbursement for Uniformed Law Enforcement Officer services based on actual costs of the services as billed by the law enforcement agency and paid by Design-Builder, unless another method is approved in writing by the Department.

- The Design-Builder shall keep detailed records of the actual Uniformed Law Enforcement Officer costs as billed and paid by presenting to the Department copies of invoices from the law enforcement agency that performed the work.
- The Design-Builder shall submit to the Department, for Department approval, the paid invoices for these costs as part of the monthly pay application for the work performed that month.
- The Department will review the invoices and other supporting documentation presented by the Design-Builder for proper payment.

The Design-Builder shall not be entitled to any profit, overhead, or other markups for Department-approved Uniformed Law Enforcement Officers work paid pursuant to this Special Provision.

#### **Basis of Payment**

Payment for Uniformed Police Officers is full compensation for providing the Officer, official law enforcement vehicle, all necessary equipment, and administrative costs associated therewith.

#### **APPENDIX C**

### DESIGN-BUILD CONTRACT FORMS APPENDED TO BOOK 2 (DESIGN-BUILD CONTRACT)

| Form Name  | Form Designation |
|--|------------------|
| Attestation Regarding Personnel Used in Contract Performance | Form AT          |
| Conflict of Interest Disclosure Statement                    | Form COI         |
| Contract Payment and Performance Bond                        | Form CP&PB       |
| Lobbying Certificate   | Form LC          |
| Technical Proposal Signature Page                            | Form TPSP        |



# TENNESSEE DEPARTMENT OF TRANSPORTATION Design-Build Book 3 Project Specific Information Industry Review Draft

#### Gallatin Pike (SR-6) Safety Project

Gallatin Pike: (Walton to Wiley) and (Liberty to Northside)

Davidson County, Tennessee

Project Identification Number (PIN): 125526.09 (Walton to Wiley) and 132524.00 (Liberty to Northside)

State Project Number: 19025-1233-94 and 19025-3233-94 (Walton to Wiley) and 19S006-F1-006 and

19S006-F3-006 (Liberty to Northside)

Federal Project Number: HSIP-6(145) (Walton to Wiley) and HSIP-6(155) (Liberty to Northside)

Contract# DB2504

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#### 1 GENERAL

This Book 3 (Project Specific Information) contains the requirements and conditions by which the Design-Builder shall design and construct the Project, except for any portions of the work that may be stipulated within this Book 3 (Project-Specific Information) to be performed by the Tennessee Department of Transportation ("TDOT", or "the Department").

The order of precedence of this Book 3 (Project Specific Information) with the other Contract Documents is described in Book 2 (Design-Build Contract).

The definition of terms corresponding with this Book 3 (Project-Specific Information) are found in the most recent version of the Department's *Standard Specifications for Road and Bridge Construction* (TDOT Standard Specifications) and *Design-Build Standard Guidance* (DB Standard Guidance) as of 30 days prior to the Proposal due date. Additionally, the Design-Builder shall use the most current version of any listed standard or reference as of 30 days prior to the Proposal due date, unless expressly stated otherwise in the Contract Documents.

#### 1.1 General Project Description; Scope of Work

The Design-Builder shall perform all surveying, design, construction, administration, project management, and other necessary services/work required to construct the Gallatin Pike (SR-6) Safety Project (the "Project") in accordance with the Contract Documents (the "Work").

Safety improvements are required along two sections of Gallatin Pike (SR-6). The first section is from Walton Lane to Wiley Street (PIN 125526.09). The second section is from Liberty Lane to north of Northside Drive (PIN 132524.00).

PIN 125526.09 includes pedestrian and bicycle safety improvements at various intersections:

- Walton Lane
- Berkley Drive
- Palestine Avenue
- Moving Center Court
- Webster Street
- Emmitt Avenue
- Neelys Bend Road
- Harrington Street
- Harris Street
- Woodruff Street
- Hickory Street
- Maple Street
- East Old Hickory Boulevard
- West Old Hickory Boulevard (SR-45)

As shown in the Base Technical Concept, the required improvements include designing and constructing sidewalks, pedestrian curb ramps, bicycle lanes, bus boarding islands, midblock crossings, signing, pavement

markings, and signals. The length of this section is approximately 1.922 miles extending from Station 3+20.41 to Station 105+31.08 (the Walton to Wiley section of the "Project Limits").

PIN 132524.00 includes pedestrian and bus lane improvements from Liberty Lane to north of Northside Drive, inclusive of all Work between these two intersections. As shown in the Base Technical Concept, the required improvements include designing and constructing sidewalks, multi-use paths, pedestrian curb ramps, curb and gutter, signing, pavement markings, signals, and lighting. This roadway section also includes the conversion of a portion of the existing shoulder to a proposed bus lane. The length of this section is approximately 0.277 mile extending from Station 106+74.54 to Station 121+39.96 (the Liberty to Northside section of the "Project Limits").

As described in Section 7, the Department has established the Project's proposed right-of-way (ROW) limits and TCE boundaries as shown on the ROW Exhibits (the "Planned ROW Limits"). These acquisitions (to be completed by the Department) include the properties and interests listed in Tables 1 and 2 for identified use when constructing the Work.

Beyond the items of Work listed above, the Design-Builder's general responsibilities with respect to the Work include:

- Meet or exceed minimum Project design criteria for all improvements as defined in Section 3 and Section 4.
- Coordinate with utility owners (as necessary) through the construction phase.
- Install new roadway signs and sign structures within the Project Limits.
- Provide traffic control during the construction Work, including maintaining detour signs where needed
- Acquire necessary construction and use permits not previously obtained by the Department.
- Meet all environmental commitments and perform environmental services in accordance with the approved C-List Categorical Exclusion and technical appendices (the "NEPA Document").

A detailed description of the Work is included within the various sections of this Contract Book 3 (Project-Specific Information). Figures 1 and 2 depict both Project locations.



Figure 1: Location Map (Walton Lane to Wiley Street) (PIN 125526.09)

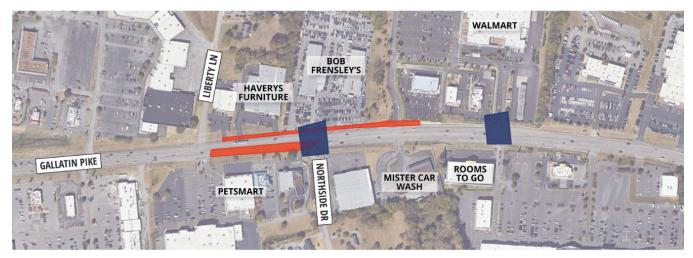


Figure 2: Location Map (Liberty Lane to North of Northside Drive) (PIN 132524.00)

#### 1.2 Project Goals

The Project goals are as follows:

- 1. Implement pedestrian safety measures, such as improved sidewalks and crosswalks, along SR-6 (Gallatin Pike).
- 2. Minimize impacts to business access and traveling public along SR-6 during construction.
- 3. Support the Department in mitigating known risks related to right-of-way acquisitions and utility relocations.

#### 1.3 Reference Documents

Information on the Project has been included as Reference Documents, published on the Department's Project website.

The Design-Builder shall acknowledge that the Reference Documents are preliminary and provided solely to assist the Design-Builder in the development of its Design Documents. The Design-Builder shall be fully responsible for the accuracy and completeness of all Design Documents and related Work performed under this Contract. The Design-Builder shall be fully liable and hold the Department harmless for any additional costs and all claims against the Department that may arise due to any Department errors or omissions to the Reference Documents or due to the errors, omissions, or negligence of the Design-Builder in performing the Work required by this Contract.

The Department-provided Reference Documents include:

- Field survey data files
- The NEPA Document
  - o PIN 125526.09 (Walton Lane to Wiley Street)
  - o PIN 132524.00 (Liberty Lane to North of Northside Drive)
- Base Technical Concept (in .dgn format and sheet files)
  - The Base Technical Concept is provided for information only; the scope of the Project listed in the Contract Documents takes precedence.

- The .dgn files will be sent to the Design-Builder upon receipt of an executed CAD Disclaimer form (provided on the Project website) to the TDOT point of contact listed in Section 1.5 of Book 1 (Instructions to Proposers).
- Utilities Contact List and Department's Utility Impact Matrix
- ROW Exhibits

The Design-Builder shall establish datum adjusted survey control tied to the Tennessee Geodetic Reference Network (TGRN) in accordance with Section 2.1 of the TDOT Survey Manual. The existing coordinates, dimensions, and elevations used in the Reference Documents are provided for information only. The Design-Builder shall verify all existing elevations, dimensions, and horizontal and vertical alignments in the field. This shall include elevations at interfaces of existing and proposed pavement, sidewalks, signals and lighting poles, and grading limits. The Design-Builder shall be responsible for all surveys, including those relating to the work and utilities and including locating the Planned ROW Limits established by the Department to perform the work. The Design-Builder shall provide survey control to the Department prior to submission of its Definitive Design.

#### 1.4 Construction Engineering Inspection

The Department will be responsible for Construction Engineering Inspection (CEI) work and Quality Acceptance Testing. The Design-Builder shall provide and maintain a communication matrix to support coordination of Work for all parties during both the design and construction phases.

#### 2 PROJECT MANAGEMENT

The Design-Builder shall prepare and administer a Project Management Plan (PMP) containing the Design-Builder's approach to managing the design and construction activities of the Project in accordance with the *DB Standard Guidance* and the specific requirements defined herein.

The PMP shall contain, at a minimum, the following component parts:

- Organizational Structure and Staffing Plan
- Critical Path Method (CPM) Initial Project Schedule (IPS)
- Quality Management Plan (as listed in Section 2.3)
- Public Relations and Public Information Plan (PIP)
- Records Management Plan

Within 30 Days of Contract Award, the Design-Builder shall meet with the Department at the Post-Award Meeting to discuss the development of the components of the PMP for Review and Acceptance by the Department prior to the start of any Work.

The Design-Builder shall use its Proposal as a foundation to prepare the PMP and its component plans/parts. The Design-Builder shall implement all elements of the PMP over the duration of the Project.

The Design-Builder shall use an agreed-to e-plans software for the Project. All Project submittals shall be in Adobe pdf and native file format and include an email transmittal letter to the Department to initiate review of all submittals.

#### 2.1 Organizational Structure and Staffing Plan

The Design-Builder shall prepare an Organizational Structure and Staffing Plan to ensure the appropriate number of qualified staff are employed by the Design-Builder to perform the Work in a manageable and safe manner.

The plan shall identify the Key Personnel and key management staff (minimally those listed in Section 3.4 of Contract Book 2).

The Design-Builder shall provide an organizational chart that graphically represents the hierarchy and functional interaction of the Key Personnel and indicates the functional responsibilities of each staff member. The organization shall be monitored, and the chart updated and provided to the Department when changes to the Design-Builder's organizational chart occur.

The Design-Builder shall provide to the Department, within 15 calendar days after the initial Notice to Proceed (NTP), a list of the contacts (and contact details) of Key Personnel on site and Key Personnel on call who are available 24 hours per day during the execution of the Work.

The Design-Builder shall include a procedure for a structured and managed replacement of Key Personnel, as requested for Department approval, on the Design-Builder's Project team.

Any licenses or certifications that are required to meet the requirements of the Request for Proposals (RFP) shall be in place by the time the initial NTP is issued.

#### 2.2 Project Schedule and Cost Management

#### 2.2.1 CPM Schedule Requirements

For review at the Post-Award Meeting, the Design-Builder shall prepare a Critical Path Method (CPM) Initial Project Schedule (IPS), in accordance with the Department's Circular Letter 108.03.C, Chapter 3 of the DB Standard Guidance, and the requirements described herein.

#### 2.2.1.1 Initial and Monthly Schedule Submittals

In accordance with Chapter 2 and 3 of the DB Standard Guidance, the Design-Builder shall use the preliminary CPM schedule submitted with its Proposal as a foundation to prepare the CPM IPS and shall submit it to the Department for Review and Acceptance. Acceptance of the CPM IPS to be the Baseline CPM Schedule by the Department shall be a condition for starting any Work.

The Design-Builder shall submit an updated CPM Schedule monthly for the Department's Review and Comment in accordance with Department's Circular Letter 108.03.C and Chapters 3 and 9 of the DB Standard Guidance. Monthly progress payment requests and CPM updates are due five (5) business days prior to the estimate cutoff date. Each month, the Design-Builder shall provide a narrative with each CPM Schedule submittal that includes:

- A detailed description of the status of the Project and changes to the CPM Schedule;
- Identification of strategies for mitigation of Project risks or issues impacting the CPM Schedule (describing constraints and discussing contingencies);
- How the proposed Project phasing, sequence of Work, and allocation of resources enable the Design-Builder to progress the Work to achieve the Contract Completion Date(s);
- How the phasing ensures timely deliveries of materials to achieve the CPM Schedule milestones;
- Identification of categories of Work performed by Design-Builder's own direct labor force and those performed by Subcontractors;
- Pay Item activities and all Work included in the Pay Item activities corresponding to totals as reflected on the Schedule of Items; and
- Any other requirements from the Department's Circular 108.03.C and Chapter 3 and 9 of the DB Standard Guidance.

Acceptance by the Department shall not be construed to imply approval of any particular method or sequence of construction or to relieve the Design-Builder of providing sufficient materials, equipment, and labor to guarantee completion of the Project in accordance with all Contract requirements. The Department's acceptance shall not be construed to modify or amend the Contract, Project milestones, Interim Completion Date(s) (as applicable), or the Contract Completion Date.

Furthermore, the Department's acceptance of any schedule update does not relieve the Design-Builder of responsibility for the accuracy or feasibility of the CPM Schedule, does not modify the Contract, will not be construed as an endorsement or validation of the Design-Builder's plan, and does not guarantee that the Project can be performed or completed as scheduled. The Department's acceptance of the CPM Schedule in no way attests to the validity of the assumptions, logic constraints, dependency, relationships, resource allocations, resource availability, manpower and equipment, or any other aspect of the means and methods of performing the Work.

Overall, the Design-Builder shall remain solely responsible for the scheduling, planning, and execution of the Work to meet the Project milestones, Interim Completion Date(s) (as applicable), and the Contract Completion Date(s).

#### 2.2.1.2 PROJECT CPM SCHEDULE REQUIREMENTS

In addition to the requirements from the Department's Circular 108.03.C and the DB Standard Guidance, the CPM Schedule shall detail adequate planning and execution of the Work, allow the Design-Builder and Department an opportunity to evaluate the progress of the Work, and shall follow the applicable categories within the Schedule of Items and other cost control systems, including the Payment Progress Process.

The CPM Schedule shall include all major activities of Work required under the Contract, in sufficient detail to evaluate design and construction progress. The CPM Schedule shall not contain open-ended activities, except for the first and last activity in the CPM Schedule. The Design-Builder shall provide adequate time in the CPM Schedule for all parties involved with the Project to complete their work, including inspections, procurement activities, and testing. The Design-Builder shall include in the CPM Schedule the work of subcontractors, vendors, suppliers, utilities, railroads, permitting agencies, the Department, and all other parties associated with the Project. The CPM Schedule may be utilized to facilitate the Department's Construction Engineering and Inspection (CEI) and Quality Assurance/Acceptance (QA) activities.

If at any time the design or construction of the Project potentially affects the approved environmental document, the Design-Builder shall cease Work and contact the Department Alternative Delivery Office.

Failure by the Design-Builder to include any element of its Work or the work of others required for completion of the Project will not excuse the Design-Builder from completing the Project by the Contract Completion Date(s).

The scheduling software employed by the Design-Builder shall be compatible with the current and any future scheduling software used by the Department. The Department's current software is *Oracle Primavera P6 (v 18.8)*. The software shall be compatible with the electronic file version of the CPM Schedule that can be loaded or imported by the Department using the Department's scheduling software with no modifications, preparation, or adjustments.

The CPM Schedule shall show the order in which the Design-Builder proposes to complete the Work, the time frame which it will start the major items of work, and the critical features of such work (including procurement of materials, plant, and equipment). The CPM Schedule shall include, at a minimum, the following items:

- Controlling items of Work, major Work, and activities to be performed;
- Seasonal weather limitations;
- Land disturbance restrictions;
- Phase duration or milestone events, based on selected option as applicable; and
- Specified Contract Completion Date(s) from the Contract.

The CPM Schedule shall be time and cost loaded, depicting Pay Items and subordinated activities and their respective prices (distributed over time) in accordance with the DB Standard Guidance. Within thirty (30) calendar days after award of the Contract, the Design-Builder shall assign a percentage of the Pay Item Cost to each activity in the proposed CPM Schedule that reflects an accurate percentage value to each activity based on estimated costs plus associated profit and overhead. The profit and overhead assigned to the individual activities shall be equal to or less than the mark-up applied to the Work when establishing the

Contract Amount. The CPM Schedule shall be in a suitable scale to indicate graphically the total percentage of Work scheduled to be completed at any time.

#### 2.2.1.3 SUBMITTAL REQUIREMENTS

In addition to the requirements of Section 2.7 of the DB Standard Guidance, Design-Build submittals shall be scheduled and submitted based on the approved CPM Schedule. The Design-Builder shall include all review submittals and any resubmittals in the CPM Schedule in order for the Department to appropriately allocate resources for performing the reviews and to track and document any possible schedule impacts.

Ten (10) business days shall be allocated in the CPM Schedule for activities requiring the Department's Review and Acceptance or Review and Comment, unless otherwise indicated in a Special Provision or third-party review. In accordance with the DB Standard Guidance, submittals requiring the Department's Review and Acceptance shall be limited to two concurrent submittals per Division unless indicated otherwise by the TDOT Project Manager.

All submittals required to be reviewed and approved by third-party stakeholders shall be tracked individually. Each such submittal shall have separate activities that track submittal development, required reviews, and revisions required by third-party stakeholders, the Department, or the Design-Builder.

#### 2.2.1.4 TIME ADJUSTMENTS

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

- Adverse weather conditions (e.g., weather days should be accounted for in the CPM Schedule);
- The time required for the Department's review and response to any initial submittal and any required resubmittal to resolve the Design-Builder noncompliance or nonconformance with the Contract Documents;
- The time required to review value engineering cost proposals (VECPs);
- The time to process Change Orders or plan revisions requiring additional Department or other agency review and/or approval;
- The time to complete any Work that the Design-Builder did not account for in its CPM Schedule as required by the Contract Documents; or
- Any delays typically encountered during a Project regardless of the source.

The Department may consider time adjustments for:

- The time for plan revisions requiring additional third-party or other agency (i.e., non-Department) review and/or approval if the Design-Builder is unable to work on the controlling item of work without revised plans or shop drawings;
- The time for ordering and delivery of materials for extra work as directed by the Department that affects the CPM Schedule;
- Delays encountered due to a force majeure event as defined in Section 108.07B of the TDOT Standard Specifications that is beyond the control of the Design-Builder that the Department determines adversely affected the progress of the Work.

In accordance with Section 2.7 of the DB Standard Guidance, submittals must be stamped into the Department-designated contact office before 12:00 p.m. CST to start the review period that day. If submittals are received after 12:00 p.m. CST, the review period will begin on the following business day. The review period includes only the Department workdays.

#### 2.2.2 Schedule and Cost Controls

The Design-Builder shall develop procedures for schedule and cost control on the Project, including the cost control and schedule management system to be used to control and coordinate the Work.

The cost-control approach shall include a description of the proposed approach for calculating progress performance for preparing the monthly payment requests using the Pay Item activities, Schedule of Items, and the CPM Schedule. The Design-Builder shall include a procedure for re-scheduling its Work to achieve schedule recovery objectives and how these objectives will be enforced with its workforce and Subcontractors.

### 2.2.3 Liquidated Damages for Failure to Meet Completion Deadline

The Design-Builder shall complete the Project within the time limitations set forth in Book 2 (Design-Build Contract) and Special Provision 108B.

If the Design-Builder fails to achieve Substantial Completion by the Contract Completion Date, then the Department will suffer substantial losses and damages. Special Provision 108B provides the daily sum that shall be deducted from monies due the Design-Builder, not as a penalty, but as Liquidated Damages, if the Contract Completion Date is delayed.

## 2.3 Quality Management Plan

The Design-Builder shall establish and implement a Quality Program and prepare a Quality Management Plan in accordance with Section 2.5 of the DB Standard Guidance and the requirements described herein. The Quality Management Plan shall include:

- Design Quality Management Plan (DQMP);
- Construction Quality Management Plan (CQMP);
- Environmental Compliance Plan (ECP); and
- Safety and Health Plan (S&H Plan).

The Department expects the Design-Builder to implement Quality Program improvements over the Project's duration. It is essential that the Design-Builder involves its staff and partners with the Department to ensure overall Project satisfaction. The Department will strive for an oversight role in the Quality Program for the Project; however, this will only be possible if the Design-Builder's Quality Program exhibits sufficient staff and sound processes and practices that place quality design and workmanship above production and/or cost by all team members.

## 2.3.1 Design Quality Management Plan (DQMP)

The Design Quality Management Plan (DQMP) shall conform to the requirements of Section 5 of the DB Standard Guidance and describe:

- Quality roles and responsibilities of the Design-Builder's design Quality Team, including the Design Quality Manager (DQM) and Design Manager;
- Procedures for implementing the design work;
- Design development, submittal, and design review process for preparation of final signed and sealed construction plans and specifications used to construct the Project (the Readiness-for-Construction Plans and Specifications);

- Processes and procedures for the Department's Review and Acceptance of necessary submittals prior to starting any design work; and
- Quality control and quality assurance procedures for ensuring the quality of design work and conformance, including design-quality checks and certifications, and independent design reviews prior to submittal for the Department's Review and Acceptance.

The DQMP shall provide all Design Documents and perform design reviews in accordance with the design review schedule established in the CPM Schedule and in accordance with Contract requirements.

The Design Engineer or Manager shall be responsible for design quality control and ensuring that the design submittals and design reviews are performed in accordance with the DQMP and the Contract Documents. In accordance with Section 2.5.2 of the DB Standard Guidance, the DQM shall provide an independent review and certify that the Design Documents comply with all Contract requirements (QA/QC Stamps) prior to requesting Review and Acceptance by the Department. Failure by the Design-Builder to perform its Quality Management function will result in the immediate rejection of the Design Documents and the Design-Builder shall revise and resubmit. Additional review comments may be added to the resubmission by the Department.

The DQMP shall describe how nonconformances are identified and tracked, how resolutions to nonconformances are developed, and how the actions taken to correct nonconformances are documented, either in Design Documents or construction records and reviewed or re-inspected. This section will apply to both design and construction of the Project. The Design Engineer who signed the applicable Design Documents shall review and approve all resolutions of nonconformances that require design changes, repairs, or rework.

The DQMP shall describe the corrective and preventive actions the Design-Builder will take upon the identification of actual or potential major and systemic nonconformances, identified internally or by the Department. The Design-Builder shall advise the Department when corrective action has been implemented so that the Department may verify implementation, should the Department so choose. This section will apply to both design and construction of the Project.

The DQMP shall be submitted for the Department's Review and Acceptance prior to starting any design work.

### 2.3.2 Construction Quality Management Plan (CQMP)

The Construction Quality Management Plan (CQMP) shall describe the quality roles and responsibilities of the Design-Builder's construction Quality Team and procedures for implementing the construction work in accordance with Chapter 7 of the DB Standard Guidance.

Although the Department will provide CEI and QA testing, the Design-Builder is responsible for ensuring the quality of the work and shall prepare procedures in the CQMP for quality control of materials and how the Design-Builder plans to inspect the Project to ensure compliance with the Contract Documents. The Design-Builder shall guarantee and provide full cooperation in relation to the Department's CEI and QA audits, reviews, request for information, etc.

The Construction Manager shall be responsible for quality control during construction and ensuring that quality control testing and inspections are performed in accordance with the CQMP and the Contract Documents.

In accordance with Section 2.5.3 of the DB Standard Guidance, the Design-Builder shall provide a Construction Quality Manager (CQM) to oversee, manage, certify, and perform construction Quality

Management activities. The CQM shall independently review the submittals for the Department, and upon completion shall certify to the Department that the information is accurate and complete. The CQM shall certify that all Work Product has been checked and/or inspected by the Quality Team and that all work complies with the Contract Documents. The CQM shall also certify to the Department that the CQMP and all measures, protocols, and procedures provided therein, are functioning properly and are being followed.

The CQMP shall be submitted for the Department's Review and Acceptance prior to starting any construction work.

## 2.3.3 Environmental Compliance Plan (ECP)

The Design-Builder shall prepare an Environmental Compliance Plan (ECP) in accordance with Section 2.5.4 of the DB Standard Guidance.

## 2.3.4 Safety and Health Plan (S&H Plan)

The Design-Builder shall prepare a Safety and Health Plan (S&H Plan) in accordance with Section 2.5.5 of the DB Standard Guidance.

### 2.4 Public Relations and Public Information Plan

The Design-Builder shall comply with Section 7.4.5 of the DB Standard Guidance and address the following Project-specific requirements.

### 2.4.1 Internal and External Communications

The Design-Builder shall describe the internal and external communication process between the Design-Builder and the Department's staff, external stakeholders, third parties, and public affected by the Work.

The Design-Builder shall provide all information required for communication purposes. The communication activities are primarily intended for the Department and Department staff (internal stakeholders), but shall also focus on neighboring public and communities, companies and organizations, emergency services, Washington County, surrounding communities, environmental agencies, railroads (as applicable), impacted utilities, and other external services.

The focus of Project/construction communication shall support the following goals:

- Ensure that the entire Project is executed in the least disruptive and positive manner possible for the Department, external stakeholders, and the traveling and local public;
- Maintain the best possible long-term relations with all relevant external stakeholders; and
- Ensure that the Work is performed in the most effective and efficient way.

## 2.4.2 Handling Complaints

The Design-Builder shall process complaints that result from performing the Work, whether received directly or through the Department to the Design-Builder, as soon as possible in a proactive way.

- The Design-Builder shall notify the Department within two hours after receiving a complaint and inform the Department of what actions will be taken to resolve the cause of the complaint.
- The Design-Builder shall keep a complete and updated complaint register of all complaints received, addressed directly to the Design-Builder or through the Department.
- The complaint register shall include all relevant information in relation to the complaint (who, when received, contents), the actions planned concerning the complaint, the person(s) responsible for the

communication, and the status of the complaints (open, closed), which shall be available to the Department upon request.

The Design-Builder shall coordinate all public communication with the Department.

### 2.4.3 Information for Project Website

The Design-Builder shall coordinate with the Department and provide Project-related information to the Department at least monthly and at least two (2) weeks in advance of significant events or milestones for Review and Approval, including:

- Contact information,
- Project maps,
- Current Project activities and progress,
- Timing of roadway closures and openings,
- Newsletters and meeting materials, and
- Calendar of, and announcements for, meetings and special events.

#### 2.4.4 Liaison with the Media

Unless otherwise authorized in writing by the Department, the Design-Builder shall provide no news release, press release, or any other statement to a member of the news media regarding this Project. The Design-Builder shall require this clause to be within all Subcontractor agreements.

## 2.5 Records Management Plan

The Design-Builder shall describe its 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 described herein.

The Department will perform a combination of audits, reviews, and inspections to assess whether the Design-Builder's integrated project management responsibilities and its PMP are functioning properly and determine whether its records and information are reliable and up to date.

Submitted at the time listed in the DB Standard Guidance, the Design-Builder shall provide the TDOT Alternative Delivery Office a transmittal letter, an electronic copy (CAD and signed PDFs) of the As-Built Plans and final foundation type (if applicable), including footing elevations and lengths of subsurface foundational elements, prior to final payment of funds to the Design-Builder.

The Professional Engineer in charge of the development of the Project's Plans and specifications shall place his/her seal, including signature and date, on the right side of the title sheet. All plan sheets shall contain the seal, including signature and date, of the Professional Engineer in charge of its development.

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

### 3 ROADWAY

### 3.1 Standards and References

The Design-Builder shall design and construct the Work to adhere to following roadway standards.

- TDOT Roadway Standard Drawings
- TDOT Roadway Design Guidelines PDN
- TDOT Roadway Design Documents PDN (and Instructional Bulletins)
- TDOT Drainage Manual
- TDOT Design CADD Standards
- TDOT Project Scoping Guide
- TDOT Traffic Design Manual
- TDOT Standard Traffic Operations Drawings
- TDOT Supplement to the Standard Highway Signs
- TDOT Survey Manual
- TDOT Standard Specifications
- The Department accepted AASHTO Policy on Geometric Design of Highways and Streets, AASHTO Roadside Design Guide, AASHTO Guide for the Development of Bicycle Facilities, Manual on Uniform Traffic Control Devices (MUTCD)
- Public Right-of-Way Accessibility Guidelines (PROWAG)

The Design-Builder shall use OpenRoads Designer (ORD) in its development of 3D parametric modeling to provide model-centric design deliverables. Use of ORD shall be in accordance with requirements and guidelines provided on the Department's website: <u>ORD (tn.gov)</u>

# 3.2 Design Requirements

The Department has developed the roadway design criteria for Design-Builder use on this Project in accordance with *TDOT Roadway Design Guidelines – PDN*. The Design-Builder shall design and construct the improvements detailed in Section 1.1 within the Project Limits based on the following criteria:

- Sidewalks (horizontal and vertical alignments of sidewalks shall meet Americans with Disabilities Act (ADA) and PROWAG compliance.)
  - o Minimum width: 5 feet
  - Maximum cross slope: 1.5%
  - Maximum grade: 5.0% or as matching roadway grade
- Curb ramps
  - o Minimum width: 4 feet
  - Maximum cross slope: 1.5% to 2.0%
  - Maximum running slope: 8.33%

Midblock crosswalks

Desired minimum median width: 8 feet

Minimum median width: 4 feetMinimum cut through width: 5 feet

Bike lanes

Desired width: 5 feet
Minimum width: 4 feet
Maximum width: 8 feet

Bus lanes

Width: 12 feetCross slope: 2.0%

Design-Builder shall design and construct all sidewalks, curb ramps, and midblock crosswalks in accordance with the *TDOT Multimodal Standard Drawings* and ADA and PROWAG rules and regulations.

The Design-Builder shall prepare final signed and sealed construction plans to construct the Project, including:

- Preparing the plans in accordance with TDOT Roadway Design Guidelines PDN and the previous design standards referenced in this section.
- Identifying the need for any special roadway design details (i.e., any special drainage structures, special ditches, etc.) and providing special design drawings to the Department for Review and Comment.
- Ensure that all applicable "General and Special Notes" found in Section IX of the current edition of the TDOT Roadway Design Guidelines – PDN and Instructional Bulletins (IBs) are included in the Design Documents and are adhered to during the construction Work.

The Design-Builder shall design geometric configurations of all safety improvements to provide adequate drainage and prevent ponding (when complete). Design-Builder shall design and construct all cross slopes in accordance with the requirements of the roadway typical section. The Design-Builder shall provide hydraulic calculations (including spread calculations) to the Department.

# 3.3 Waivers and Exceptions

No design waivers or exceptions will be allowed without the Department's approval.

# 3.4 Safety Appurtenances

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

Specific to guardrail, Design-Bulder shall:

- Remove and replace existing guardrail that does not meet TDOT standard in accordance with the TDOT Standard Specifications and TDOT Standard Drawings.
- All new guardrail and end terminals shall be MASH-compliant TL-3 and be on the Department's Qualified Products List (QPL).

## 3.5 Drainage

The Design-Builder shall analyze, design, and construct adequate drainage within the Project Limits, including, stormwater conveyances (open-channel and closed-conduit), stormwater inlets, and stormwater collection systems in accordance with the Department's *Drainage Manual*.

- All stormwater runoff that flows through the Project, whether originating within or outside of the Project Limits, must be accounted for in the design of the drainage system.
- The analysis, design, and construction of all components of the stormwater management system shall address the interim conditions during design and construction of the Project.

## 3.5.1 Drainage Design Requirements

The Design-Builder shall use a 10-year design storm (50-year at roadway sag locations) for all new (and existing to remain) storm sewer systems in accordance with the Department's *Drainage Manual*.

 All drainage systems shall be designed to convey the 10-year storm (50-year at roadway sag locations) without overtopping of any existing or proposed drainage or transportation elements.

The Design-Builder shall design culvert and pipe outfalls, channels, and ditches (including special ditches) within the Project Limits in accordance with requirements of the *TDOT Drainage Manual*.

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 *TDOT Drainage Manual* and this Book 3.

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 *TDOT Drainage Manual*. The design shall include temporary erosion control and other Best Management Practices (BMPs) needed to satisfy NPDES, local municipality, and other regulatory requirements. All environmental commitments related to drainage design and erosion control shall be included as "notes" on the plans for each stage of construction.

## 3.5.2 Existing Drainage Systems

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.

If existing drainage patterns must be altered due to a temporary or permanent aspect of the design, the Design-Builder shall provide documentation of any/all impacts to upstream/downstream and/or adjacent properties and/or road crossings for Department's Review and Approval prior to alteration of existing drainage patterns. The Design-Builder shall collect survey data for all upstream/downstream/adjacent properties that are impacted, such as road crossing information, structure elevations, and channel cross sections (at a minimum), which shall be used in support of hydraulic calculations for the offsite drainage systems. The Design-Builder shall provide engineering analyses and certifications to the Department for Review and Approval prior to performing the alteration.

The Design-Builder shall inspect and verify that existing drainage systems to remain are clean, operable, and structurally adequate. The Design-Builder shall complete any repairs, replacements, debris removal, and/or correct deficiencies as a result of designing and constructing this Project.

The Design-Builder shall analyze existing storm drainage systems to remain, culverts (boxes and cross pipes), and open channels within the Project Limits that are impacted by the Design Documents.

The Design-Builder shall replace or supplement any pipes or culverts that are deemed hydraulically or structurally deficient as a result of designing and constructing this Project.

## 3.6 Pavement Markings

The Design-Builder shall prepare pavement marking Plans as part of its Design Documents for Department Review and Comment and shall install the pavement markings in accordance with the Department standards and the following requirements.

- The design and installation of permanent pavement markings shall be done in accordance with the Manual on Uniform Traffic Control Devices (MUTCD), TDOT Roadway Design Guidelines -- PDN, TDOT Standard Drawings, TDOT Standard Traffic Operations Drawings, TDOT Traffic Design Manual, and 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 Design-Builder's cost and time.

## 3.7 Signing

The Design-Builder shall design, reuse existing signs, and/or install new signage throughout the Project Limits in accordance with the MUTCD, *TDOT Roadway Design Guidelines – PDN, TDOT Standard Drawings*, the *Standard Highway Signs*, the *TDOT Supplement to the Standard Highway Signs*, the TDOT Standard Specifications, and *TDOT Traffic Design Manual*.

The Department has provided a conceptual signage design in the Base Technical Concept for information only, and the Design-Builder shall verify location, type, size, and use of each sign in its signing Plans. All permanent signing Plans, signing layouts, sign schedules, and miscellaneous detail sheets shall be coordinated as follows prior to ordering and construction/installation.

- The Design-Builder shall prepare and submit signage Plans and related details and schedules for Department Review and Comment prior to ordering and installing all signs.
- After the permanent sign locations have been staked, but prior to ordering any material for supports, the Design-Builder shall lead a field review for acceptance by the Department.
- The Design-Builder shall verify all support lengths at the site prior to erection.

All new sign sheeting shall be Type 3 Prismatic or better. All new signs shall meet the retro-reflectivity requirements. All new yellow reflective warning signs shall be fluorescent yellow.

#### 3.8 Pavement

The Design-Builder shall construct all bus lane asphalt pavements (as part of PIN 132524.00, Liberty Lane to north of Northside Drive) using the pavement design in Attachment A and the *TDOT Roadway Design Guidelines – PDN*. The Design-Builder's CPM Schedule shall include time for installing tack coat and prime coat per the application rates in *TDOT Roadway Design Guidelines – PDN* and TDOT Standard Specifications.

No pavement scope is expected for PIN 125526.09 (the Walton to Wiley section) beyond needed pavement tie-in for the sidewalk work in accordance with the pavement design in Attachment A.

# 4 Traffic/Pedestrian Signals and Lighting

### 4.1 Standards and References

The Design-Builder shall design and construct the Work to adhere to following signals and lighting standards.

- Traffic signals shall be designed and constructed in accordance with Supplemental Specification 700SS, Special Provision 700SIG, Nashville Department of Transportation and Multimodal Infrastructure (NDOT) specifications, TDOT Standard Traffic Design Drawings, and the TDOT Traffic Design Manual.
- Lighting shall be designed and constructed in accordance with TDOT Traffic Design Manual, AASHTO Roadway Lighting Design Guide, National Electric Code, National Fire Protection Association (NFPA) 70, and FHWA Lighting Handbook.
- All proposed roadway lighting and signal infrastructure (including foundations) shall be designed in accordance with the requirements of the LRFD Standard Specifications for Structural Support for Highway Signs and Luminaires and Traffic Signals published by the American Association of State Highway and Transportation Officials.
- All materials required for installation of lighting and signal infrastructure (including wire, conduit, and pull boxes) shall meet or exceed the requirements of TDOT, Nashville Electric Service (NES), and NDOT standards.
- The Design-Builder shall obtain all permits required for installation of lighting and signals. The Design-Builder shall coordinate with TDOT and/or NES to determine electric feed points.

# 4.2 Traffic/Pedestrian Signals

The Design-Builder shall prepare and submit signal Plans and construct the proposed traffic and/or pedestrian signals (including cabinets, controllers, traffic signal heads, wiring, detection equipment, conduit and pull boxes, traffic signal poles and associated traffic signal timing and all other materials and methods required to provide a fully functional and operational traffic signal) at the following intersections along Gallatin Pike (SR-6).

- PIN 125526.09
  - Walton Lane
  - Berkley Drive
  - Midblock crossing near E. Palestine Avenue
  - E. Palestine Avenue
  - Webster Street
  - Emmitt Avenue
  - Harrington Avenue
  - Madison Street / Harrison Street

Woodruff Street

- Maple Street
- Old Hickory Boulevard (SR-45)
- Midblock crossing near Duling Avenue
- PIN 132524.00
  - Northside Drive
  - North Walmart Drive

The Design-Builder shall submit its signal Plans as part of its Definitive Design Plans for Department Review and Comment, which shall be advanced prior to procuring any signal equipment.

The Design-Builder shall be responsible for active management of signals and operations until final acceptance of the Project. During this time, the Design-Builder shall implement and adjust (as needed) final signal timing to provide optimal traffic signal operations.

The Design-Builder shall provide final signal timing settings to NDOT as a condition of Substantial Completion.

# 4.3 Lighting

The Design-Builder shall prepare and submit lighting Plans and construct Project lighting as follows

- PIN 125526.09: lighting luminaires shall be attached to proposed signal poles at the following intersections
  - Midblock crossing near E. Palestine Avenue
  - Webster Street
  - Harrington Avenue
  - Woodruff Street
  - o Maple Street
  - Midblock crossing near Duling Avenue
- PIN 132524.00: lighting luminaires shall be installed throughout the Liberty to Northside Project Limits
  - From Liberty Lane to N. Walmart Drive

The Design-Builder shall submit its lighting Plans and related calculations as part of its Definitive Design Plans for Department Review and Comment, which shall be advanced prior to procuring any lighting equipment. The Design-Builder's lighting Plans and calculations shall include design files using AGi32 software and layout sheets, which illustrate the photometrics.

All lighting shall be 3,000 K LED lighting.

The Design-Builder shall not allow light pollution/light hindrance into residential areas during the construction Work. The Design-Builder shall only use light fixtures for offset lighting approved by NES. The maximum distance between offset or mast arm light poles shall not exceed 250 feet.

All wiring shall be concealed underground in 2-inch schedule 40 PVC rigid conduit. The conduit shall be installed a minimum depth of 26 inches as measured from finished subgrade.

# 5 STRUCTURES

If the Design-Builder elects to use a retaining wall, the Design-Builder shall design and construct each wall in accordance with TDOT Standard Drawings and TDOT Standard Specification, including Special Provision 624 (Retaining Walls).

### **6 GEOTECHNICAL ENGINEERING**

The Design-Builder shall perform a design-level geotechnical investigation and engineering to validate its Design Documents related to earthwork slopes, retaining walls [if used], and signal pole and lighting foundations.

## 6.1 Geotechnical Investigations

The Design-Builder shall perform all geotechnical subsurface investigations and laboratory testing in accordance with the current TDOT *Geotechnical Guidelines*. In submitting a Proposal, the Design-Builder acknowledges that it has scoped and priced the appropriate amount and level of the geotechnical investigations and engineering to cover geotechnical risks associated with this Project, including taking on all cost and time risk if any differing site conditions are encountered.

- All borings shall be deep enough to show a complete soil and rock profile to the depth of the foundation supporting layer.
- The Design-Builder shall perform a slope analysis for all proposed slopes.

The Design-Builder is solely responsible for undercutting and disposal of unsuitable soils and replacement with suitable material at no additional cost or time to the Department. The need for undercutting shall be determined by the TDOT Resident Engineer.

The Design-Builder shall provide traffic control for all drilling activities occurring within the Department's ROW, including lane closures and shoulder closures.

## 6.2 Geotechnical Reports

The Design-Builder shall provide geotechnical reports and design and construction summaries that contain pertinent subsurface investigations, tests, and engineering evaluations.

Prior to any geotechnical design submittal, as outlined in the TDOT *Geotechnical Guidelines*, the foundation design recommendation reports shall be sealed and signed by a Professional Engineer registered in the State of Tennessee who has completed a minimum of three geotechnical design projects of the scope and complexity similar to that anticipated for this Project.

# 7 RIGHT-OF-WAY (ROW)

The Department will acquire and provide for the Design-Builder's use (at the Department's costs) the right-of-way (ROW) and TCEs needed to construct the Project as depicted on the ROW Exhibits (the "Planned ROW Limits").

The Department's responsibilities include performing all ROW acquisition activities, including advancing the ROW design (as depicted on the Base Technical Concepts) and completing all title reports and related ROW documentation, appraisals, appraisal reviews, and acquisitions in accordance with Tennessee Uniform Relocation Assistance Act of 1972 and the Uniform Relocation and Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646, as amended by Public Law 100-17).

Tables 1 and 2 list the ROW and availability dates that the Department will acquire for the Project, including TCEs that may be used to construct the Project.

Table 1: ROW Acquisition for PIN 125526.09

| TRACT NO. | PROPERTY OWNER   | FEE SIMPLE AREA TO<br>BE ACQUIRED (SQ.<br>FT.) | TEMPORARY<br>CONST. ESMT (TCE)<br>(SQ. FT.) | AVAILABILITY DATE (on or before) |  |
|-----------|--|--|---|----------------------------------|--|
| 4         | Wildflower Properties, LLC a Delaware limited liability company  | 45   | 251   | TBD                              |  |
| 5         | Borchert Properties, Inc., a Florida Corporation   | 80   | 598   | TBD                              |  |
| 6         | Saint Joseph Catholic Church   | 309  | 1058  | TBD                              |  |
| 7         | Farad Davachi and Mehrnoosh<br>Davachi   | 57   | 228   | TBD                              |  |
| 8         | WNR5 – Madison, LLC, a Tennessee Limited Liability Company   | 33   | 353   | TBD                              |  |
| 12        | Lisa D. Harris, James Robert<br>Rippeteau, Trustee of the James<br>Robert Rippeteau Trust and<br>Jacqueline Marie Poe Conner | 89   | 550   | TBD                              |  |
| 14        | Lisa D. Harris, James Robert<br>Rippeteau, Trustee of the James<br>Robert Rippeteau Trust and<br>Jacqueline Marie Poe Conner | 13   | 313   | TBD                              |  |
| 15        | James Sawyer Watts   |  | 1045  | TBD                              |  |
| 17        | 1130 Gallatin Pike, LLC, a Texas limited liability company   |  | 1421  | TBD                              |  |
| 19        | Synced Properties, LLC, a Tennessee limited liability company  | 406  | 847   | TBD                              |  |
| 20        | Reality Income Corporation   | 70   | 165   | TBD                              |  |
| 26        | Jonathan D. Runion & Randall Voland  |  | 885   | TBD                              |  |
| 30        | McDonald's Corporation, a Delaware corporation   |  | 862   | TBD                              |  |
| 34        | Tennessee Quick Cash, Inc.   | 76   | 219   | TBD                              |  |
| 36        | Tennessee Operations, LLC, a Florida limited liability company and the Estate of Adel Gayed                                  |  | 502   | TBD                              |  |
| 38        | Mid Madison Marketplace, LLC   | 161  | 161 185                                     |                                  |  |
| 39        | 721 Madison Square, LLC, a Texas limited liability company   | 426  | 0.323 AC.                                   | TBD                              |  |
| 40        | Salah Girgis   |  | 994   | TBD                              |  |
| 42        | 7-Eleven, Inc., a Texas corporation  | 21   | 274   | TBD                              |  |
| 51        | Starr Frierson   | 122  | 835   | TBD                              |  |

| TRACT NO. | PROPERTY OWNER  | FEE SIMPLE AREA TO<br>BE ACQUIRED (SQ.<br>FT.) | TEMPORARY<br>CONST. ESMT (TCE)<br>(SQ. FT.) | AVAILABILITY DATE (on or before) |
|-----------|---|--|---|----------------------------------|
| 52        | Metropolitan Government of Nashville and Davidson County, Tenn. for the use and benefit of the Board of Education |  | 578   | TBD                              |
| 53        | Pate Sisters Properties   | 173  | 345   | TBD                              |
| 60        | Walid M. Anki and Hanna M. Anki   |  | 364   | TBD                              |
| 63        | Truitt Clayton Ellis, as Trustee of the TCE 2025 Exempt Irrevocable Trust under Agreement dated February 21, 2025 |  | 192   | TBD                              |
| 73        | Salah Ayoub Girgis  | alah Ayoub Girgis 125 229                      |   | TBD                              |
| 75        | Juan A. Cruz and wife, Maria A. Pena<br>Martinez  |  | 718   | TBD                              |
| 76        | BFS Retail & Commercial Operations,<br>LLC, a Delaware limited liability<br>company                               |  | 550   | TBD                              |
| 85        | Elite Globe Home and Trade LLC, a<br>Tennessee limited liability company  |  | 569   | TBD                              |
| 86        | Kroger Limited Partnership I, an Ohio limited partnership   |  | 468   | TBD                              |
| 87        | Hill Center Five Points-Madison, LLC, a Tennessee limited liability company                                       |  | 386   | TBD                              |
| 90        | David Kim and Sun Y. Kim  |  | 473   | TBD                              |
| 94        | Urban Gate Properties, LLC, a<br>Tennessee limited liability company  |  | 141   | TBD                              |
| 95        | John W. Ellis Jr., Julie Ellis Starr Hill and Henry Bone Ellis  |  | 778   | TBD                              |
| 96        | Madison Church of Christ, a Tennessee not for profit corporation  | 165  | 574   | TBD                              |

Table 2: ROW Acquisition for PIN 132524.00

| TRACT NO. | PROPERTY OWNER  | FEE SIMPLE AREA TO<br>BE ACQUIRED (SQ.<br>FT.) | TEMPORARY<br>CONST. ESMT (TCE)<br>(SQ. FT.) | AVAILABILITY DATE (on or before) |
|-----------|---|--|---|----------------------------------|
| 3         | 127 AMM LLC, a Florida limited liability company                              |  | 777   | TBD                              |
| 6         | Jeries Salim Husari, Salim Husari and<br>Phillip Husari, as tenants in common |  | 388   | TBD                              |
| 7         | Silverman Properties, LP, a<br>Tennessee limited partnership                  |  | 216   | TBD                              |
| 9         | Bank of the Ozarks, an Arkansas state bank                                    |  | 219   | TBD                              |
| 15        | Lois Madison LLC, a Delaware limited liability company                        |  | 865   | TBD                              |

If the actual acquisition date extends beyond the anticipated date, the Department will review the Design-Builder's time impact analysis for impacts to the Critical Path that may justify additional Contract Time. If warranted, additional time will be granted to extend the Contract Completion Date, but this extension will be non-compensable.

Additionally, the Design-Builder may rely on the Planned ROW Limits identified on the ROW Exhibit to construct the Project. If the Design-Builder identifies in its Design Documents that additional ROW is

required to fully adhere to the design and construction requirements detailed in this Section 3, the Design-Builder may request a Change Order for the Department to acquire additional ROW. If warranted, additional time will be granted to extend the Contract Completion Date, but this extension will be non-compensable. A Change Order will not be granted for the circumstances detailed in Section 7.2.

In either instance, the Design-Builder shall work with the Department to re-sequence its CPM Schedule to reduce potential schedule delays associated with the additional ROW acquisition to the extent practicable.

### 7.1 ROW Limitations

#### 7.1.1 Access and Use

Physical construction shall not commence on any phase, segment, individual properties, or a group of properties until the Design-Builder receives a notice to proceed for construction Work from the Department on each phase, segment, individual properties, or a group of properties. The decision to advance a ROW segment to the construction stage shall not impair safety with respect to unacquired or occupied properties on the same or adjacent segments of ROW.

The Design-Builder shall provide 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. Open burning should not occur within 1,000 feet of an occupied dwelling.

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

## 7.1.2 Temporary Interest (including Temporary Construction Easements)

The Department does not anticipate the need for any temporary construction easements beyond what is listed in Tables 1 and 2 to complete the Project. The Design-Builder, at its sole cost and time, shall be responsible for acquisition of any additional temporary locations or other temporary interests in property which the Design-Builder determines are necessary, desirable, or advisable to complete the Project. Such temporary interests may include rights for temporary Project-specific activities, such as construction work sites, temporary work areas, lay down areas, staging areas, storage areas, stockpiling areas, earth work material borrow sites, equipment parking areas, as well as any property needed for any temporary utility facilities being constructed by the Design-Builder.

As identified (either as part of the Planned ROW Limits or acquired in accordance with Section 7.2), the Design-Builder shall only use a temporary location, interest, or listed TCE for associated Work activities, access to properties, or other facilities. No permanent Project infrastructure, which will be owned and maintained by the Department or any others, shall be located within a temporary location or interest, including within the TCEs listed in Table 1 and 2.

# 7.2 Design-Builder's Additional ROW

If the Design-Builder's Design Documents require additional ROW or easements (temporary or permanent) beyond the Planned ROW Limits for the Design-Builder convenience, specific construction means and methods, or due to any errors, omissions, or negligence of the Design-Builder in performing the Work required by this Contract, the Design-Builder shall:

- 1. Obtain a concurring opinion from the Department as to the necessity for said additional ROW.
- 2. Be responsible for performing all of the required environmental studies, reports, and public involvement activities to comply with the NEPA requirements and obtain any required governmental approvals, including environmental approvals.
- 3. Be responsible for coordinating with all adverse impacts to utility owners caused by Design-Builder's proposed additional ROW.
  - a. Any utility rights acquired will require a replacement of rights. Design-Builder shall be responsible for acquiring any replacement utility property interests at the Design-Builder's sole cost and time.
  - b. All proposed utility easements must be agreed to and be acceptable to the receiving utility owner and be limited in replacing existing rights held by the utility owner.
  - c. The Department's assigned utility coordinator shall be included in all negotiations for replacing existing utility rights.
- 4. Bear all cost and time associated with the associated design and ROW change, including the costs and time of relocating displaced businesses or residents and the costs and time to secure a ROW certification from the Department for each additional property.
- 5. Provide mapping for additional ROW that includes proper survey location information. Obtain concurrence from the Department on the ROW plans and associated legal descriptions.
- 6. Comply with the Department's ROW standards, in addition to any other applicable governmental approval and governmental law.

If requesting additional property, the Design Documents (showing the approved priority and phasing) shall be submitted to the Department, and the ROW boundaries shall be surveyed and staked prior to the Design-Builder and Department proceeding with the ROW process. The Department is not liable for acquisition delays resulting from incomplete Design Documents or acquisition of any parcels not shown on the Base Technical Concept.

Once the Final Definitive Design Plans (Final DD Plans) are accepted, the Design-Builder shall account for the following durations (up to 20 months) in its CPM Schedule to complete the ROW acquisition process for each impacted tract. The Design-Builder shall account for the various ROW NTPs detailed in Section 6.1 of the DB Standard Guidance before proceeding to the related steps in the process.

**Table 3: ROW Acquisition Timelines** 

| Activity   | Estimated Timeframe | Responsible Party   |
|--|---------------------|---|
| Prepare ROW estimate (in parallel with the utility estimate)                       | 5 weeks             | Design-Builder  |
| Prepare the Preliminary Group Inspection (PGI) Report                              | 10 weeks            | TDOT  |
| Stake the ROW and perform appraisals (including time for TDOT's appraisal reviews) | 5 months            | Design-Builder  |
| Make offers to landowners  | 3 months            | Design-Builder  |
| Gain right-of-entry/possession (including time for condemnation if needed)         | Up to 9 Months      | Design-Builder (TDOT will lead condemnation efforts as encountered) |

## 8 UTILITIES

The Project is <u>not</u> a Chapter 86 eligible project.

# 8.1 Utility Coordination Responsibilities

The Department has identified the following utilities (as listed in Tables 4 and 5) within the Project Limits and has evaluated potential impacts from the Base Technical Concept to each utility. More information for each utility is provided on the Department's Utility Impact Matrix.

Table 4: Utility Information for PIN 125526.09

| ·  |  |                    |  |   |
|--|--|--------------------|--|---|
| Utility Owner  | Utility Type and<br>Location                     | Location Reference | Base Technical<br>Concept<br>Disposition | Anticipated<br>Relocation/<br>Adjustment Date |
| AT&T<br>(Telephone &<br>Fiber Optic)                         | Overhead Communications and Fiber Optic Line     | In development     | In development                           | TBD   |
| COMCAST<br>(Cable)   | Underground<br>Communications<br>Line            | In development     | In development                           | TBD   |
| Metro Water &<br>Sewer Service<br>(Sanitary Sewer)           | Underground Water and Sewer Lines                | In development     | In development                           | TBD   |
| Madison<br>Suburban Utility<br>(Water)                       | Underground Water<br>Line                        | In development     | In development                           | TBD   |
| Nashville Electric Service (Overhead & Underground Electric) | Underground Electric<br>Lines<br>And Power Poles | In development     | In development                           | TBD   |
| Piedmont Gas<br>(Gas)  | Underground Gas<br>Lines                         | In development     | In development                           | TBD   |
| AT&T Fiber<br>Optic Cable<br>(Fiber Optic)                   | Underground Fiber<br>Optic Line                  | In development     | In development                           | TBD   |
| Windstream<br>Communications<br>(Fiber Optic)                | Underground Fiber<br>Optic Line                  | In development     | In development                           | TBD   |
| Zayo Bandwidth<br>(Fiber Optic)                              | Underground Fiber<br>Optic Line                  | In development     | In development                           | TBD   |
| XO<br>Communications<br>Verizon<br>(Fiber Optic)             | Underground Fiber<br>Optic Line                  | In development     | In development                           | TBD   |
| Google Network<br>(Fiber Optic)                              | Underground Fiber<br>Optic Line                  | In development     | In development                           | TBD   |

**Table 5: Utility Information for PIN 132524.00** 

| Utility Owner                                      | Utility Type and<br>Location                       | Location Reference | Base Technical<br>Concept Disposition | Anticipated<br>Relocation/<br>Adjustment<br>Date |  |
|--|--|--------------------|---------------------------------------|--|--|
| COMCAST<br>XFINITY<br>(Cable)                      | Communications<br>Pedestal                         | In development     | In development                        | TBD  |  |
| Nashville<br>Electric Service<br>(Electric)        | Underground Electric<br>Lines<br>And Power Poles   | In development     | In development                        | TBD  |  |
| Piedmont Gas<br>(Gas)                              | Underground Gas<br>Line                            | In development     | In development                        | TBD  |  |
| AT&T<br>(Telephone &<br>Fiber)                     | Overhead<br>Communications and<br>Fiber Optic Line | In development     | In development                        | TBD  |  |
| Madison<br>Suburban Utility<br>(Water)             | Underground Water<br>Pump                          | In development     | In development                        | TBD  |  |
| XO<br>Communications<br>Verizon<br>(Fiber Optic)   | Underground Fiber<br>Line                          | In development     | In development                        | TBD  |  |
| Zayo Bandwidth<br>(Fiber Optic)                    | Underground Fiber<br>Line                          | In development     | In development                        | TBD  |  |
| Metro Water &<br>Sewer Service<br>(Sanitary Sewer) | Underground Sewer<br>Line and Manholes             | In development     | In development                        | TBD  |  |

While it is anticipated that construction Work will be required around the utilities being protected in place (as listed in Tables 4 and 5), the Department will coordinate relocation efforts for the balance of impacted utilities either before or concurrently with the Design-Builder's construction Work (the "Advanced Utility Adjustments"). The Department's responsibilities include submitting utility coordination plans and receiving, reviewing, and approving responses, reimbursement agreements, easement agreements (if needed), and authorizing the utility owner to proceed with the Advanced Utility Adjustments.

The Design-Builder's Design Documents shall accommodate the Advanced Utility Adjustments. Any subsequent relocation, adjustments, removal, or alteration of the Advanced Utility Adjustments or alteration of a protect-in-place disposition listed in Tables 4 and 5, as required by the Design-Builder's Design Documents or construction Work, shall be considered a change in design and the responsibility of the Design-Builder in accordance with Section 8.3.

The Design-Builder shall coordinate its construction Work considering the Advanced Utility Adjustments, limiting its construction of temporary or permanent improvements in or around the adjustment areas, not prevent the utilities from accessing the Project Limits to complete the utility owner's work, or otherwise not occupy the areas a utility owner is working in until after the relocation dates listed in Tables 4 and 5.

If the actual relocation/adjustment date extends beyond the anticipated relocation date, the Department will review the Design-Builder's time impact analysis for impacts to the Critical Path that may justify additional Contract Time. The Design-Builder shall work with the Department to re-sequence its CPM Schedule to reduce potential schedule delays associated with the additional utility adjustment to the extent practicable. If

warranted, additional time will be granted to extend the Contract Completion date, but this extension will be non-compensable.

## 8.2 Design and Construction Requirements

### 8.2.1 Utility Due Diligence

The Department has provided certain utility information in the Reference Documents (see the Department's Utility Impact Matrix) and this Section 7. The Design-Builder shall analyze the utility information, contact and make inquiries of utility owners, perform surface inspections of the Project's ROW, and perform such additional inspections (including potholing) as it deems appropriate to verify that the information provided fully and accurately identifies all utilities within the Project Limits, addresses all field conditions, and to supplement the utility information. Within ninety (90) Calendar Days from the initial NTP, Design-Builder shall submit for Department Review and Approval the Design-Builder's Utility Conflict Matrix reflecting the existence and disposition of any and all utilities likely to be impacted by the Project.

If any utility located within the Planned ROW Limits and requiring actual relocation is not identified in the utility information provided by the Department or is misidentified therein, but is timely identified by the Design-Builder on the Design-Builder's Utility Conflict Matrix within the first ninety (90) days, then the Design-Builder may be entitled to a Change Order for performing work directly attributable to such lacking or inaccurate information. The Design-Builder shall work with the Department to re-sequence its CPM Schedule to reduce potential schedule delays associated with the additional utility adjustment to the extent practicable. If warranted, additional time will be granted to extend the Contract Completion Date, but this extension will be non-compensable.

However, the Design-Builder shall <u>not</u> be entitled to a Change Order for any of the following:

- Increased costs of the Work attributable to unidentified or misidentified Utilities to the extent that the existence of the facility was known to the Design-Builder as of the Proposal due date or could have been inferred from a reasonable investigation or the presence of other facilities, such as buildings, meters, junction boxes, manholes or identifying markers, visible during a surface inspection of the area conducted prior to the Proposal due date;
- Increased costs of the Work attributable to unidentified or misidentified utilities where Design-Builder failed to provide timely notice in the time allowed (i.e., on its Utility Conflict Matrix submitted within 90 days of the initial NTP).
- Increased costs of the Work attributable to misidentified or unidentified utilities that can be protected in place or removed rather than physically relocated;
- The costs of Design-Builder's supplemental utility investigation performed in accordance with its due diligence of the Project Limits; and
- Delay and disruption damages.

### 8.2.2 General

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

The Design-Builder shall be familiar with and adhere to TDOT Rule Chapter 1680-06-01, Rules and Regulations for Accommodating Utilities within Highway Rights-of-Way; Tennessee Code Annotated, Title 54, Part 8, Relocation of Utilities (T.C.A. § 54-5-801 through § 54-5-856); 23 CFR Part 645 -- Utilities; and

TDOT Policy 340-07, Utility Relocation from Public Highway Right-of-Way Under TCA § 54-5-804 (Chapter 86), TDOT ROW Procedures Manual, and Section 6 of the DB Standard Guidance.

The Design-Builder shall notify each individual utility owner of its intent/plan of operation in the area of the utilities. Prior to commencing any Work, the Design-Builder shall contact the utility owners and request the owners 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 T.C.A. § 65-31-106. Notification by calling the Tennessee One Call System, at 1-800-351-1111 as required by T.C.A. § 65-31-106 will be required.

The Design-Builder shall provide all necessary protective measures to safeguard existing utilities from damage during construction. In the event that special equipment is required to work over and around the utilities, the Design-Builder shall be required to furnish such equipment. The Design-Bulder shall include the cost of protecting utilities from damage and furnishing special equipment in the Contract Amount.

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

In the event the Design-Builder performs any utility relocation work, it is the Design-Builder's responsibility to obtain all applicable property rights and applicable permits, including any environmental permits.

## 8.3 Design-Builder's Changes in Design

For purposes of this Section 8, a change in design is the modification of the Design-Builder's Design Documents that:

- Require a change to the disposition of a utility listed in Table 4 and 5,
- Requires adjustment of a utility that was not listed in Table 4 and 5,
- Require subsequent relocations, adjustments, removals, or alterations for any of the Advanced Utility Adjustments, or
- Necessitate acquisition of a utility easement not included in the Department-provided property.

In any of these circumstances, the Design-Builder shall bear all cost and time for the Design-Builder and Department's utility coordination and the utility owner's relocation/adjustment efforts. If the Department agrees with the Design-Builder's alterations, the Design-Builder shall complete at its cost and account for the following utility coordination tasks and timelines (as listed in Section 8.3.1 and Section 8.3.2, respectively) in the CPM Schedule without any increase to the Contract Amount or extension to the Contract Completion Date.

# 8.3.1 Utility Coordination Activities

As part of its initial field survey Work, the Design-Builder shall locate all newly impacted utilities, including the survey data in the Definitive Design Plans. Additionally, the Design-Builder shall develop its Design Documents to include all required utility information as listed in Section 6.2.2 of the DB Standard Guidance. The Design-Builder shall determine the exact locations of each utility in the field by contacting the utility owners involved. Notification by calling the Tennessee One Call System (as required by TCA 65-31-106) is required, in addition to the Design-Builder monitoring each utility owner's responses to its locate requests

per TCA 65-31-118. The Design-Builder shall submit a property packet used to establish the existing ROW, One-Call tickets for utility location, and any other pertinent information via email or file share to the Department.

After acceptance of the final Definitive Design Plans (Final DD Plans), the Design-Builder will lead coordination efforts for all newly impacted utilities. This includes the Design-Builder:

- Preparing the utility estimate (in parallel with preparing the associated ROW estimate) so that TDOT
  can update its authorized utility relocation funding. The Design-Builder shall allow up to four (4)
  weeks after the estimate is submitted to receive authorization to move forward.
- Preparing the Utility Coordination Plans (based on the Final DD Plans) and associated correspondence to send to the impacted utility owners. The Design-Builder's responsibilities during this time may include leading a kickoff meeting with the impacted utility owners to communicate forthcoming work efforts and utility requirements.
- Overseeing the utility coordination timeline required under TCA 54-5-854, which states:
  - The utility owner is to respond within one hundred and twenty (120) calendar days of receiving the Definitive Design Plans (A-date). A utility owner's response will include the "A-Date Package," which includes color coded relocation plans (rainbows), a schedule of calendar days, and an estimate of cost in order to generate the Utility Relocation Agreement.
  - The "A-date" may be extended an additional forty-five (45) calendar days upon request of the utility owner and approval by TDOT.
  - The Design-Builder's responsibilities during this time may include leading a kickoff meeting and deconfliction meeting(s) with the impacted utility owners.
  - The Department will be responsible for the following during this timeline:
    - Reviewing and approving any engineering packages/contracts requested by the utility owner to complete its relocation design work
    - Reviewing any other utility consultant documentation, including any established MOUs, certification of consultant, proposed scopes of work, and estimate of costs
- Receiving and reviewing the A-Date Packages in coordination with the Department's Environmental and Utilities divisions.
- Receiving and reviewing the B-Date Packages if a Move-in State (MIS) utility relocation is identified and agreed to by the parties.
  - Move-In State (MIS) utility relocation work is only to be accomplished if a MIS Contract is executed by both TDOT and the utility owner.
  - MIS contracts will require that the utility owner provide the detailed construction plans, construction specifications and quantities, collectively known as the "B-Date Package" in the Utility Agreement, no later than thirty (30) calendar days after the utility receives the fully executed contract back from the Department.
  - In the event the Design-Builder performs any utility relocation work as part of an MIS relocation, the Design-Builder shall complete any necessary NEPA reevaluations and obtain all applicable permits (including water quality and environmental permits) to complete the work.

- Certifying that in a written statement to the Department that the proposed relocation of utilities will
  not conflict with the proposed highway improvement or with another utility's relocation plan.
- Supporting the Department in generating the relocation contracts and "put to work" letters with the impacted utility owners.
- After construction NTP, authorizing the utilities to begin work and continuing coordination efforts and record keeping (as detailed in Section 6.3 of the DB Standard Guidance) during the construction Work.
- Locate all final utility locations on the As-built Plans as described in the DB Standard Guidance.

The Design-Builder shall be responsible for identifying any utility conflicts/relocations from the utility construction plans.

## 8.3.2 Utility Coordination Timelines

Once the Final Definitive Design Plans (Final DD Plans) are accepted, the Design-Builder shall update its CPM Schedule with the following activities and timelines to complete the utility coordination process for each newly impacted utility identified under this Section 8.3.

**Table 6: Utility Timelines** 

| Table of Camby Timesmoo  |   |   |  |  |
|--|---|---|--|--|
| Activity   | Estimated Timeframe   | Responsible Party   |  |  |
| Prepare revised utility estimate   | 5 weeks   | Design-Builder/ Department (as demarcated in Section 7.2.1) |  |  |
| Develop and distribute utility coordination plans  | 2 weeks   | Design-Builder  |  |  |
| Utility review (utility owner to prepare A-Date package)   | Up to 165 calendar days   | Utility Owner   |  |  |
| Submit rainbows (from the A-Date Package) to the Department utilities and environmental division | 2 weeks   | Design-Builder  |  |  |
| Generate and execute relocation contracts  | 6 weeks   | Department  |  |  |
| Send "put to work" letters   | 3 weeks   | Department  |  |  |
| Receive B-Date Package(s) (if an MIS) and complete its relocation/adjustment work                | Timing to be coordinated with the utility owner based on the A-Date Package | Utility Owner   |  |  |

### 9 ENVIRONMENTAL

#### 9.1 NEPA Document

The Department has obtained and provided the NEPA Document in the Reference Documents.

#### 9.1.1 NEPA Commitments

Expanded upon in Section 5.2.9 of DB Standard Guidance, the Design-Builder shall review and adhere to the approved NEPA Document and technical reports

### 9.1.2 Environmental Technical Study Area (ETSA)

The environmental technical study areas (ETSAs) for Project location are the same as Planned ROW Limits (including TCEs) shown on the ROW Exhibit. Changes to the ETSA limits or Work outside of the ETSA limits shall be governed by the requirements in this Section 9.

#### 9.1.3 Environmental Boundaries

Should an unknown environmental feature within the ETSA be uncovered, all construction Work shall stop immediately in that area, and the Design-Builder shall contact the Department for consultation.

For impacts to any streams, springs, wetlands, sinkholes, or other water resource features not previously documented, the Design-Builder shall provide the data sheets and forms listed below to the Department for Review and Comment prior to submittal to the applicable regulatory agencies.

#### **Streams**

- Hydrologic Determination Field Data Sheet (Version 1.4).
- Ecology Water Resources Field Data Sheet.
- Tennessee Department of Environment and Conservation (TDEC) Division of Water Resources: Habitat Assessment Field Data Sheet Moderate to High Gradient Stream.
- A location map, plan sheets with resources clearly marked and labeled, 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**

- U.S. Army Corps of Engineers (USACE): Wetland Determination Data Form Eastern Mountain and Piedmont Region: Version 2.0.
- TDEC 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 Hydrogeomorphic (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, plan sheets with resources clearly marked and labeled, 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.

Water resource determinations shall be completed by a Tennessee Qualified Hydrologic Professional (TN-QHP). The certification for the TN-QHP must be submitted along with the Hydrologic Determination Field Data Sheet for the individual preparing the data sheets and forms. All additional environmental field studies are to be performed by the Design-Builder's personnel with the required qualifications.

## 9.1.4 State or Federal Endangered / Threatened Species

Based on the Pedestrian Road Safety Initiative, a field review of the Project area and a review of the TDEC Division of Natural Areas Rare Species Database, both Project PINs are covered by the 2022 Grouped Programmatic No Effect Activities Agreement between TDOT and FHWA, the 2023 Memorandum of Agreement between TDOT, FHWA, and the TDEC Division of Natural Areas, and the 2022 Memorandum of Agreement between TDOT, FHWA, and the Tennessee Wildlife Resources Agency.

If the Design-Builder requires any additional ROW (e.g., fee simple or easement) or needs to work outside the ETSA or alters the scope to require additional study not previously completed within the Project's ETSA, the Design-Builder shall be responsible for the time and cost to coordinate any additional review(s) and lead all effort to document and address any proposed changes with the appropriate environmental agency. The Design-Builder shall contact the Department prior to any coordination with the resource agencies.

The Design-Builder's coordination with resource agencies shall, at a minimum, include the following information:

- A clear description of the Project changes to be reviewed,
- Timing and schedule for implementation of the changes,
- Maps showing location of changes (if applicable),
- Plans documenting the changes,
- Description of how the changes maintain compliance with existing environmental commitments, and
- Previous coordination responses from the resource agencies.

If a NEPA re-evaluation is required (also see Section 8.1.7), the Design-Builder shall be responsible for the time and cost necessary to prepare the re-evaluation and adhere to any additional environmental commitments required by the resource agencies because of the agency review. These commitments may include preparation of species reports or biological assessments, species surveys, species sweeps and relocations, additional prohibitions on the Work during designated time periods, and any required species monitoring.

If required, the Design-Builder shall (in consultation with the Department) allow adequate time in the CPM Schedule for this agency coordination to occur.

#### 9.1.5 Other Natural Resources

The Design-Builder shall ensure identification, survey, and monitoring of other natural resources. The Design-Builder shall work with the Department to coordinate with regulatory agencies (e.g., TDEC) as necessary and to obtain any necessary permits for modifications to the natural resources.

#### 9.1.6 GPS/GIS Data Collection

The Design-Builder's data collection for streams, wetlands, springs, sinkholes, or other jurisdictional features shall be with mapping grade accuracy (defined as sub meter).

## 9.1.7 Design-Builder Required Reevaluations

If the Design-Builder's design footprint or construction limits extend beyond the ETSA, including for use of permanent and/or temporary interests, or alters the scope to require additional study not previously completed within the Project's ETSA, either of which results in changes to impacts of identified resources, the Design-Builder shall bear all cost and time associated with the:

- Design-Builder's preparation of revised environmental technical studies and the NEPA Document reevaluation(s),
- Department's Review and Approval of the NEPA Document re-evaluation(s), and
- All agency coordination, as required, of the NEPA Document re-evaluation(s).

Additionally, if the Design-Builder's changes result in changes to impacts of the environmental features, the Design-Builder shall bear all cost and time to incorporate additional compensatory mitigation documented in the updated EBR or for additional features identified prior to and during construction Work.

The Design-Builder shall provide the Department with a notification and copy of the revised Plans.

## 9.2 Mitigation of Streams and Wetlands

The Base Technical Concept does not impact any streams or wetlands and therefore does not require any stream or wetland mitigation.

If the Design-Builder's design alters this mitigation determination, then the Design-Builder shall bear all cost and time required to:

- Modify the Project's environmental water quality permits
- Design and construct stream/wetland mitigation or purchase necessary stream/wetland credits to address the additional impacts to the permittable features.

# 9.3 Environmental Water Quality and Construction Permits

While there are no water quality permits anticipated on this Project based on the Base Technical Concept, the Design-Builder is still responsible, under federal and state environmental laws and regulations, 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. As applicable, the Design-Builder assumes all responsibility as the Authorized Agent of the Department (Permittee) as indicated in the permit that relates to protection of the "Waters of the United States" and/or "Waters of the State of Tennessee" pursuant to the regulatory permits listed in Section 5.2.10 of the DB Standard Guidance.

The Design-Builder is responsible for obtaining all necessary water quality permits and a TDEC National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) to construct the Project.

For all other permits, the Design-Builder shall be responsible for and obtain the necessary state and federal environmental permits and approvals resulting from its design and construction Work. If environmental permits are necessary, prior to completion of the Definitive Design Plans, the Design-Builder shall contact the Department for guidance.

## 9.3.1 Design and Construction Requirements

#### 9.3.1.1 PERMITTING FOR DESIGN-BUILDER'S TEMPORARY INTEREST

The Design-Builder shall bear all cost and time for complying with and obtaining any necessary building, demolition, grading, and environmental and regulatory permits or approvals, including archaeology, ecology, historical, hazardous materials, air quality and noise, TVA 26a, TDEC, and USACE permits from federal, state, and/or local agencies regarding any Design-Builder temporary interest, including material and staging areas, storage areas, excess excavated materials disposal areas, and the operation of any Project-dedicated asphalt, concrete plants, and waste or borrow sites that will be used. These areas are to be addressed in accordance with the TDOT *Waste and Borrow Manual*. Design-Builder shall submit all such permits to the Department prior to the commencement of activities in the permitted area(s).

The Department shall be included in all correspondence and/or negotiations with agencies.

The Design-Builder shall be aware that environmental permits may also be required when activities such as core sampling, seismic exploratory operations, geotechnical investigations, ROW fence replacement, utility relocations, and historic resources surveys are within Waters of the State or Waters of the U.S. These permits may also be required for placement and operations of scientific measurement devices.

### 9.3.1.2 Erosion Prevention and Sediment Control (EPSC)

The Design-Builder shall be responsible for all Erosion Prevention and Sediment Control (EPSC) designs and implementation. The Design-Builder shall place all permanent stabilization at locations to prevent damage to adjacent facilities and property due to erosion on all newly graded cut and fill slopes that have permanently ceased.

- 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.

Design-Builder shall initiate temporary stabilization within 14 calendar days when construction activities on a portion of the site are temporarily ceased, and earth disturbing activities 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 no later than 7 calendar days after construction activity on the slope has temporarily or permanently ceased. For this Project, steep slopes shall be defined as natural or created slopes of greater than 3H:1V, regardless of height.

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

The Design-Builder shall perform inspection, repair, and maintenance of EPSC structures on a regular basis and remove sediment 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 Design-Builder shall provide a copy of each inspection report to the Department.

The Design-Builder shall place and treat sediment removed from sediment control structures in a manner so that the sediment is contained within the Project Limits and does not migrate onto adjacent properties or 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 (i.e., ROW, 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.

Upon conclusion of the inspections, the Design-Builder shall repair, replace, or modify EPSC measures found to be ineffective before the next rain event, if possible, but in no case more than 24 hours after the inspection or when the condition is identified. If the repair, replacement, or modification is not practical within the 24-hour timeframe, the Design-Builder shall provide written documentation in the field diary and EPSC inspection report. An estimated repair, replacement, or modification schedule shall be documented within 24-hours of identification. The Design-Builder shall bear all costs and time associated with modifications made to these measures, and all modifications shall be concurred with by the Department.

The Design-Builder may remove temporary EPSC measures at the beginning of the workday but must be replaced at the end of the workday or before/during a precipitation event. Delaying planting of cover vegetation until winter months or dry months shall be avoided.

The Design-Builder shall minimize offsite vehicle tracking of sediments and the generation of dust. The Design-Builder shall provide a stabilized construction access (a point of entrance/exit to the construction project) to reduce the tracking of mud and dirt onto public roads by construction vehicles.

The Design-Builder shall have a plan in place for dust control. The dust control plan shall be developed prior to the start of any construction activities and shall be submitted to the Department for Review and Approval.

The Design-Builder shall update the EPSC plans whenever EPSC inspections indicate, or where State or Federal officials determine EPSC measures are proving ineffective in eliminating or significantly minimizing pollutant sources or are otherwise not achieving the general objectives of controlling pollutants in storm water discharges associated with the construction activity.

The accepted EPSC plan shall require that EPSC measures be in place before clearing, grubbing, excavation, grading, culvert construction, cutting, filling, or any other earthwork occurs, except as such work may be necessary to install EPSC measures.

EPSC measures shall be installed and functional prior to any earth moving operations and shall be maintained throughout the construction period except as such work may be necessary to install EPSC measures.

The Design-Builder shall establish and maintain a proactive method to prevent litter and construction wastes from entering Waters of the State/United States. The Design-Builder shall remove these materials from

stormwater exposure prior to anticipated storm events, before being carried offsite by wind, or as otherwise needed to prevent these materials from becoming a pollutant source for stormwater discharges. After use, the Design-Builder shall remove materials used for EPSC from the site.

#### 9.3.1.3 NPDES PERMIT REQUIREMENTS

A TDEC National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) for construction stormwater runoff is required for this Project. The Design-Builder shall develop its EPSC sheets and the Storm Water Pollution Prevention Plan (SWPPP) to 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 template 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: <a href="NPDES">NPDES</a>
<a href="Stormwater Permitting Program (tn.gov)">NPDES</a>
<a href="Stormwater Permitting Program (tn.g

The SWPPP shall include the EPSC plans for application of coverage under the CGP. The Design-Builder shall submit the SWPPP and NOI at least forty-five (45) business days prior to beginning construction activities. Once a Notice of Coverage (NOC) is received by the Design-Builder, the EPSC submitting the SWPPP for coverage under the CGP shall be submitted to both TDEC and the Department for their records.

The Design-Builder shall prepare EPSC plans detailing best management practices (BMPs) to prevent erosion, control sedimentation, and prevent the discharge of any pollutants from leaving the Project Limits and Department's ROW or easements, or from entering jurisdictional features or stormwater conveyances, and be transported to receiving waters during the construction of the Project. The Design-Builder shall identify all outfall locations on the EPSC plans with an appropriate numbering or lettering system.

The Design-Builder shall revise the SWPPP and the EPSC plans as necessary based on actual construction activities throughout the duration of the Project. All SWPPP and EPSC revisions shall be documented. The Design-Builder shall certify that the individual who prepared and reviewed the EPSC plans and SWPPP is currently certified according to the CGP. The Design-Builder shall also certify that the BMPs are designed so that if properly implemented, installed, and maintained, they will manage erosion and prevent sedimentation to Waters of the State/United States or on adjacent property owners, as well as comply with the terms of the TDEC NPDES CGP.

#### 9.3.1.4 INSPECTIONS

The Design-Builder shall complete Project site inspections of the erosion control measures, disturbed areas, areas used for storage of material, construction entrance/exit, and all outfalls. Following the inspection, the Design-Builder shall prepare and maintain a report with the SWPPP. The CGP requires the inspections to be performed at least twice a week, 72 hours or more apart. The inspector must document the findings of the inspection fully in the report and provide a copy to the site operator and the Design-Builder, document that the rain gauge has been read and rainfall recorded on a daily basis or that a reference site has been used to document rainfall. The inspector shall also document that all records are being completed and maintained per the TN CGP.

The inspector shall use photo documentation to clearly convey recommendations to the site operator and the Design-Builder. All photos shall be saved to document site conditions over time to support the inspection report findings when the site is audited by TDEC or other regulators.

The Design-Builder shall maintain a rain gauge on-site that measures up to 6-inches of rainfall. The rain gauge shall be located within the Project Limits in an open area such that measurements will not be influenced by outside factors. The Design-Builder shall initiate rainfall monitoring prior to clearing, grubbing, excavation, grading, cutting or filling. The rain gauge shall be read and emptied after every rainfall event occurring on the Project site (at approximately the same time of day). The rainfall records shall be recorded and maintained with the SWPPP. Recorded data should include the date of the rain event, amount of rainfall and the approximate duration.

Inspectors performing the required twice weekly inspections must have:

- A valid certification from the "Fundamentals of Erosion Prevention and Sediment Control Level I" course and licensed professional engineer or landscape architect,
- Certified Professional in Erosion and Sediment Control (CPESC) certification, or
- A person who has successfully completed the "Level II Principles for Erosion Prevention and Sediment Control for Construction Sites" course.

A copy of each inspector's certificate, license, or training record shall be kept on site.

As outlined in the NPDES CGP, the Department will perform the monthly Environmental Quality Assurance Project Compliance Assessments (QA Inspections) on this Project, which will include any Design-Builder temporary interest sites (including waste and borrow areas).

#### 9.3.1.5 NONCOMPLIANCE DETERMINATIONS

If at any time, the Design-Builder is not in compliance with any applicable permit regulations, all noncompliance 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 compensation or time extension for any work suspension associated with a non-compliance determination. Any monetary fees and/or fines associated with any violations shall be the sole responsibly of the Design-Builder. In the event that a Notice of Violation (NOV) is issued by a regulatory agency, the response to the NOV shall be written by the Design-Builder and approved by the TDOT Environmental Division – Environmental Engineering Office – Permits Unit prior to submittal to the agency.

#### 9.3.2 Permit Register

The Design-Builder shall maintain a permit register and provide updates with 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 it will comply with the permit requirements and conditions, and

Validity and the expiry date (if any) of the permit.

## 9.3.3 Permit Modification Due to Design-Builder Design Changes

If the Design-Builder's design substantially alters the Base Technical Concept resulting in additional or altered impacts to the environmental features in the area, the Design-Builder shall bear all cost and time to procure any environmental water quality permit(s), design and construct any required mitigation, and/or acquire any mitigation credits needed to address the impacts form the Design-Builder's design.

If permit modifications are necessary prior to completion of the Definitive Design Plans, the Design-Builder shall contact the Department for guidance and requirements.

### 10 CONSTRUCTION

The Design-Builder's construction Work shall meet the requirements of the TDOT Standard Specifications, supplemental specifications, the relevant Special Provisions, the *Manual on Uniform Traffic Control Devices* (MUTCD), and regulations of the Tennessee Occupational Safety and Health Administration (TOSHA).

The Design-Builder shall ensure that all applicable "General and Special Notes" found in Section VI of the current edition of the State of Tennessee Department of Transportation Design Division *Roadway Design Guidelines – PDN* are adhered to during all construction Work.

### 10.1 Construction Services

The Design-Builder shall supervise and administer all construction Work in accordance with the Contract requirements. The Design-Builder shall perform all other construction Work required to complete the Project in conformance with all Contract requirements. Notably, the Design-Builder shall:

- Comply with all applicable laws.
- Keep the Work location and its vicinity free from accumulation of waste materials and rubbish caused by the Design-Builder's operations.
- Repair, at its expense, any area that is disturbed outside limits of the construction Work over the duration of the Project. Note: all repaired areas shall be inspected and be deemed satisfactory by the Department.
- Coordinate its Work with that of other contractors and utility owners working on or near the Project Limits. Note: The Design-Builder shall consider the schedule of other contractors when developing the CPM Schedule to maintain continuity of Work and compliance with the Contract Time.

## 10.2 Construction Submittals

The Design-Builder shall submit Plan revisions of approved design and field changes to the Department within two weeks after approval of each change. As required in the DB Standard Guidance, all field design changes shall be incorporated into the As-Built Plans.

# 10.3 Acceptance of Material

All materials used on this Project shall meet the requirements set forth in the Contract Documents, Design Documents/Plans, and specifications. Materials incorporated into the Project must have certifications, test reports, and/or acceptance testing as specified in the Department's Quality Assurance Program for the Sampling and Testing of Materials and Products (SOP 1-1) (<u>Standard Operating Procedures</u>). The Design-Builder shall communicate what materials will be used in the Project, along with estimated quantities, in sufficient time that adequate samples and/or acceptance testing can be performed by Department representatives. The Design-Builder shall provide the Department an estimated quantities list using the Department's pay item list for each lump sum item so that the Department may determine the number(s) and type(s) of testing required.

The Design-Builder is responsible for determining all means and methods of its construction Work for the Project. However, this does not relieve the Design-Builder of the responsibility to protect the public, environment, and private property.

No partial payments, including payment for stockpile materials, shall be made before Work begins.

# 10.4 Maintenance During Construction

The Design-Builder shall prepare and submit (prior to starting any construction Work) a Maintenance Plan for Department Review and Approval that meets the requirements of the TDOT Standard Specifications (including Section 104.05), the DB Standard Guidance, and this Section. The Design-Builder is responsible for the maintenance of the Project Limits in accordance with these requirements and the approved Maintenance Plan from the date of the Notice to Proceed for the construction Work until Project completion and acceptance by the Department.

## 10.4.1 General Requirements

The Design-Builder shall maintain all components of the transportation system within the Project Limits, which shall include asphalt roadway, signing, existing signals and lighting infrastructure, and guardrail.

Prior to receiving Notice to Proceed for the construction Work, the Department and Design-Builder shall complete a preconstruction maintenance survey of the existing conditions within the Project Limits. For any existing areas/facilities previously in a state of disrepair or damaged prior to when the Design-Builder's maintenance responsibilities begin, the Department will coordinate with Design-Builder on the extent of the repair, timing for the repair, and potential payment for the repair as additional Work.

### 10.4.2 ROW Mowing and Litter Removal

As part of its Maintenance Plan, the Design-Builder shall detail its approach to general housekeeping of the Project Limits (e.g., mowing, litter removal, vandalization mitigation). The Design-Builder shall perform ROW mowing (minimally four mowing cycles each year) and litter and graffiti removal (minimally monthly) within the Project Limits to provide a consistent vegetation height and a clean, non-littered appearance.

The Design-Builder shall propose and the Department will direct the Design-Builder on the exact dates for the annual mowing cycles.

### 10.4.3 Acceptance of the Project

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

#### 10.4.4 Maintenance of Traffic

Prior to starting any Work requiring traffic control, the Design-Builder shall prepare and submit a Transportation Management Plan (TMP) for Department Review and Approval (also see Section 5.2.14 of the DB Standard Guidance for additional information). The TMP shall include related temporary traffic control (TTC) strategies and TTC Plans (inclusive of pedestrian and bicycle protection) prepared alongside the Design Documents. Traffic control design shall be in accordance with TDOT Standard Traffic Design Drawings and the MUTCD.

#### 10.4.4.1 WORK RESTRICTIONS

The Design-Builder shall only work on a single block at a time within the Walton to Wiley section of the Project Limits. Within these Project Limits, Work at an intersection shall be limited to one corner of the intersection at a time in order to maintain pedestrian movement/access throughout construction.

Throughout both the Walton to Wiley section of the Project Limits and the Liberty to Northside section of the Project Limits, pedestrian and bicycle traffic shall be maintained in accordance with TDOT Standard Traffic

Design Drawings. Traffic shall be maintained on existing travel and bicycle lanes, except in areas where closures are needed for construction. Lane closures shall be permitted, but shall be limited to single day activities and only during active work periods in accordance with SP 108B. Lane closures shall be maintained in accordance with TDOT Standard Traffic Design Drawings. For lane closures where an existing bicycle lane is present, a temporary 4-foot bike lane shall be provided.

The Design-Builder shall not close or prevent use of consecutive bus stops throughout both sections of the Project Limits.

#### 10.4.4.2 Uniformed Law Enforcement Officers

In accordance with SP 712U, the Design-Builder shall use Uniformed Law Enforcement Officers (ULEOs) during its construction Work to enhance traffic safety and supplement its traffic control for the Project. The Design-Builder shall establish the timing for and number of proposed ULEOs as part of its TMP and called out in its TTC Plans for Department Review and Comment. The Department will reimburse the Design-Builder for use of the approved ULEOs as part of a Department-established allowance (beyond the Contract Amount) in accordance with SP 712U.

## 10.5 Construction Signage

Access to all side roads, business entrances, and driveways shall be maintained during the construction Work unless specified elsewhere in the Contract Documents.

All construction signing shall be in strict accordance with the current edition of the MUTCD.

## 10.6 Disposal

All disposal activities shall be in accordance with the TDOT Waste and Borrow Manual.

Borrow and waste disposal areas shall be located in non-wetland areas and above the 100-year FEMA floodplain. Borrow and waste disposal areas shall not affect any Waters of the State/U.S. unless these areas are specifically covered by environmental water quality and construction permits.

# 10.7 Department Inspections

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

Should the Project have repeat non-conformance reports on QA Inspections, water quality violations, or a NOV, the Department may increase the frequency of QA inspections to two per month. The extra QA inspection will occur until the Project has been brought back into compliance for two consecutive QA inspections.

The Design-Builder will bear all cost and time associated with any work related to the additional QA inspections or non-compliance determinations, including compensating the Department for the additional QA inspections. The Design-Builder shall be solely responsible for any monetary fees and/or fines associated with any violations, as assessed by the Department or the regulatory agencies.

## **Attachment A**

# **Pavement Design Report**

Tennessee Department of Transportation Flexible Materials and Pavements Section

Pavement Design

 County
 Davidson
 PIN
 132524.00

 Route
 SR-6
 Design YR
 2025

Descriptior (Gallatin Pike), From Liberty Lane to north of Northside Drive

Road Bus Lane

|          | Pavement Schedule |   |            |  |  |
|----------|-------------------|---|------------|--|--|
|          | Mainline          |   |            |  |  |
|          | Item#             | Description                                 | Depth (in) |  |  |
|          | 411-02.10         | ACS MIX(PG 70-22)Grading D                  | 1.25       |  |  |
| ¥        | 307-02.08         | Asphalt Conc Mix(PG 70-22)(BPMB-HM) GR B-M2 | 2          |  |  |
| Pavement | 307-02.01         | Asphalt Conc Mix(PG 70-22)(BPMB-HM) GR A    | 3          |  |  |
| ave      |                   |   |            |  |  |
| 2        |                   |   |            |  |  |
|          |                   |   |            |  |  |
| Base     | 303-01            | Mineral Aggregate, Type A                   | 10         |  |  |
| Subgrade |                   |   |            |  |  |

Note: Add Tack Coat Per Standard Specification 403.05 between each pavement layer

Note: Add Prime Coat @ 0.35 Gal/SY between base and pavement

