ODOT

DESIGN BUILD

SCOPE OF SERVICES

PID: 115443 **State Project Number:** 447946

County: TRU **Route:** 46 **Section:** 25.07

1 PROJECT IDENTIFICATION & GENERAL INFORMATION

Table 1-1: Project Identification

PID	115443
State Project Number	447946
County-Route-Section	TRU-46-25.07
Local Route Name (if applicable)	N/A
Highway Functional Classification & Federal Aid System	Rural Major Collector

1.1 Design Designation

The DBT shall use the design designations for each of the facilities below various design elements as specified within the Scope of Services.

Table 1-2: Design Designation

Location:	TRU-46-25.07 (Approx. 1.4 miles north of SR-87)
Current ADT:	950 (2022)
Design Year ADT:	1200 (2042)
Design Hourly Volume:	150
Directional Distribution:	52.4%
Trucks:	4%
Design Speed:	60 MPH
Legal Speed:	55 MPH
Design Functional Classification:	Rural Major Collector
NHS Project:	No

1.2 Existing Plans and Project Information

Available information related to the Project is available in the Document Inventory shown in Table 1-3. The Document Inventory will identify whether the document is designated as “Reference Documents Appendices” or “Contractual Appendices”.

Reference Documents Appendices are provided for informational purposes only. The Department makes no representation or warranty as to the accuracy, adequacy, applicability,

or completeness of the Reference Documents Appendices. Except to the extent set forth to the contrary in the Contract Documents, reliance upon the Reference Documents shall be at the Proposer's risk, and the Department shall have no liability or obligation as a result of the inaccuracy, inadequacy, inapplicability, or incompleteness of the Reference Documents, regardless of the contents thereof.

Contractual Appendices in the Document Inventory are considered binding obligations of the DBT. The DBT shall meet requirements identified in the Contractual Appendices and shall implement the Work in accordance with these requirements.

The Offerors (i.e. prospective Design-Build Teams) shall examine the information provided in the Document Inventory to determine if the information accurately depicts existing field conditions.

The following existing plans are considered part of the Document Inventory and are available for review:

1. TRU-46-25.14 (1984) – Original Bridge Construction Plans
2. TRU-46-18.49 (2013) – Bridge Rehabilitation Plans

The plans identified in the Document Inventory are not as-built plans. All existing plans are considered Reference Documents.

In addition to the existing plans, Appendices to the Scope of Services are listed in the Document Inventory and posted on the FTP site at ftp://ftp.dot.state.oh.us/pub/Districts/D04/115443

Document Inventory

Appendix	Appendix Title	Contractual/Reference Designation
A	Asbestos Inspection Report	Reference
B	Required Plan Notes	Contractual

1.3 Railroad Coordination

Not Applicable

1.4 Airway/Highway Clearance

Not Applicable

2 PRE-BID MEETING

Not Applicable

3 CONTRACTOR PRE-QUALIFICATION

It is required that the Bidder be a Contractor prequalified in accordance with Section 102.01 of PN 126. The Contractor or one of the subcontractors identified in the Proposal must be prequalified for all Work Type Codes included in the Proposal.

The Bidder is also required to have engaged the services of an ODOT pre-qualified Consultant (Designer) in accordance with Section 4 of the Scope of Services to constitute the DBT.

If the Contractor, Designer, and/or the sub-consultant(s) submitted do not meet all the required qualifications, the Office of Contract Sales may reject the bid.

4 DESIGNER

Each Offeror shall name the Designer and all design sub-consultant(s) in the electronic form on the following webpage prior to Bid submittal:

http://www.dot.state.oh.us/Divisions/ContractAdmin/Contracts/Pages/Scope.aspx

Each Offeror must list relevant prequalification categories for the Designer and each design sub-consultants to show that the prequalification requirements listed below are satisfied. All consultant names and addresses must be the same as that on file with the Department as found on ODOT Office of Consultant Services Website at https://www.dot.state.oh.us/Divisions/Engineering/Consultant/Pages/default.aspx

The Designer or sub-consultants of the Designer must be prequalified to perform design work associated with the following prequalification categories:

1. Non-Complex Roadway
2. Subsurface Utility Location Services
3. Level 1 Bridge Design

In accordance with Section 104.011 of PN 126, design services that require prequalification may only be performed by firms that are prequalified for those services at the time of performance of the services.

Restrictions on Participation in design-build contracts: Any Consultant who provided services to the Department that have been directly utilized in this design-build Proposal or Scope of Services document will NOT be eligible to participate in this design-build contract for this Project, either as a prime consultant or as a sub-consultant.

5 SCOPE OF WORK

Project Description:	Superstructure replacement on SFN 7802994 TRU-46-25.07 over Mosquito Creek
Completion Date:	09/30/2022
Warranties:	Not Applicable

The approximate Project Limits for each applicable roadway are:

Roadway Name	Begin	End
SR-46	Approx. 100 ft south of the south end of the existing southern approach slab	Approx. 100 ft north of the north end of the existing northern approach slab

Work Limits shall be determined by the DBT.

The Consultant shall provide for the engineering services, design, and preparation of detail construction plans for the construction of the proposed project.

The Contractor shall provide for the furnishing of materials, construction and completion in every detail of all the work described in the Contract Documents to fulfill the intent of the Contract.

6 FIELD OFFICE

Field office Type A as required by Construction and Material Specification Item 619, shall be available and completely functional no later than 1 week prior to the start of construction work. The field office requirements are only applicable to the Department's personnel. The Field Office will be paid for on a Unit Cost Basis.

7 GENERAL PROVISIONS FOR THE WORK

7.1 Governing Regulations

All services, including but not limited to survey, design and construction work, performed by the DBT and all subcontractors (including sub-consultants), shall be in compliance with all applicable ODOT Manuals and Guidelines.

It will be the responsibility of the DBT to acquire and utilize the necessary ODOT manuals that apply to the design and construction work required to complete this project.

The current edition, including updates released on or before *the* date original advertisement, of the following ODOT Manuals and Guidelines shall be met or exceeded in the performance of the design and construction work required to complete this project:

Bridge Design Manual
Location and Design Manuals
Volume One - Roadway Design
Volume Two - Drainage Design
Volume Three - Plan Preparation
Pavement Design & Rehabilitation Manual
Specifications for Geotechnical Explorations
Survey Manual
Construction and Material Specifications
Proposal Notes for Construction and Material Specifications
Supplemental Specifications for Construction and Material Specifications
Item Master
Manual for Abandoned Underground Mines - Inventory and Risk Assessment

Pavement Design and Rehabilitation Manual
State Highway Access Management Manual
Standard Construction Drawings
Plan Insert Sheets
Traffic Engineering Manual
Ohio Manual of Uniform Traffic Control Devices
Real Estate Administration Policies and Procedures Manual:
Appraisal
Acquisition Property Management
Relocation
ROW Plans
Utilities
Wireless Communication Tower Manual
Environmental Services Handbooks and Guidelines
Waterway Permit Manual
Design Mapping Specifications
CADD Engineering Standards Manual
Geotechnical Bulletins

7.2 CADD files supplied by the DBT

The DBT shall comply with ODOT's CADD Standards, and supply files in accordance with the CADD Engineering Standards Manual for OHDOT CONNECT. All data shall be provided to the Department according to the provisions as detailed under the appropriate CADD links accessed from the Department's Division of Engineering's website. This includes, but is not limited to, the level assignments, symbols, lines and line styles that are to be used, line weights, cells, placement of text and file naming conventions.

The websites can be accessed at the following URL addresses:

- http://www.dot.state.oh.us/Divisions/Engineering/CaddMapping/Pages/default.aspx
- http://www.dot.state.oh.us/Divisions/Engineering/CaddMapping/CADD_Services/Pages/default.aspx
- http://www.dot.state.oh.us/Divisions/Engineering/CaddMapping/CADD_Services/Standards/Pages/Files.aspx
- ftp://ftp.dot.state.oh.us/pub/CADD/CADDSync/Manuals/Guidelines_for_Electronic_Design_Deliverables.pdf

The Department will accept CADD files through electronic media.

1. The DBT shall submit all CADD information produced in the process of plan development. All CADD information shall be submitted in the current version of MicroStation (*.dgn) format as indicated in the CADD Engineering Standards Manual for OHDOT CONNECT. The DBT shall provide a comprehensive set of complete and accurate CADD data which is compatible with ODOT's CADD systems with no additional work or modification.

2. The DBT shall submit all information produced in the process of plan development according to L&D Volume 3, Section 1500.

The DBT shall use a separate file name for each horizontal or vertical alignment. The DBT shall provide required ASCII report content in accordance with the CADD Engineering Standards Manual.

These requirements and procedures may be updated from time to time with notification provided on the ODOT Division of Engineering website. The DBT shall use ODOT cell files and ODOT seed files consistent with the version of the requirements identified in Section 7.1 (Governing Regulations).

7.3 Pre-Award Conference

Within 7 days following Bid opening, the apparent successful DBT shall attend a mandatory pre-award conference. This confidential meeting will be held with the Office of Contract Sales in the Division of Construction Management to discuss the DBT's bid of the lump sum items. The DBT shall be prepared to discuss general items of Work included within the lump sum bid items, approximate amounts of Work included within the DBT's Bid Items, and general design approach and design concepts for the Work. Other Department representatives familiar with the Project may attend.

While not required, the DBT may prepare general engineering information to be presented to the Office of Contract Sales to help explain design concepts and quantities. This information will be used only by the Office of Contract Sales to assist in understanding the DBT's bid for award recommendation purposes.

No shared concepts, shared quantity information, discussions, comments made or shared by either party will be considered binding, a revision to the Contract Documents, or acceptance or validation of any design concept or assumed quantities of Work.

7.4 Partnering Agreement

The DBT is required to enter into a partnering agreement with the Department that is:

☐ Facilitated

☑ Self-Facilitated

The objective of this agreement is the timely completion of the work and a quality product that will be a source of pride to both the Department and the DBT. Partnering will not affect the terms and conditions of the contract. The partnering agreement is a document which is solely intended to establish an environment of cooperation between the parties. The costs associated with the partnering process will be in accordance with Section 108.02 of PN 126.

7.5 Communication

All communication during design and construction shall be with the District Project Manager and the District Project Engineer.

District's Project Manager's Name:	Thomas J Powell, PE
Phone number:	330-786-4834
E-mail:	thomas.powell2@dot.ohio.gov

District's Project Engineer's Name:	Will be named at the Pre-Design Meeting.
Phone number:	
E-mail:	

At the Pre-Design Meeting, the DBT shall name a Project Manager who will act as a liaison between the DBT and the Department.

7.6 Permits

The DBT shall ensure that the Project is constructed and maintained in accordance with all requirements, regulations, and applicable permits required for the Project. This includes the permits described herein and any additional permits not specifically identified in the Contract Documents.

Unless noted otherwise in the Contract Documents, the DBT shall obtain all necessary permits and pay all charges, fees and taxes associated with these permits (e.g., city street opening permits, street crossing/equipment moving permits, water department fees, sewer permits, rail permits and fees, etc.). The DBT shall be responsible for any fines levied by regulatory agencies as a result of their construction activities or non-compliance with any permit special or general conditions.

The DBT shall obtain a permit from the State or local government having jurisdiction to perform any non-construction work within the existing Right of Way and/or limited access.

7.7 Entry on Private Property

The DBT, acting as The Department's agent, may enter upon any lands within the State for the purpose of inspecting, surveying, leveling, digging, drilling, or doing any work deemed necessary in the execution of any survey authorized by the Director of Transportation in accordance with Section 5517.01 of the Ohio Revised Code and ODOT's Survey Manual. Prior to performing said survey, the DBT will send notification letters indicating the date and duration of entry to the affected property owners no less than forty-eight hours nor more than 30 days prior to the date of entry for said survey in accordance with ODOT's Survey Manual. The DBT shall forward copies of all notification letters distributed to ODOT's Project Manager.

Any subsequent claims for compensation due to damages incurred while said activities were performed will be negotiated between the DBT and the affected property owners with final approval from ODOT's Project Manager. Crop and property damage minimization and

reimbursement information, together with the crop damage reimbursement formula and Special Waiver of Damage form, will be provided to the DBT by ODOT's Project Manager.

Any subsequent entries onto private property for the purpose of obtaining additional survey or soil information prior to the submission of the Bid will be made in accordance with the procedures outlined in this section.

8 ENVIRONMENTAL

The DBT shall ensure that the Project is designed, constructed and maintained in accordance with all environmental requirements, regulations, and applicable ohpermits required for this Project.

8.1 NEPA & Environmental Commitments

The DBT shall perform all environmental commitments as described below, unless otherwise specified in the Contract Documents. The DBT shall include these commitments as part of the Plans.

Commitment
ENDANGERED SPECIES HABITAT - INDIANA BAT/NORTHERN LONG-EARED BAT **THE TRU-46-25.07 PROJECT SITE IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED AT THIS LOCATION FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.**
STREAM AVOIDANCE – TRU-46-25.07: **UNDER NO CIRCUMSTANCES SHALL ANY EQUIPMENT (LIFT, SCAFFOLDING, BACKHOE, EARTH MOVING EQUIPMENT, ETC.) AND/OR MATERIALS ENTER MOSQUITO CREEK AT THE AFOREMENTIONED LOCATION. NO FILL MATERIAL (INCLUDING TEMPORARY FILLS SUCH AS WORK PADS, COFFERDAMS, ETC.) SHALL BE PLACED BELOW THE IDENTIFIED ORDINARY HIGH WATER MARK (OHWM) OF MOSQUITO CREEK. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ALL DEMOLITION DEBRIS, CONSTRUCTION MATERIALS, WASTE MATERIALS, WATER CHEMICALS OR OTHER SUBSTANCES USED TO CONSTRUCT THE PROJECT FROM ENTERING MOSQUITO CREEK.**

The DBT shall:

1. Monitor and document Work to demonstrate compliance with environmental commitments.
2. Provide documentation of environmental commitment compliance at request of the Department.
3. Follow Department and local regulations regarding dust control, adhering to dust control measures outlined in C&MS 616.
4. Adhere to local ordinances for vehicle idling and all current U.S. Environmental Protection Agency (EPA) air quality regulations.

If the DBT becomes aware of any failure to perform an environmental commitment, the DBT shall notify the Department immediately.

8.2 Environmental Permits

The DBT shall:

1. Be aware of all applicable environmental permits related to the Work.
2. Coordinate with the Department and prepare applications and other relevant information necessary to obtain all environmental permits required to perform the Work.
3. Comply with all conditions imposed by environmental permits in design and construction.
4. Notify the Department regarding any failure to comply with conditions of the environmental permits.
5. Maintain and update environmental permits to ensure they are in effect during the Work.
6. Coordinate with the Department and submit any documents regarding updates required for environmental approvals to the Department for coordination with the regulatory agency.

If the DBT modifies elements of the Conceptual Design used as the basis for obtaining a permit, the DBT accepts all responsibility for associated cost and schedule impacts resulting from the permit modification process and accepts the risk that the regulatory agency may not approve the proposed permit modification.

At no time shall the DBT coordinate environmental permitting issues directly with the regulatory agencies, unless directed to do so by the Department. The DBT shall not commence with Work covered by environmental permits until the applicable permit approval is obtained from the regulatory agency.

The DBT shall acquire required noise permits and/or variances from the local jurisdiction.

The DBT shall be responsible for any fines levied by regulatory agencies as a result of their construction activities or non-compliance with any permit special or general conditions.

8.3 Temporary Sediment and Erosion Control

The DBT shall be responsible for designing and implementing all temporary sediment and erosion controls in accordance with SS 832 and the Ohio NPDES general permit for storm water discharges from construction activities (NPDES Permit). For information about OEPA's NPDES Permit requirements, see: https://epa.ohio.gov/dsw/permits/GP_ConstructionSiteStormWater.

The DBT shall submit information to the Department for development of the Notice of Intent for the NPDES Permit, including the total acreage of earth disturbing activities for both off project and on project work. The DBT shall assume that approval from OEPA will require a minimum of 31 days following submittal to the ODOT Project Manager. Earth disturbing activity is not permitted prior to approval of coverage under the NPDES Permit.

For projects that require an NOI, the DBT must develop a Storm Water Pollution Prevention Plan in accordance with SS832 and the NPDES Permit. The DBT shall not initiate any earth disturbing activity until the SWPPP is approved.

The DBT shall be compensated for furnishing and installing items related to temporary sediment and erosion control requirements. The Department will compensate the DBT through an encumbered amount included in the Proposal as a non-bid reference number. The Proposal specifies the unit prices for the temporary sediment and erosion control items. Payments for temporary sediment and erosion control items that exceed the encumbered amount will be made through an Extra Work Change Order using the specified unit prices. The specified unit prices are fixed for the Contract Documents and may not be negotiated or adjusted for inflation or claimed changed condition.

All costs associated with the work to development, design, revisions, modifications, amendments and submittals of a required Storm Water Pollution Prevention Plan is considered incidental to the Project. All costs associated with the work to perform Storm Water Pollution Prevention Inspections and all work associated with NPDES required inspections, monthly inspections, and reporting is considered incidental to the Project. All costs associated with providing and maintaining the required CPESC and CESSWI personnel, conducting the NPDES required inspections utilizing the SWPPPTrack inspection software application and support engineering services are incidental to the Project. All costs associated with the Storm Water Pollution Prevention Inspection Software includes all costs for the SWPPPTrack inspection software and services and is incidental to the Project.

All temporary erosion control items shall be removed before the project is accepted. Removed materials shall become the property of the DBT and shall be disposed of in accordance with the appropriate C&MS specifications.

8.4 Regulated Materials

The DBT shall meet all regulatory conditions imposed with regulated materials, including hazardous materials, associated with the Project. The DBT shall characterize, collect, contain, and properly dispose of all waste generated or encountered during the Work. The DBT shall ensure that the site is properly contained during construction so that regulated

materials do not migrate off-site. The DBT shall prepare and implement a Spill Prevention Control and Countermeasures (SPCC) Plan per the requirements of 40 CFR Part 112 that provides specific guidance for managing, handling, and disposing of regulated materials that may be encountered within the Right-of-Way and for protecting the health and safety of all on-site personnel and the general public.

If any unknown regulated materials are discovered through work on the Project, the DBT shall notify the Department immediately and shall follow the SPCC Plan, as well as all appropriate regulations.

8.4.1 Asbestos

A Certified Asbestos Hazard Evaluation Specialist inspected the bridge structure scheduled for demolition and/or rehabilitation;

The inspection determined that "Abutment Wingwall Tar" contains asbestos. The Asbestos Containing Material shall be removed and disposed of by the contractor. The Contractor shall ensure that the abatement, transport, and disposal of asbestos containing material is conducted in accordance with all Federal, State, And Local Regulations. The Contractor shall ensure that all documentation related to the Abatement, Transport, And Disposal of Asbestos Containing Materials is submitted to the Project Engineer for record keeping within 2 weeks of completion.

The department has provided a copy of the Ohio Environmental Protection Agency (OEPA) notification of demolition and renovation form (partially completed) and the Asbestos Inspection Report in the reference files for this project. The Contractor shall complete the form and submit it to the OEPA at least ten (10) working days prior to the start of any demolition and/or renovation. Online submission is available at http://www.epa.ohio.gov/asbestos and is encouraged or, the Contractor shall submit it to one of the addresses below

Asbestos Program
Ohio EPA, DAPC
P.O. Box 1049
Columbus, OH 43216-1049

Or

Asbestos Program
Ohio EPA, DAPC
50 W. Town St., Suite 700
Columbus, OH 43215

The form shall include:

1. The Contractors name and address
2. The scheduled dates for the start and completion of the structure demolition and/or renovation
3. Description of the planned demolition work and the methods be used
4. All necessary fees

The Contractor shall provide a copy of the completed notification of demolition and renovation form to the project engineer at least ten (10) working days prior to the start of any demolition and/or renovation.

The Contractor shall furnish all fees, labor, and materials necessary to complete and submit the OEPA notification form.

The Contractor shall furnish all the Labor, Equipment, and Materials necessary to properly abate, transport, and dispose of Asbestos Containing Materials in a landfill licensed by the Local Health Department and permitted by the Ohio Environmental Protection Agency - Division of Air Pollution Control to accept Asbestos Containing Material. Payment for this work shall be included in an appropriate Structure Lump Sum Pay Item.

9 RIGHT OF WAY (ROW)

The DBT shall perform all necessary construction work for the project within the Project Right of Way (ROW).

The DBT shall locate existing right of way lines based on requirements specified in Chapter 4733-37 of the Ohio Revised Administrative Code (Board Rules) governed by regulations outlined in Chapter 4733, Ohio Revised Code (Regulation Laws). The DBT shall research existing right of way information from all available sources including but not limited to ODOT records, County road records, Commissioners' Journals and records of other County offices to the extent necessary to provide an accurate basis for the establishment of the existing right of way.

The DBT will stake and flag the existing right of way in the field prior to the start of construction and will maintain stakes and flags throughout the duration of the Project.

The DBT shall identify all right of way encroachments on the construction plans with the Interim Design submission. ODOT's Project Manager will be responsible for clearing all encroachments on Federal-aid projects in accordance with standard encroachment removal.

10 UTILITIES

10.1 Existing Utilities

The District Utility Coordinator, in coordination with the registered underground utility protection services, Oil and Gas Producers Underground Protection Service (OGPUPS), and other utility owners that are non-members of any utility protection services, has determined that the utilities identified in Table 10-1 are located in the area of the Project.

List all known utilities on the Project site in Table 10-1.

Table 10-1: Utility Contacts

CenturyLink/Lumen **ATTN: Alan Peters** **3801 Elm Rd Warren, Ohio 44483**	**Petrox, Inc.** **ATTN: Scott Dutton**

330-841-1309 330-219-3306 Cell Alan.L.Peters@lumen.com relocations@lumen.com	10005 Ellsworth Road Streetsboro, OH 44241 330-653-5740 sdutton@petroxinc.com
Ohio Edison **ATTN: Brian Mulichak** **730 South Avenue** **Youngstown, OH 44502** **724-962-1094 Cell** **bmulichak@firstenergycorp.com**	Sprint communication Steve Hughes 11370 Enterprise Park Dr. Sharonville, Ohio 45241 513-459-5796 Steven.hughes@sprint.com

10.2 Utility Coordination Responsibilities

The DBT shall coordinate all utility adjustments for construction activities on the Project.

As soon as it is feasible, the DBT shall stake the existing ROW in the field and shall perform clearing and grubbing within that ROW in accordance with the Contract Documents to facilitate utility relocation. The DBT shall maintain and update ROW stakes as needed throughout the Project Limits for the duration of the Project.

The DBT shall design the project and perform construction work in a manner that minimizes the scope and extent of utility conflicts and adjustments. The DBT shall not design or construct the Work in a way that precludes legal occupancy of the highway right-of-way by the adjusted utility. The DBT shall minimize potential delays and coordinate efficient adjustments of utilities.

The DBT shall copy the ODOT Project Manager and the District Utility Coordinator on all correspondence or phone calls between the DBT and each utility. This shall include the submittal of plans to each utility. A meeting at or near the Interim Design submission shall be held between the DBT, the District Utility Coordinator and the utility owners to determine if any significant utility relocations can be eliminated or mitigated.

Any betterment to the utility's facility and ineligible, or unnecessary, work shall not be included in the Project without Department approval. The Department will not compensate for betterments or other ineligible utility work. The DBT shall coordinate determination of eligibility through the District Utility Coordinator.

10.3 Subsurface Utilities Engineering (SUE)

Subsurface Utility Engineering Required: ☑ Yes ☐ No

The DBT shall use an ODOT prequalified SUE location service to field verify all underground utilities prior to beginning any design work and shall incorporate the results in the design.

DBT shall have the SUE perform the following Quality Levels:

☑ SUE Level A

☑ SUE Level B

☐ SUE Level C

☐ SUE Level D

Payment for the SULS Level A Test Holes will be made on a Unit Cost Basis and an estimated quantity has been provided in the Proposal. Prior to performing Level A Test Holes they must be approved by the Design Project Manager, payment for Level A Test Holes performed without approval will not be made.

11 MAINTENANCE OF TRAFFIC (MOT)

11.1 General

The DBT shall be responsible for designing, providing, and maintaining safe and effective traffic control 24 hours a day for the duration of the Project. The DBT shall furnish, install, maintain and remove all traffic control devices. The DBT shall implement Maintenance of Traffic (MOT) in a manner that minimizes both construction duration and impact to the traveling public.

The DBT shall provide written notice to the Department fourteen (14) days in advance of modifications in MOT or traffic patterns, including modifications to the following:

1. MOT configuration
2. Access
3. Detours
4. Schedule
5. Duration

The DBT shall furnish temporary MOT devices compliant with the AASHTO Manual for Assessing Safety Hardware (MASH), as applicable.

All detour routes will be provided by the Department and shall be signed by the DBT. The designated local detour will be provided by the Department.

11.2 MOT Requirements

The DBT shall design and implement the MOT in accordance with the requirements below:

A. Traffic will be detoured for a maximum of 45 days
B. The official, signed detour route will be: SR-87 – SR-11 – SR-322
C. The DBT is responsible for the design, installation, maintenance and removal of Detour Signing

D. All work on this structure and the associated roadway work will be completed during the detour

11.3 Haul Routes

In addition to the requirements of C&MS 105.13, the Progress Schedule shall account for 30 Days for the Department to secure approval for haul routes.

11.4 Traffic Engineering Manual Notes

The DBT shall design and implement the MOT in accordance with the following TEM notes:

1. 642-4 (Item 614, Maintaining Traffic (Time Limitation on Detours))
2. 642-8 (Item 614, Maintaining Traffic (Notice of Closure Sign))
3. 642-19 (Dust Control)
4. 642-58 (Communications Time Table)

The DBT shall design and implement the MOT in accordance with the following notes in Appendix B:

1. Detour Notification
2. Maintenance of Traffic

12 SURVEY

A. ODOT Survey Responsibilities

The Department survey crews have provided the following survey information, listed below:

1. Centerline control and benchmarks
2. Beginning and ending centerline points for the project
3. At least two benchmarks for the project (the datum used was that which the project was originally laid out by)
4. Critical points such as P.C., P.I., P.T., T.S., C.S.
5. Vertical clearances for the overhead structures, to serve as a check for the existing vertical clearances

B. DBT Survey Responsibilities

The DBT shall submit all survey data using ODOT's standard field codes and ODOT's standard mapping codes. Reduced point data, in comma delimited ASCII text format, will be provided for all surveyed points. This data will include: point number, North (y) coordinate, East (x) coordinate, elevation and point ID.

The DBT shall not disturb existing monumentation. If the DBT disturbs the monumentation, then the DBT shall replace the monument, in-kind, using a Registered Surveyor, with current registration, recognized by the Ohio State Board of Registration for Professional Engineers and Surveyors. Costs associated with monument replacement caused by DBT disturbance shall be

borne by the DBT. The DBT shall provide copies of all monumentation changes to the District Real Estate Administrator.

The DBT shall include all control points, provided by the Department, in the ASCII file supplied by the DBT to the Department. They should retain the original point numbers and coordinate values as assigned by the Department.

The DBT shall provide the following items prior to final acceptance of the Record-Drawing plans:

1. Copies of all field notes (written or electronic) which shall include the following information:
    a. Date
    b. Crew members
    c. Weather conditions, including temperature, barometric pressure, etc.
    d. Instrument(s) used (Serial Number)
    e. Raw observation field data
    f. Other notes as needed
2. Copies of all Deeds, Plats, Maps and other written evidence used to establish points related to the project including summaries of all parole evidence acquired as a part of the survey operation.
3. Listing of all found monumentation (Horizontal and Vertical).
4. Listing of all monumentation set as part of the project (Horizontal and Vertical) including reference ties for recovery.
5. All monumentation shall be located utilizing NAD 83 (Horizontal Data), NAVD 88 (Vertical Data).
6. Short report indicating adjustment factors and methods, signed and certified by a Registered Surveyor (State of Ohio). The Registered Surveyor (State of Ohio) shall include in the report the datum used and all associated adjustments used.

13 PAVEMENT

The Full Depth Pavement and Shoulder Composition shall be:

1. Item 441 – Asphalt Concrete Surface Course, Type 1, (448), As Per Plan, PG64-22 (T=3”) (maximum lift thickness is 1½”.) (refer to Appendix B for Plan Note) (Apply Item 407 – Non-Tracking Tack Coat between lifts)
2. Item 407 – Non-Tracking Tack Coat (Application Rate as per CMS)
3. Item 301 – Asphalt Concrete Base, PG64-22 (T=9”)
4. Item 304 – Aggregate Base (T=6”)
5. Treat pavement drop-offs with Item 617 – Compacted Aggregate, As Per Plan (refer to Appendix B for Plan Note) with Item 408 – Prime Coat, As Per Plan applied to the top of the Item 617 (refer to Appendix B for Plan Note)

6. In the event Unstable or Unsuitable Soils are encountered during Construction the DBT will perform stabilization as per the "UNSTABLE OR UNSUITABLE SOILS FOR PAVEMENT STABILIZATION" Plan Note (refer to Appendix B for Plan Note). **Payment for this item of work shall be made on a unit cost basis and estimated quantity has been provided in the Proposal.**

14 ROADWAY

The following requirements apply:

1. Alignment
    a. The Horizontal Alignment shall not be modified from the existing
    b. The Vertical Alignment may be modified by the DBT
2. Lanes and Shoulders
    a. 4'-0" Paved Shoulders
    b. 11'-0" Lanes
3. Approach Slabs
    a. The length of the Approach Slabs shall be 25'-0" long
    b. Width of the Approach Slab shall meet the Bridge Width
    c. An asphalt wearing surface on the Approach Slab shall not be permitted
4. The Pavement will be replaced with the Full Depth Pavement Buildup provided
    a. The minimum length of the Full Depth Pavement Replacement will be a minimum of 100 feet on each end of the Approach Slabs or to the limits of the profile adjustment, whichever is greater
    b. Existing Pavement will be removed
    c. The width of the Full Depth Pavement and Shoulders Shall match the Proposed Bridge Width, a transition to the existing pavement width will not be required
5. Guardrail
    a. Remove all Guardrail attached to the existing bridge
    b. Install new Guardrail including all required Anchor and/or Terminal Assemblies as per the Design Standards regardless if it is outside the Project Limits (include Barrier Reflectors)
    c. Provide a minimum of 4'-0" Guardrail Offset from the Traveled Lane
    d. Provide an appropriate Anchor Assembly
    e. The DBT shall ensure adequate sight distance for drivers to exit and enter the driveways adjacent to the project location.
    f. The removal and replacement of the guardrail may extend past the Project Limits

14.1 Design Exceptions

The DBT shall develop a design which does not require approval of additional design exceptions.

15 DRAINAGE

Post-construction storm water Best Management Practices (BMP) according to Location and Design Manual are to be investigated and installed if required.

Install Aggregate Drains in the areas of the new Full Depth Pavement spaced at a maximum of 25’ on each side of the roadway.

Stream Hydraulic Calculations/Analysis is not required to be performed as long the Bridge Opening Size is not reduced from the existing condition.

16 LANDSCAPING & PERMANENT EROSION CONTROL

Landscaping & Permanent Erosion Control Required: ☑ Yes ☐ No

A. The DBT shall permanently grade and seed all impacted areas
B. Clearing and Grubbing shall be performed from the ends of the of the Proposed or Existing Guardrail (whichever is further away from the bridge) laterally between the roadway and the Right of Way Line on both sides of the road. This will consist of removal of all vegetation including brush, bushes, trees, etc.
C. Install Item 671 –Erosion Protection Mat, Type E on all slopes 3:1 or steeper

17 STRUCTURES

17.1 Existing Structures Identification

Structure Identification: TRU-46-2507

Structure File Number: 7802994

Feature Intersection: Over Mosquito Creek

17.2 Design and Construction Requirements of Structure

Str: TRU-46-2507

Existing Structure Data:

Overall Length:	76.19’±
Width o/o:	30’-0”± f/f Guardrail (4’-0” Lateral Offset, 2 x 11’-0” lanes, 4’-0” Lateral Offset)
Design Loading:	HS-20 and Alternate Military Loading

Type:	Single Span Non-Composite Precast Prestressed Concrete Box Beam on Stub Abutments with Deep Foundations
Spans:	1
Skew:	30˚± RF
Approach Slabs:	25’-0”± Long (AS-1-81)
Date Built:	1985

Alignment & Profile

Alignment: ☑ Follow Existing
☐ Relocated: ☐ Per ODOT ☑ Per DBT

Profile: ☐ Follow Existing
☑ Relocate: ☐ Per ODOT ☑ Per DBT
☐ Feathered (Adjustment): ☐ Per ODOT ☐ Per DBT

Span Configuration: ☑ Per Original

Span Lengths: ☐ Per ODOT ☑ Per DBT
☐ Variable

Transverse Sections

Roadway Width: 30’-0” f/f Guardrail

Railing: ☑ Yes ☐ No Type: Three Steel Tube Bridge Railing (Std Dwg TST-2-21)

Fence: ☐ Yes ☑ No Height/Type:

Sidewalks: ☐ Yes ☑ No Width:

Investigate the need for Prefabricated Structure: ☐ Yes ☑ No

Investigate the need for Retaining Walls: ☐ Yes ☑ No

All Shop Drawings shall comply with Item 501.

Additional Description of Required Work and Special Provisions:

1. Remove and replace the existing Bridge Superstructure (Bridge Deck, Beams, Bearings, etc.)
2. Structure Loading Requirements shall follow the Bridge Design Manual Section 303

3. Perform Bridge Load Rating as per the Bridge Design Manual, Section 900. The DBT is required to submit with the Final Design Review Submission or before.
4. Superstructure
    a. Remove existing superstructure and provide new superstructure consisting of Prestressed Concrete Composite Adjacent Box Beams with over the edge drainage
    b. The outside Bridge Railing shall be Three Steel Tube Bridge Railing (Std Dwg TST-2-21)
5. Substructure
    a. Structural Loading Analysis of the Substructure shall not be performed
    b. Inspect the concrete substructure, mark areas to be patched and perform the required patching. **Payment for this item of work shall be made on a unit cost basis and estimated quantity has been provided in the Proposal.**
    c. Remove and replace the existing porous backfill and install new porous backfill with fabric and drainage pipe behind the abutment. Plug existing weep holes if they exist. The limits of the removal and replacement shall extend to elevation of the existing porous backfill shown int eh existing plans or below.
    d. Abutments
        i. Convert the Abutments to Integral Abutments utilizing the details and information from the Bridge Design Manual Section 306.2.2.5 and Figure 306-7.
        ii. Remove the existing backwall and abutment to a point at least 1’-0” below the existing Beam Seat.
    e. Wingwalls
        i. The existing configuration of the wingwalls shall be maintained, i.e. wingwalls are parallel with the face of the abutments
        ii. The top of the wingwalls shall match the elevation of the bridge deck where they intersect.
    f. The Project Engineer will inspect substructure and mark areas to be patched. Payment for this work will be made on a unit cost basis and an estimated quantity has been provided in the Proposal.
6. Approach Slabs
    a. Remove existing Approach Slabs
    b. Provide details and construct new full width approach slabs (25’-0” long)
    c. Provide the appropriate Approach Slab Installation as per Standard Drawing AS-2-15
    d. An asphalt wearing surface on the Approach Slab is not permitted.
7. Concrete Sealing

a. Superstructure: Seal as per the Bridge Design Manual using Epoxy-Urethane Sealer
b. Substructure: Remove existing sealer if present and seal all exposed concrete surfaces

8. The Asbestos Inspection Report prepared by Lawhon & Associates is Appendix A of the Scope of Services. The DBT will include all appropriate notes and details to address Asbestos Containing Materials.
9. Remove existing Structure Identification Signs and Object Markers, if present, and install new Structure Identification Signs and Object Markers in the approach directions (Refer to Appendix B for Plan Note)
10. Perform Structure Load Rating as per the Bridge Design Manual Section 900
11. The Normal flow elevation of 920 shown on the 1984 Construction Plans shall be considered the Ordinary High Water Mark (OHWM)
12. No work shall be performed in the stream below Elev 920 as shown on the 1984 Construction Plans
13. Existing USGS Stream Monitoring Station
    a. The DBT shall inform the ODOT Project Engineer at least 30 days prior to any work that will impact the bridge and/or the existing USGS Stream Monitoring Station.
    b. The ODOT Project Engineer shall coordinate the removal with Thomas Harris. Contact can be made via one of these methods:
        i. Email: tharris@usgs.gov
        ii. Phone: 614-430-7724
        iii. Cell Phone: 816-805-7194
    c. At the completion of construction, the ODOT Project Engineer will inform the USGS that Construction is complete and the USGS Stream Monitoring Station can be reinstalled

18 TRAFFIC CONTROL

18.1 Pavement Markings and Delineators

The DBT shall perform Work related to pavement markings and delineators in accordance with Section 7.1 and the following sections.

A. Pavement Markings: ☑ Yes ☐ No.
   Pavement Markings consisting of Centerlines and Edge Lines shall be installed on all new Asphalt Surface Course Pavement, Approach Slabs and Bridge Deck. Pavement Marking material will be Paint, Item 642.
B. Raised Pavement Markers: ☐ Yes ☑ No.
C. Delineators: ☐ Yes ☑ No.

D. Barrier Reflectors: ☑ Yes ☐ No.
All barrier reflectors shall confirm to Item 626 and shall be placed on bridge parapets, concrete barrier walls, retaining walls and guardrail, in accordance with current design standards. Guardrail blockout reflectors shall be installed on the side of the blockout away from traffic.

E. Object Markers: ☑ Yes ☐ No.
All Object Markers shall conform to Item 630, Sign, Flat Sheet. Object Markers are to be installed as per the "Object Markers and Structure/Culvert Identification Signs" Plan Note in Appendix B

18.2 Signing

The DBT shall perform Work related to signs in accordance with Section 7.1 and the following sections.

18.2.1 Flat Sheet Signs

Flat Sheet Sign work required: ☑ Yes ☐ No.

D. Redesign and replace all existing flat sheet signs with new signs.
E. Size the signs in accordance with the OMUTCD
F. Remove and replace the Structure Identification Signs as per the "Object Markers and Structure/Culvert Identification Signs" Plan Note in Appendix B
G. Removed flat sheet signs shall become the property of the Contractor.

18.2.2 Extrusheet Signs

Not Applicable

18.2.3 Ground Mounted Post Supports

A. Replace: ☑ Yes ☐ No.
1. Redesign and replace all existing ground mounted post supports with new supports. New sign installations shall be on new supports. No reuse of existing ground mounted supports shall be allowed.
2. Removed ground mounted supports shall become the property of the Contractor.

18.2.4 Ground Mounted Beam Supports

Not Applicable

19 PROJECT SCHEDULE REQUIREMENTS

The DBT shall develop and maintain a project schedule in accordance with the selected note:

☑ CM&S 108.03 A. Progress Schedule

☐ Proposal Note 105 - Critical Path Method Progress Schedule for Single Season Projects

☐ Proposal Note 107 - Critical Path Method Progress Schedule for Multi-Season Projects

☐ Proposal Note 132 - Critical Path Method Progress Schedule for Design/Build Multi-Season Projects including updates released on or before the prebid meeting date, shall be met or exceeded.

20 PLAN SUBMITTALS AND REVIEW REQUIREMENTS

20.1 Plan Components

All plans submitted by the DBT shall be in conformance with the following ODOT manuals:

1. Real Estate Policies and Procedures Manual Section 3100.
   The DBT shall also identify all topographic features within the existing and proposed Right-Of-Way limits, including underground utilities.
2. Bridge Design Manual.
   Note: Bridge subsummaries are required.
3. Location and Design Manual, Volume 3:
   The following sections of the Location and Design Manual, Volume 3 are NOT required:

1302.13	Plan Signatures
1307.2	General summary sheet
1307.4	Quantity Calculations
1310.3	Earthwork and Seeding Quantities

Units of measure are **NOT** required.

Simplified plans (section 1301.2) are **NOT** allowed.

20.2 Quality Control

The DBT is responsible for the professional quality, technical accuracy and adherence to the Governing Regulations listed in Section 7.1 (Governing Regulations) of this document, for all plan submittals required under this contract.

The DBT shall immediately notify the Department of any apparent discrepancy between the various design and construction manuals and the Contract Documents.

The Department shall have the discretion to dictate the level of Design review. The Department's acceptance of the design or failure to identify improper design does not, in any way, relieve the DBT of the responsibility for the quality, accuracy, or feasibility of the Design.

In the event the Department determines that any required submission is incomplete, contains inaccuracies which preclude a meaningful review, or does not adhere to the Governing Regulations listed in Section 7.1 (Governing Regulations) of this document, the Department

will advise the DBT of the shortcomings and direct the DBT to revise and resubmit the plan. No time extension will be granted as a result of such action. The Department will schedule a review meeting or issue review comments as appropriate.

20.3 Comment Resolution Process

This section establishes transmittal processes and interaction between the Department and the DBT during submittal reviews in addition to the requirements found within the Scope of Services and other Contract Documents. The process can be modified upon mutual agreement between the DBT and the Department with the intention of meeting the requirements of the Contract or specific submission needs. This process may be revised by mutual agreement of both parties.

Specific identified procedures may be amended, revised, eliminated, or added to address project specific needs or mutual party understanding.

This process shall utilize electronic transmittals for all design submissions unless otherwise specified in the Scope of Services. Plan and design submissions shall be in PDF format, Microsoft Excel, Microsoft Word, or other document types as mutually agreed and appropriate to and for the submission.

Submissions should generally conform to the Scope of Service and other specification included in the Contract Documents, as appropriate, with variations as mutually agreed.

The Department shall establish a file transfer website (typically, an ODOT Project SharePoint, ProjectWise site, or other appropriate file transfer and storage site), with controlled and controllable access, for uploading design submissions and subsequent transmittal of design review comments.

Project specific process details shall be discussed at the Pre-Design Meeting. These details include the responsible contacts (Department and DBT), file server location/IP address, known required persons needing access, and login requirements.

A. Procedure

The Department will grant access to an identified DBT representative who will have authority and responsibility to create Buildable Unit Submission (BUS) folders and other folders within the transfer website. Each folder shall be logically named. Within each BUS folder, additional folders representing each stage of review (i.e. Interim/Final/Construction) will be created. If mutually agreeable, the DBT may perform this role if management by the DBT facilitates submissions.

With each Buildable Unit with each Design Submission, the DBT shall include a transmittal sheet describing the BUS, the BUS stage (Interim/Final/Construction), the contractual review response date (from the Department as well as any other third-party reviewer, if applicable), critical assumptions made for the BUS impacting subsequent BUS submissions, and any information which could facilitate review.

The DBT shall develop and utilize a Comment Resolution Spreadsheet (CRS) for each Buildable Unit with each Design Submission (Interim, Final, Construction) for use in logging and tracking

review comments. The DBT shall provide a blank CRS to the Department and other third-party reviewers at Interim Design Submission. The Department and applicable reviewing agencies shall review for Contract requirements. The Department will utilize the CRS document to centralize all Department employee Buildable Unit Design Submission comments.

Department review comments will primarily focus on compliancy with the Contract Documents. The Department will refrain from making excessive preferential and formatting comments. Reviewer preferential comments shall be marked “Preference” within the CRS. While formatting comments do not need responded to, the Department reserves it’s right to reject a submission which, in its judgement, is not reasonably following required ODOT CADD standards.

An updated copy of the CRS shall be provided to all reviewers at the Final Submission. With the Final Submission on the transmittal page, the DBT shall identify major design revisions and design approaches made between Interim and Final Submission being outside the course of typical design progression and were not made to address Interim Review comments. The updated copy shall include all comments received at Interim submittal along with the DBT’s written disposition of all Non-Compliant comments made during formal Interim design submittals. The Department and other appropriate third-party reviewing agencies will review the DBT’s formal disposition to Interim Submittal review comments as well as revised plans to respond to previous comments. The Department will include any additional comments based on the Final Design Submittal review within the CRS.

The DBT shall clearly identify if an ODOT Interim review comment responded with an “Accept” by the DBT is not being corrected within a Final submission. If an “Accept” comment is not being addressed, the DBT shall clearly describe the intended resolution for the RFC submission. The Department may require additional information before the Construction Plan submission or may request a Comment Resolution meeting (or phone call if appropriate) to understand the DBT’s design direction. The DBT shall memorialize the time of the Comment Resolution Meeting within the CRS submitted with the Construction Plans.

In the event the DBT believes that any review comment, or direction issued by the Department or other third-party review, require a change to a Contract, the DBT shall first contact the Department for clarification and shall, within 10 days of receipt of the comments or direction, provide written notice to the District Project Manager and Project Engineer concerning the reasons why the DBT believes the scope has been changed.

The DBT is not required to comment nor respond to ODOT identified Preference comments.

For comments considered substantial to the Department or the DBT, the DBT shall schedule a Comment Resolution Meeting with the Department to discuss.

1. The Department shall notify the DBT, either within the CRS or other notice, if the Department requires a Comment Resolution Meeting.
2. The DBT shall notify the Department within seven days of any “Non-Compliant” comments they intend to “Dismiss” or “Resolve”. The DBT shall schedule a Comment Resolution Meeting prior to the next stage submittal.

3. For less substantial comments and as agreed by the Department and the DBT, a comment resolution conference call may be sufficient.

The DBT shall obtain Department concurrence with the “Non-Compliant” comment dismissal and this concurrence shall be documented on the CRS.

The DBT shall resolve all outstanding issues and comments from the Final Submittal (or other outstanding comments) and prepare a full set of Design Documents stamped "Checked and Ready for Released for Construction” (RFC). The Department’s expectation is that no revisions shall be made except for those required to address Final review comments. In the event that other revisions are required unrelated to review comments, the DBT shall notify the Department and coordinate revisions for concurrence.

The Department shall review to ensure all comments from final reviews have been resolved or “Closed” to the satisfaction of the Department. There is no formal review period for Construction submission.

The DBT has the responsibility for ensuring the RFC meets all contract requirements. If upon Department review it is determined that it is questionable as to whether comments received from the Department or other agencies have been resolved or addressed appropriately, the DBT shall stop construction of the portion of the Buildable Unit in question, consult with the commenter to resolve such comments. The DBT shall document resolution of the comment within the CRS.

The DBT continues to be liable for design accuracy regardless of ODOT review.

B. General Third-Party Requirements

A “Third-Party”, in regard to the Design-Build Comment Resolution process, is any overseeing agency with oversight and design approval authority of relevant portions of the design as identified in the Contract.

Other third-party reviewers may not utilize the CRS.

It is the DBT’s responsibility to reasonably add all third-party markups and comments received; the DBT shall consolidate third-party comments into the CRS corresponding to each Buildable Unit and save on the ODOT Project file transfer website (typically, an ODOT Project SharePoint, ProjectWise site, or other appropriate file transfer and storage site). Any plan markups shall also be scanned by the DBT and included on file transfer website (typically, an ODOT Project SharePoint, ProjectWise site, or other appropriate file transfer and storage site) within the appropriate BUS folder.

The DBT shall address all third-party review comments. All third-party review comments shall be, initially, considered as a “Non-compliant” comment type, as identified below.

With ODOT’s concurrence, the DBT may subsequently identify comments as potentially a “Preference” or “Recommendation”. The DBT shall obtain Department concurrence with the “Non-Compliant” comment dismissal and this concurrence shall be documented on the CRS.

C. Comment Resolution Spreadsheet

Minimum requirements of the CRS along with information on content is included below. The DBT may modify format or include additional information with Department concurrence.

Reviewer	
Comment ID No	Consecutive listing
Document	Submittals may include multiple components including plans, reports, calculations, etc. This column will list which item the comment is on.
Page	Page reference/location comment refers to
Comment type	Either “Non-compliant”, “Preference”, or “Recommendation”. Non-compliant – elements that do not meet requirements of the Contract. Preference – elements which depict the owner’s preferred design method or result but are not required by the Contract. Recommendation – a general noted item intended to make the designer aware of potential troublesome design methods.
Contract Section	If Comment Type is Non-compliant to the Contract, the reviewer shall include the Contract Document of the requirement that is non-compliant (for example, Scope Section 8.2, L&D Volume 1, BDM, etc)
Reviewer Note	A Reviewer Note is optional but is recommended to ensure the designer understands the intent to the comment made. Reviewer shall note if a Comment Resolution Meeting or discussion is desired.
Reviewer Agency	Representing Agency
Reviewer Name	Name of reviewer
DBT Response	
Resolution Code (Approve, Dismiss, or Resolve)	Accept – DBT agrees with the comment and addressed the comments Dismiss – DBT disagrees with the comment based on comment no longer applying because the design has changed, reviewer error, or other reasons. Resolve – DBT needs additional clarification and/or coordination to address the comment accordingly. Comment may also reflect a change to the Contract Documents which will require additional

	discussion and direction by the Department due to the financial/schedule impacts.
DBT Comment/Disposition	The DBT shall provide a more detailed response to the comment as necessary. Response shall note if a Comment Resolution Meeting or discussion is desired.
Reviewer Response	
Status	Open – the submittal did not address the original comment made. Closed – the submittal or disposition addresses the original comment. The DBT shall schedule a comment resolution meeting with the Department to discuss any comments from previous submittals that remain "Open" according to the reviewer. The DBT and the Department will also discuss whether review comments are in conformance with the Contract Document requirements or preferential comments. For less substantial comments and as agreed by the Department and the DBT, a comment resolution conference call may be sufficient.
Reviewer Name	Name of reviewer
Date Closed	Date that the reviewer responded to the comment.
Comments	Provide a more detailed response clarifying why comment remains "Open" or other information

20.4 Document Management

The DBT shall create and maintain a BUS Log sheet to facilitate submission tracking. The BUS Log shall identify the name of the Buildable Unit, brief description of the BUS, Interim Design submission date, Interim Submission review comments transmittal date, Final Submission date, Final Submission comments transmittal date, Released for Construction date, and a BUS Comments field. The BUS Comments field shall note any necessary resubmissions, dates of Comment Resolution meetings with noted submission stages, Over-the-Shoulder meeting dates resulting in design adjustments, or any other needed summarized data to help understand the BU submission process. The BUS Log Sheet may be modified as necessary to facilitate review. The BUS Log shall be maintained in the master project folder, or in a location mutual agreeable and accessible to the DBT and the Department.

The DBT shall create a folder for each BU on the Department's file transfer website (typically, an ODOT Project SharePoint, ProjectWise site, or other appropriate file transfer and storage site). Each BU folder shall have an "Interim", "Final", and "RFC" folder. All Design Documents (plans, calculations, reports, etc.) submitted at each phase (Final, Interim, RFC) shall be uploaded by the DBT to the Project file transfer website (typically, an ODOT Project SharePoint, ProjectWise site, or other appropriate file transfer and storage site). An updated CRS at each submittal shall be included in each folder with the latest including all

comments “closed”. Meeting minutes from comment resolution meetings or over-the-shoulder reviews shall be prepared by the DBT and also saved to Department’s file transfer website (typically, an ODOT Project SharePoint, ProjectWise site, or other appropriate file transfer and storage site).

20.5 Optional Pre-Submission Meeting

The DBT may request a Pre-submission Meeting to be held prior to, or concurrent with, the submission of a buildable unit. The intention of the Pre-submission meeting is an opportunity for the DBT to explain design intent to facilitate owner review. Formal assembly and submittal of drawings or other documents will not be required, but the DBT is encouraged to provide informal submittals to facilitate reviews.

20.6 Optional Over-the-Shoulder Reviews

The DBT or the Department may request “Over-The-Shoulder” (OTS) review of designs at any time in the design process. The OTS is an informal review of a partial design during development. This may include in-progress drawings, calculations, sketches, design concepts, proposed specifications, or any other document used or created during the design. They are to facilitate communication and the design process. These can be in the form of a phone call, meeting, correspondence, or any other means of information sharing between the DBT and the Department.

An Over-the-Shoulder review may be necessary to discuss direction on potential design changes. An OTS may be requested during any period in the design development. Appropriate third-party agencies, as well as the DBT and Department, may also participate in these meetings. The DBT or the Department may include the decision or direction given in an OTS within the applicable CRS submission.

The OTS reviews shall not replace the formal Interim and Final Review. Likewise, the Department may also request an OTS review during any stage of design to facilitate review or design development.

20.7 Major Design Decision

Separate submittals for concurrence with major design decisions are required. The submittals may be required during any phase of Design. Major design decisions involve significant utility relocation, unforeseen acquisition of ROW by the Department, traffic operation or geometric decisions that involve two or more viable solutions, designs not typical nor standards not ordinarily exercised by members of the engineering profession practicing under similar conditions at the same time and locality, and any other decision that impacts the public, operation of the facility or designs which require future long term excessive maintenance. The level of development of the submittal is dependent upon the level of detail necessary to accurately depict the major design decision.

When the DBT becomes aware of additional decisions during the design, they must advise the District Project Manager in writing.

20.8 Interim Design Review Submission

For each Buildable Unit, the DBT shall submit the Interim Design submission for review by the Department and other third-party agencies as appropriate.

Interim Design Submission is defined as followed:

A. Maintenance of traffic, traffic signals, lighting, utilities (water, power, sanitary, etc.), and landscaping shall be developed to Stage 2 level of detail as defined the ODOT Location & Design, Volume 3.
B. Full signing plans are not required at Interim, however, all overhead signage and major ground mounted signage shall be shown on plan sheets (may be shown on pavement marking plans if signing plans are not submitted).
C. All other plan components and supplemental submittal requirements as defined as Stage 1 per the ODOT Location & Design, Volume 3.

Each Plan Sheet will be clearly marked "INTERIM DESIGN SUBMISSION – NOT FOR CONSTRUCTION"

The Department will have 10 Work Days from receipt to review complete submissions. The following are excluded as Work Days: State Holidays, Federal Holidays, Saturdays, Sundays, the Friday after Thanksgiving, Christmas Eve, and the days between Christmas and New Year's Day. This review time must be shown on the required Progress Schedule.

Following this review, the DBT shall correct any errors, incorporate modifications, perform required investigations and make related changes to the plans and supporting documents prior to submitting the plans for Final Design review.

Plan Review Distribution Table**:** The DBT shall supply an electronic version (in PDF format) along with half size (11" x 17") paper prints simultaneously to the parties indicated below, except that **each affected utility company shall receive one full size (22"x34") plans.**

	Number of half size Sets
ODOT District Engineering	Electronic Only
ODOT District Construction	Electronic Only
Each affected utility or railroad company	2

20.9 FINAL DESIGN Review Submission

For each Buildable Unit the DBT shall submit the Final Design submission for review by the Department and other third-party agencies as appropriate.

The Final Design submission shall include submittal requirements as defined as Stage 3 per the ODOT Location & Design, Volume 3, however, subsummary and general summary sheets are

not required. Quantity summaries shall be provided in electronic format (Excel and PDF) prior to construction for the Department's use in establishing testing requirements.

Each Plan Sheet will be clearly marked "FINAL DESIGN SUBMISSION – NOT FOR CONSTRUCTION"

The Department shall have 10 Work Days from receipt to review complete submissions. The following are excluded as Work Days: State Holidays, Federal Holidays, Saturdays, Sundays, the Friday after Thanksgiving, Christmas Eve, and the days between Christmas and New Year's Day. This review time must be shown on the required Progress Schedule.

Following the review, the Department will return to the DBT marked plans noted 'ACCEPTED', 'ACCEPTED AS NOTED' or 'NOT ACCEPTED' as described in section 105.02 of the Construction and Material Specifications. The DBT shall correct errors, incorporate changes, perform investigations and make related changes to the plans and supporting documents prior to submitting construction plans.

Plan Review Distribution Table: The DBT shall supply an electronic version (in PDF format) along with half size (11" x 17") paper prints simultaneously to the parties indicated below except that each affected utility company shall receive one full size (22"x34") plans:

	Number of half size Sets
ODOT District Engineering	Electronic Only
ODOT District Construction	Electronic Only
Each affected utility or railroad company	2

20.10 Released for Construction Plans

After the review comments for the Final Design review submission have been complied with, and following approval of the design documentation, the DBT shall prepare plan sets for use during construction. All review comments shall be resolved in writing by the DBT to the satisfaction of the Department and appropriate third-party agencies before the DBT submits the construction plans. No revisions shall be made except for those revisions needed to address Final Design review comments.

Each plan sheet shall have its last revised date noted on the sheet and clearly marked 'Released for Construction'. The 'Released for Construction' plan set shall be signed, dated and sealed by a Professional Engineer. Physical construction shall not begin until the plans marked 'Released for Construction' are delivered to each party on the Plan Distribution Table below.

No time extensions will be approved by the District Construction Engineer if the plan distribution is not completed and project delays occur as a result.

Plans Distribution Table: The DBT shall supply an electronic version (in PDF format) along with full size (22" x 34") and/or half size (11" x 17") paper prints of the each plan submission simultaneously to the parties indicated below:

	# of Full Sets	# of Half Sets
ODOT District Engineering	0	0
ODOT District Construction	4	4
Each affected utility or railroad company	1	1

20.11 Railroad Submittals

Not Applicable

20.12 Plan Distribution Addresses

Ohio Department of Transportation, District 4 (Engineering)
2088 South Arlington Road
Akron, Ohio 44306
Attn: Thomas J Powell, PE

Ohio Department of Transportation, District 4 (Construction)
2088 South Arlington Road
Akron, Ohio 44306
Attn: Joseph Alfano, PE

Utility Companies
(As shown in Utilities Section)

20.13 As-Built Construction Record-Drawing Plans

At the completion of the construction work for each respective Buildable Unit, the DBT shall provide a "Red-Line" set of drawings that clearly identify all changes made to the Construction Documents. They may be noted by hand markup of the revisions, utilizing the Clouding command in MicroStation (or other CAD software) or the Clouding command in PDF editing software. The red-lined drawings shall have a Contractor signed verification on the title sheet indicating all field changes are being incorporated into the red-lined drawings.

Prior to Final Acceptance of the Work, the DBT shall furnish the Department formal As-Built Construction Record-Drawing plans. The DBT shall provide a general summary within the final As-Built Construction Record-Drawing plans. The formal As-Built Construction Record-Drawing shall include all red-lined changes. Red-line change shall be denoted utilizing the Clouding

command in MicroStation (or other CAD software) or the Clouding command in PDF editing software. The As-Built Construction Record-Drawing shall have a signed verification on the title sheet from the Designer and the Contractor indicating that all red-lined and field changes have been incorporated into the As-Built Construction Record-Drawing.

> Note: The Contractor's verification statement indicates all known field modifications made after the RFC plans where sealed by the Designer have been included in the formal Record-Drawing. The Contractor's verification statement shall be signed by the Contractor's Project Manager (or acceptable representative).
>
> Note: The Designer's verification indicates the Designer's acknowledgement of the red-line and field changes, the presented field changes have been included within the As-Built Construction Record-Drawing and is the Designer's concurrence that these changes meet the design intent of the Contract. The Designer's verification statement shall be signed by the Lead Designer's representative.

The DBT may choose to omit the "Red-Line" submission and submit only formal As-Built Construction Record-Drawing.

As-Built Construction Record-Drawing plans shall be submitted using the following method:

PDF Images created according to the documentation on the Office of Contracts website

http://www.dot.state.oh.us/DIVISIONS/CONTRACTADMIN/CONTRACTS/Pages/TIFF.aspx

In addition to the information shown on the construction plans, the Record-Drawing plans shall show the following:

1. All deviations from the original approved construction plans which result in a change of location, material, type or size of work.
2. Any utilities, pipes, wellheads, abandoned pavements, foundations or other major obstructions discovered and remaining in place which are not shown, or do not conform to locations or depths shown in the plans. Underground features shall be shown and labeled on the Record-Drawing plan in terms of station, offset and elevation.
3. The final option and specification number selected for those items which allow several material options under the specification (e.g., conduit).
4. Additional plan sheets may be needed if necessary to show work not included in the construction plans.

Notation shall also be made of locations and the extent of use of materials, other than soil, for embankment construction (rock, broken concrete without reinforcing steel, etc.).

The Plan index shall show the plan sheets which have changes appearing on them.

Two copies of the As-Built Construction Record-Drawing plans shall be delivered to the Project Engineer for approval upon completion of the physical work but prior to the request for final payment. After the Department has approved the As-Built Construction Record-

Drawings, the associated electronic files shall be delivered to the District Capital Programs Administrator. Acceptance of these plans and delivery of the associated electronic files is required prior to the work being accepted and the final estimate approved.

The plans shall be prepared in conformance with the Location and Design Manual, Volume 3, Section 1200 - Plan Preparation.

21 BUILDABLE UNITS (BU)

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

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

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

The Final Review Submission and Construction Plans shall specifically be identified by the Buildable Unit code. If the design of a BU requires input information from an adjacent or related BU, the source for that information in previously approved plans shall be cited or the DBT shall provide an estimated value of the data. The input data shall also be carefully

identified. In the same way any assumption, calculations or results from the stage and BU which are used as input to another BU shall be similarly identified, and where appropriate, compared back to that BU to verify previous assumptions. Should assumptions not match values calculated later, the DBT shall re-analyze all affected components and determine appropriate changes. Should those elements have already been constructed, the DBT shall recommend repairs, adjustments, modifications or replacement of the existing work as necessary to comply with the Scope of Work. All costs for re-design, re-submissions, modifications, removals, disposal of materials and new work needed to remedy the project and bring it to compliance shall be borne by the Contractor and no time extensions shall be approved for this.