

ODOT
DESIGN BUILD
SCOPE OF SERVICES

PID: 122404 State Project Number: _____

County: FRA Route: 71 Section: 3.07

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1 PROJECT IDENTIFICATION

PID: 122404 State Project Number: _____
County: FRA Route: 71 Section: 3.17
Local Route Name: IR 71
Highway Functional Classification & Federal Aid System: Interstate

Design Designation:

Location: FRA 71
Current ADT (2025): 74,500
Design Year ADT (2037): 84,000
Design Hourly Volume: 10,000
Directional Distribution: 51.3%
Trucks: 16%
Design Speed: 70
Legal Speed: 65
Design Functional Classification: Urban Interstate Freeway
NHS Project: Yes X No _____

1.1 EXISTING PLANS:

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

- D06-VAR-HAR - PID 91409 - 2012 Install of Highway Advisory Radios
- FRA-RAMP METER UPGRADE - PID 92381 - 2014 plan
- FRA-71-5.29 - PID 84868 - 2015 widening of FRA-71
- FRA-62-1.64 - PID 94907 - 2016 drainage project on US 62

Addenda A

- FRA-71-9.62 - PID 104799 - 2017 widening of FRA-71
- FRA-71-1.53 - PID 93496 - 2019 widening of FRA-71
- FRA-DMS-Replacement-FY19 - PID 108892
- FRA-71-9.07 - PID 92615 - 2020 widening of FRA-71
- FRA-71-0.00 - PID 107201 - 2020 widening of FRA-71

The plans identified in the Document Inventory are not as-built plans, unless labeled as such. 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.

<https://ftp.dot.state.oh.us/pub/Contracts/Attach/FRA-122404/Appendices/>

Table 1-1: Document Inventory

Appendix #	Appendix Title	Contractual/Reference Designation
A	Existing Plans	Reference
B	Geotechnical Data	Reference
C	Utility Plans	Reference
D	Utility Conflict Example	Reference
E	Existing Survey Data	Reference
F	FRA-71 Fiber Prop Pathway & Locations	Contractual
G	MOT Plan Notes and Tables	Contractual
H	Environmental Data	Reference
I	Frac-Out contingency plan example	Reference

1.2 WORK ZONE SPEED LIMIT

The Contractor shall evaluate if a work zone speed reduction is warranted based on the final MOT scheme. The evaluation requirements are listed in the Traffic and Engineering Manual.

1.3 RAILROAD COORDINATION

NOT APPLICABLE

1.4 AIRWAY/HIGHWAY CLEARANCE

The DBT shall prepare and submit the Airway/Highway Clearance Analysis in accordance with Location and Design Manual Volume 3, Section 1407.1. In addition to the requirements set forth in Location and Design Manual Volume 3, Section 1407.1 for public use facilities, the DBT shall also perform analysis on the MedFlight helipad (private use) located just northeast of the I-71/SR-665 interchange at 5300 N. Meadows Dr., Grove City, OH.

The DBT shall convey all relevant documentation to ODOT and coordinate with the ODOT Project Manager to obtain all necessary approvals. The DBT shall account for the

required time to obtain approvals in their schedule and will not be able to start work until the approvals and documentation are received by the ODOT Project Manager.

2 PRE-BID MEETING

There will not be a PRE-BID meeting for this project.

3 PRE-QUALIFICATION

It is required that the Bidder be a Contractor prequalified in accordance with Section 102.01 of Proposal Note 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 5 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 CONTRACTOR'S CONSULTANT

The Contractor must name the Consultant and all Sub-Consultant(s) in the electronic form on the following web-page prior to Bid submittal:

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

The Contractor must list relevant prequalification categories for prime and 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 the following listing:

<http://www.dot.state.oh.us/Divisions/Engineering/Consultant/Consultant/Prequalification%20publish.xlsm>

The following work types must be performed by members of the Consultant team (combination of Consultant and Sub-consultant(s)):

- Basic Traffic Signal Design
- Traffic Signal System Design
- ITS Design and Operations
- Non-complex roadway design
- Subsurface utility location services
- Geotechnical Engineering Services
- Geotechnical Testing Laboratory
- Geotechnical Field Exploration Services
- Geotechnical Drilling Inspection Services
- Ecological Survey
- Waterway Permitting

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.

Failing to name the Consultant and Sub-Consultant(s) in the electronic form who are pre-qualified in the required Project work types may render the Bid nonresponsive and ineligible for award per CM&S 102.14 A and CM&S 102.14 R.

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.

The following Consultants have been identified as being precluded from participation:

NOT APPLICABLE

5 SCOPE OF WORK

Project Limits:	FRA 71	From:	SLM 3.08 - US-62 (Harrisburg Rd)	To:	SLM 9.53 - CR-135 (Stringtown Rd)
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Project Length: 6.45 Miles

Work Length 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.

Project Description: The design and construction of fully functional underground micro-duct conduit pathway (4 cell 14mm/10mm OD/ID) and necessary pull boxes along I-71 for the future installation of fiber optic lines used for traffic surveillance. The design and construction of ITS Cameras as required.

The installation of fiber optic lines shall be performed by others.

Project work shall occur within the project study area utilized for NEPA clearance. If project limits deviate from the approved NEPA study area, ODOT will need to be notified and NEPA will need to be re-evaluated.

Completion date: 07/15/2026

Warranties: NOT APPLICABLE

6 FIELD OFFICE

No field office required for this project.

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.

The fact that the bid items for this Design-Build project are general rather than specific shall not relieve the DBT of the requirement that all work be performed as required by the Contract and shall be in reasonable conformity with the specifications. The Contractor's Consultant shall reference in the plans the appropriate Construction and Material Specifications Item Number for all work to be performed and all materials to be furnished.

The attention of the Bidder is directed to the provisions of section 100 of the Construction and Material Specifications as modified in the design-build proposal.

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 of 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:

Aesthetic Design Guidelines
Bridge Design Manual
CADD Engineering Standards Manual
CADD Standards for MicroStation and GEOPAK and other applications
Construction and Material Specifications
Environmental Services Handbooks and Guidelines
Geotechnical Design Manual
Geotechnical: Manual for Abandoned Underground Mine - Inventory and Risk Assessment
Geotechnical: Specifications for Geotechnical Explorations
Item Master
Location and Design Manual, Volume One - Roadway Design
Location and Design Manual, Volume Three - Plan Preparation
Location and Design Manual, Volume Two - Drainage Design
Multimodal Design Guide
ODOT Analysis and Traffic Simulation (OATS) Manual
Ohio Manual of Uniform Traffic Control Devices
Pavement Design Manual
Proposal Notes for Construction and Material Specifications
Quality Standards for TTCDs & Acceptable Delineation Methods for Vehicles
Real Estate Policies and Procedures Manual: Acquisition Manual
Real Estate Policies and Procedures Manual: Appraisal
Real Estate Policies and Procedures Manual: Certification of Right of Way Control
Real Estate Policies and Procedures Manual: Property Management

Real Estate Policies and Procedures Manual: Railroad Coordination
Real Estate Policies and Procedures Manual: Relocation
Real Estate Policies and Procedures Manual: ROW Plans
Real Estate Policies and Procedures Manual: Utilities
Sign Designs & Markings Manual (SDMM)
Standard Drawings: Bridges | Plan Insert Sheets
Standard Drawings: Construction - Hydraulics | Plan Insert Sheets
Standard Drawings: Construction - Pavement | Plan Insert Sheets
Standard Drawings: Construction - Roadway and Roadside | Plan Insert Sheets
Standard Drawings: Traffic | Plan Insert Sheets
State Highway Access Management Manual
Supplemental Specifications for Construction and Material Specifications
Survey & Mapping Specifications
Traffic Engineering Manual
Waterway Permits Manual

7.2 CADD FILES SUPPLIED BY CONSULTANT

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 standards and necessary downloads can be accessed at the following URL addresses:

<https://www.transportation.ohio.gov/working/engineering/cadd-mapping/cadd/>

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 of after bid opening, the apparent successful DBT will attend a mandatory pre-award conference. This confidential meeting will be held with the Office of Estimating 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 Bid Item by the DBT, and general design approach and design concepts for the Work. Other ODOT representatives familiar with the Project may attend.

While not required, the DBT may prepare general engineering information to be presented to the Office of Estimating to help explain design concepts and quantities. This information will be used only by the Office of Estimating 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, 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 GENERAL:

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

District's Project Manager's Name:	Laura Wright
Phone number:	740-833-8228
Fax:	NOT APPLICABLE
E-mail:	Laura.Wright@dot.ohio.gov

The District Project Engineer shall be named at the pre-design meeting.

At the pre-design meeting, the Contractor shall name a Project Manager who will act as a liaison between the DBT and the Department.

7.6 TASK FORCE DESIGN MEETINGS REQUIRED: ☐ YES ☒ NO

7.7 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.

7.8 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 HAZARDOUS MATERIALS

The DBT shall ensure no excavation deeper than 6 feet will occur in areas other than the proposed locations of the camera poles. If excavation deeper than 6 feet is needed in other areas, further review and approval will be required. No construction activities will occur within 300 feet of landfill (SWACO).

9 ENVIRONMENTAL

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

The Department is currently completing the NEPA process and is anticipating the NEPA process to be completed by 5/16/25.

Until the completion of the NEPA process, no commitment will be made as to any alternative under evaluation in the NEPA process, including the no-build alternative. No commitments will be made to any alternative being evaluated in the NEPA process and the comparative merits of all alternatives presented in the NEPA document, including the no-build alternative, will be evaluated and fairly considered Prior to the completion of the NEPA Process.

The DBT may initiate and submit for review the preliminary design pursuant to a design-build contract.

The DBT may not initiate Final Design until the Department provides a “Notice to Proceed with Final Design”.

9.1 NEPA & ENVIRONMENTAL COMMITMENTS

The DBT shall:

1. Monitor and document Work to demonstrate compliance with final environmental commitments (if there are environmental commitments for the project).
2. Provide documentation of final environmental commitment compliance at request of the Department (if there are environmental commitments for the project).
3. Follow Department and local regulations regarding dust control, adhering to dust control measures outlined in C&MS 616.
4. Adhere to local City ordinances for vehicle idling and all current U.S. Environmental Protection Agency (EPA) air quality regulations.
5. Review ecological resource mapping that has been provided from past projects and current aerial and street view mapping to determine if the project will impact ecological resources. If these ecological resources will be impacted, the DBT shall utilize an ODOT pre-qualified consultant to prepare a Level 1 Ecological Survey Report, which will be submitted to ODOT through its EnviroNet system for coordination with the ODOT Office of Environmental Services and regulatory agencies.
6. Coordinate with the Department and submit any documents regarding updates required for environmental approvals to the Department for coordination with the regulatory agencies.
7. Obtain any necessary waterway permits for construction. All waterway permits will be obtained prior to construction. The waterway permit determination process shall be initiated by an ODOT pre-qualified consultant utilizing the ODOT EnviroNet system.
8. Comply with any waterway permit special provisions, if required, during construction.

If the DBT becomes aware of any failure to perform or meet conditions of an environmental commitment and/or the approved NEPA document, the DBT shall notify the Department immediately.

Upon the Department completing the NEPA Process, immediately notify the Engineer per 108.02 F if the DBT believes that any required final environmental commitment differs substantially from the draft NEPA and Environmental Commitments in Appendix H or is reasonably unforeseeable when considering requirements necessarily exercised by members

of the engineering profession practicing under similar conditions at the same time and locality.

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

The DBT shall be responsible to obtain all necessary environmental permits and pay all charges, fees and taxes associated with these permits.

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.

9.2 RESERVED

9.3 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. The Department will submit the NOI to the OEPA within 10 days after information is received from the DBT. Approval from the OEPA takes 21 days and the ODOT Project Manager has 10 days to file the NOI.

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 the 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.

9.4 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 and response plan that will address the proper storage and management of all fuels, oils, and chemicals being stored and/or used on the project and the actions to be taken if a release occurs on the project including notifying reportable releases and spills to the National Response Center and Ohio EPA Spill Hotline. The DBT is to address the project's known areas of regulated materials in their health and safety plan. The DBT is to take reasonable actions to prevent the general public from accessing the regulated materials areas to prevent an exposure and/or a release of the regulated materials.

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

9.5 STREAM CROSSING INVESTIGATIONS (FLOOD PLAIN ANALYSIS)

ODOT has determined that this project will have no impact upon the Base Flood Elevation and flood plain analysis exemption is applicable. With the exemption, no hydraulic analysis is required.

The DBT to provide a Letter of Notification of Special Flood Hazard Area (SFHA) Exemption [LD-53](#) to the Local Floodplain coordinator and copy to the project file.

If proposed work shall change the alignment, grade or hydraulic capacity of any existing crossing within FEMA flood zones, then the exemption is no longer applicable and the Consultant shall perform a detailed flood plain analysis for each waterway crossing. The analysis shall be as per the Location & Design Manual and The Bridge Design Manual and as follows: The extent of the analysis shall be from a minimum of 500' downstream, to the greater of either one bridge opening/width upstream, or to the limits of the area inundated by the 100-year event.

The results of the detailed flood plain study, supporting hydraulic calculations, and recommendations shall be submitted to the District for review and comment prior to construction of the drainage structure. If the proposed crossing is in a special flood hazard

area as defined by FEMA, the detailed flood plain analysis shall be submitted concurrently to the local flood plain coordinator.

9.6 TREE CUTTING

The DBT should avoid tree removal related to this project. For the purposes of this scope, 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. If tree removal is unavoidable, the DBT will be responsible for obtaining a pre-qualified ecological consultant to field delineate the area to be removed. The pre-qualified consultant will contact ODOT District 6 Environmental and the ODOT Central Office, Office of Environmental Services who will coordinate with the regulating agency(s).

9.7 ENVIRONMENTAL COMMITMENTS

The DBT shall adhere to environmental commitments as described in the approved NEPA document (forthcoming) and as described below.

1. If the Design Build Contractor determines that excavation deeper than 6 feet will be required for areas other than camera pole installation, contact the Project Manager and the District 6 Environmental Coordinator prior to these actions for evaluation of the areas that require deep excavation.
2. Avoid ecological resources including wetlands, streams, jurisdictional ditches, etc., during project construction. If impacts to any ecological resource is unavoidable, the DBT will secure an ODOT pre-qualified consultant to delineate the ecological resources, report and secure waterway permits and/or authorization as needed. Notify the Project Manager and the District 6 Environmental Coordinator prior to securing the consultant.
3. If the Design Build Contractor determines that new ROW must be acquired for the project, they must contact the Project Manager and the District 6 Environmental Coordinator prior to acquisition.
4. If the Design Build Contractor determines that the project will impact areas not previously studied in the NEPA document, then the contractor will notify the Project Manager and District 6 Environmental Coordinator to obtain the proper review and approvals of additional project area(s).
5. If any trees that meet the definition of suitable wooded habitat are required to be cleared as a result of the project, then tree clearing must occur within the allowable seasonal dates of Oct 1 - March 31.

10 RIGHT OF WAY (ROW)

All necessary construction work for the project will be performed within the existing right of way.

Existing right of way lines will be located by the DBT 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). It is the responsibility of the DBT to 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.

If construction is anticipated within 10ft of the Limited Access (LA) RW line, the DBT will stake and flag the existing right of way in the field (where work is anticipated within 10ft of the RW line) prior to the start of construction and will maintain said stakes and flags throughout the duration of the project.

The DBT shall replace any existing L/A fence that is disturbed by the project.

11 UTILITIES

It is the intent of this contract that ALL existing utilities be avoided by the proposed underground conduit facilities and proposed CCTV foundations. The DBT shall be responsible for coordinating with utilities throughout the Design and Construction phase of this contract. In-field adjustments of proposed underground conduit locations may be required. Field adjustments due to unexpected utility locations shall not be considered a revision to the contracts. Field adjustments must be included in the As-Built drawings.

The DBT shall contact the Underground Utility Protection Services - Ohio Underground Protection Service (OUPS) at 1-800-362-2764 and Oil and Gas Producers Underground Protection Service (OGPUPS) at 1-800-925-0988 and any other utility owners.

The DBT shall verify the actual location of all underground utilities, including type, number and depth. The DBT is responsible for verifying the actual location of all overhead utilities including type, number, and elevation of lines and all above ground utility facilities.

Additionally, ODOT ITS utilities will be marked through OUPS tickets. If utilities appear to be unmarked for any reason, the DBT shall contact ODOT Central Office ITS Lab by email (cen.its.lab@dot.state.oh.us), or phone (614-387-4113) to get the utilities marked.

The DBT may make use of Subsurface Utilities Engineering services to facilitate avoidance of all existing utilities as part of this project.

All costs associated with utility coordination shall be paid under
107E99000 SPECIAL - UTILITY COORDINATION

12 MAINTENANCE OF TRAFFIC (MOT)

Maintenance of Traffic (MOT) Special Provisions in addition to the Governing Regulations listed in section 8.1 (GOVERNING REGULATIONS) of this document:

12.1 GENERAL

All temporary MOT devices shall comply with the National Cooperative Highway Research Program (NCHRP) 350 or the AASHTO Manual for Assessing Safety Hardware (MASH), as applicable.

12.2 MOT RESTRICTIONS

All existing lanes of traffic in each direction shall be maintained at all times, except as permitted by the Permitted Lane Closure Times note, by use of the existing pavement.

The following criteria shall be used in development of maintenance of traffic plans for all roadways within the project limits:

Minimum lane width:	11 feet
Minimum barrier/curb offset:	2 foot
Minimum edge of pavement offset:	2 feet

No work shall be performed and all existing lanes shall be open to traffic during the following designated holidays or events:

Christmas	Fourth of July
New Year's	Labor Day
Memorial Day	Thanksgiving

The period of time that the lanes are to be open depends on the day of the week on which the holiday or event falls. The following schedule shall be used to determine this period:

<u>Day of holiday or event</u>	<u>Time all lanes must be open to traffic</u>
Sunday	12:00N Friday through 6:00 AM Monday
Monday	12:00N Friday through 6:00 AM Tuesday
Tuesday	12:00N Monday through 6:00 AM Wednesday
Wednesday	12:00N Tuesday through 6:00 AM Thursday
Thursday	12:00N Wednesday through 6:00 AM Friday
Thursday (Thanksgiving only)	6:00 AM Wednesday through 6:00 AM Monday
Friday	12:00N Thursday through 6:00 AM Monday
Saturday	12:00N Friday through 6:00 AM Monday

If the DBT fails to meet any of these requirements, the DBT shall be assessed a disincentive as specified in the Unauthorized Lane Use Table, Appendix G, for each minute the above described lane closure restrictions are violated.

All work and traffic control devices shall be in accordance with C&MS 614 and other applicable portions of the specifications, as well as the Ohio Manual of Uniform Traffic Control Devices.

12.3 MAINTENANCE OF TRAFFIC PLAN NOTES

The DBT shall incorporate the MOT notes from Appendix G into the plans.

12.4 TRAFFIC ENGINEERING MANUAL NOTES

642-15, 642-29

The DBT shall determine and include all other TEM notes required to meet the intent of the Scope and applicable notes per the DBT's Maintenance of Traffic plan.

12.5 PERMITTED LANE CLOSURE TIMES

Short term lane closures are those which are permitted by the Permitted Lane Closure Note. These times shall not be revised without prior approval from the District 6 Work Zone Traffic Engineer. Short term lane closures shall only be implemented when work is being continuously performed in the lane. The closure shall be removed as soon as possible after work has stopped. Permitted lane closures shall only be allowed during the times specified in the Unauthorized Lane Use Table, see Appendix G.

12.6 ADDITIONAL DESCRIPTION OF REQUIRED WORK AND SPECIAL PROVISIONS

Long term maintenance of traffic schemes using contra flow are not permitted. Long term maintenance of traffic schemes using lane shifts are not anticipated. The following provisions are required, if the DBT's elects to use a lane shift maintenance of traffic scheme.

12.7 ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC

The DBT shall verify the existing pavement composition of any shoulder or gore area used to maintain traffic. Any existing pavement composition that does not meet or exceed the requirements of Item 615 Pavement for Maintaining Traffic Class A, shall be replaced with Item 615 Pavement for Maintaining Traffic Class A. Any existing pavement composition that meets or exceeds the requirements of Item 615 Pavement for Maintaining Traffic Class A, shall be milled the full width of the shoulder or gore at 1½" depth and paved with 1½" Item 441 Asphalt Concrete Surface Course, Type 1, in order to remove existing pavement markings including edge lines and existing rumble strips.

12.8 TRANSITION AREA RESURFACING

The DBT shall resurface all transition areas. In preparation for resurfacing, the existing pavement shall be removed to a depth necessary to reach the level of the intermediate course of the existing pavement. The resurfacing of all transition areas shall also include the tangent area within the shifted limits. The resurfacing shall include the entire width of the roadway, including shoulders no matter where the pavement impacts are located.

12.9 PAYMENT

All labor, materials, equipment, and incidentals to complete all items described in this Section shall be paid as follows:

ITEM 614E99000 SPECIAL - MAINTAINING TRAFFIC, LUMP SUM

13 LOCATION & DESIGN

Location & Design Special Provisions in addition to the Governing Regulations listed in section 8.1(GOVERNING REGULATIONS) of this document:

13.1 SURVEY

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

Addenda A

1. Centerline control (State Plane Coordinate System and OCCS Franklin County Coordinate System)
2. Beginning and ending centerline points for the project
3. Historic Aerial Control Points (State Plane Coordinate System and OCCS Franklin County Coordinate System)
4. Critical points such as P.C., P.I., P.T., T.S., C.S.

Survey Responsibilities: All survey data shall be submitted using ODOT's standard field codes and GEOPAK'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, x coordinate, y coordinate, elevation and point ID. Customized GEOPAK information is available on the ODOT CADD web site.

Monumentation shall not be disturbed. If the Contractor does disturb the monumentation, then it shall be replaced, in-kind, by a Registered Surveyor, with a current registration, recognized by the Ohio State Board of Registration for Professional Engineers and Surveyors. Costs associated for this item shall be borne by the Contractor. Copies of all monumentation changes shall be forwarded to the District 6 Real Estate Administrator.

All control points, provided by ODOT, shall be included in the ASCII file supplied by the DBT to ODOT. They should retain the original point numbers and coordinate values as assigned by ODOT.

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. If RW is needed, then provide 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).
4. Listing of all monumentation set as part of the project (Horizontal) including reference ties for recovery.
5. All monumentation shall be located utilizing OCCS (Franklin County - Horizontal Datam), NAVD 88 (Vertical Datam).
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.

13.2 VERTICAL AND HORIZONTAL ALIGNMENT

The existing vertical and horizontal alignment of all roadways shall be maintained.

13.3 PAVEMENT

Pavement Work Required:

Any pavement damaged by the project shall be replaced matching the composition of the existing pavement.

All pavement repairs shall have a pavement makeup accepted by the Project Engineer. The minimum width of repair is 4'. The minimum length of repair is 10'.

Any pavement work shall be incidental to the project.

13.4 ROADWAY

Roadway Work Required:

The goal of the project is to install an underground micro-duct conduit pathway and camera poles outside the clearzone of I-71 to the maximum extent possible. The pathway location minimums are defined in Section 15.9.1.

13.5 DRAINAGE

Drainage Work Required:

Any existing drainage infrastructure damaged by this project shall be repaired or replaced to a condition equal or exceeding condition prior to the start of the project.

All proposed work to existing drainage infrastructure shall be accepted by the Project Engineer.

The DBT shall incorporate the following Drainage notes into the plans.

13.5.1.1 Location and Design, Volume 2 manual notes

D107, D114, D123 and E101.

The DBT shall determine and include all other Drainage notes required to meet the intent of the Scope.

Any required drainage work is considered incidental to the project.

13.6 DESIGN EXCEPTIONS

Previously approved Design Exceptions:

NOT APPLICABLE

The Consultant shall advise of any future design features that does not meet the minimum design criteria. The Consultant shall prepare all future design exceptions and submit to ODOT for approval.

13.7 LANDSCAPING

Landscaping Required: ☐ Yes ☒ No

Note: While no new landscaping is required, the DBT shall be required to permanently grade and seed all impacted areas. Any existing landscaping damaged by the project shall be repaired/replaced with landscaping material equal to or exceeding the pre-existing landscaping.

13.8 FENCING

All fencing is to be maintained during the placement of the proposed conduit. Removed fence must be replaced within 24 hours or temporary fence installed.

Any fencing work shall be incidental to the project.

13.9 ADDITIONAL DESCRIPTION OF REQUIRED WORK AND SPECIAL PROVISIONS NOT APPLICABLE

14 DESIGN AND CONSTRUCTION REQUIREMENTS: STRUCTURES

14.1 HYDRAULIC DATA PROVIDED BY ODOT NOT APPLICABLE

14.2 EXISTING STRUCTURES IDENTIFICATION: NOT APPLICABLE

14.3 DESIGN AND CONSTRUCTION REQUIREMENTS OF STRUCTURE NOT APPLICABLE

14.4 STRUCTURES GENERAL: NOT APPLICABLE

14.5 NOISE BARRIER NOT APPLICABLE

15 DESIGN AND CONSTRUCTION REQUIREMENTS: TRAFFIC CONTROL

15.1 PAVEMENT MARKINGS AND DELINEATORS SPECIAL PROVISIONS

In addition to the Governing Regulations listed in section 8.1 (GOVERNING REGULATIONS) of this document:

A. Pavement Marking Requirements and Locations: ☐ Yes ☒ No.

B. Raised Pavement Markers: ☐ Yes ☒ No.

C. Delineators: ☐ Yes ☒ No.

D. Barrier Reflectors: ☐ Yes ☒ No.

E. Object Markers: ☐ Yes ☒ No.

15.2 SIGNING SPECIAL PROVISIONS

In addition to the Governing Regulations listed in section 8.1(GOVERNING REGULATIONS) of this document:

NOT APPLICABLE

15.3 FLAT SHEET SIGNS

Flat Sheet Sign work required: ☐ Yes ☒ No.

15.4 EXTRUSHEET SIGNS

Extrusheet Sign Work Required: ☐ Yes ☒ No.

15.5 GROUND MOUNTED POST SUPPORTS

Replace: ☐ Yes ☒ No.

15.6 GROUND MOUNTED BEAM SUPPORTS

Ground Mounted Beam required: ☐ Yes ☒ No.

Overhead Supports: ☐ Yes ☒ No.

15.7 LIGHTING SPECIAL PROVISIONS

NOT APPLICABLE

Any permanent lighting work shall be incidental to the project.

15.8 SIGNAL SUPPORTS AND SIGNAL HEADS

NOT APPLICABLE

15.9 INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

ITS Work Required: ☒ Yes ☐ No

ITS Requirements:

Design and construct a fully functional underground micro-duct conduit pathway, along I-71 in Franklin County between CR-135 to US-62 on the south side of Columbus.

All ITS materials and work shall be provided and installed per ODOT Standards, including but not limited to Supplemental Specifications 804, 809, 904, 909, the Traffic Authorized Products (TAP) List, and all applicable ITS Standard Construction drawings (SCD).

The Department has not performed any additional project specific geotechnical investigations. For reference, the department has provided existing geotechnical information for reconstruction projects within the region. Additional test borings may be drilled during the design process if the team would like to confirm the presence of bedrock, rocky conditions or any other subsurface conditions. Additional compensation will not be considered for differing site conditions.

See the provided Google Earth KMZ file for the proposed work, including but not limited to the conduit pathway, pull box locations, device locations, etc. The Google

Earth KMZ file shall be considered a draft plan containing general requirements of work to be performed as a supplement to this Scope document.

The project shall include the removal of an existing wireless radio repeater site on a wood pole with ITS cabinet, located on I-71 SB between SR-665 and Hoover Rd.

The project shall also include the removal of an existing Traffic.com pole with solar panels and old radar device, located behind the sound wall on I-71 NB between Hoover Rd and Stringtown Rd.

Planview information related to this project shall be at a scale of no larger than 1"=200'.

1. **Micro-Duct Conduit Pathways:** New conduit shall be installed in a location determined after the environmental studies are completed and approved by ODOT. It may be installed along the shoulder or the median or both depending on what is the most appropriate location.

The proposed conduit shall be connected into existing ODOT ITS device locations along the routes by connecting the conduit into existing pull boxes through knockouts per SCD ITS-14.10, as determined by the ITS Engineer. The DBT shall install the underground micro-duct pathway only; fiber optic cable installation shall be performed by others. A new 32" pull box shall be installed at any location where there is not an existing 32" pull box, such as existing traffic signal locations. At those traffic signal locations, the new 32" pull box shall be installed within 10 feet of the existing pull box next to the traffic signal cabinet, and a 2" conduit shall be installed between the pull boxes in order to provide a complete path into the existing cabinet.

For the conduit pathway along I-71, the route shall start at the proposed camera pole location on I-71 just north of US-62 (~MM 3.13). The route shall end at the existing camera site within the I-71NB/CR-135 (Stringtown Rd) entrance ramp (~MM 9.602) in-field.

New duct shall be Micro-duct Pathway, 4 Cell Pathway, where each duct shall have an outside diameter of 14mm and an inside diameter of 10mm, with an integral tracer wire, and shall be listed on ODOT's Traffic Authorized Products list (TAP).

The 4 cell, 14mm/10mm (OD/ID) micro-duct pathway material and installation shall comply with ODOT Supplemental Specifications 809 and 909, and ITS Series of Standard Construction Drawings.

Prior to installation, The DBT shall be certified by the micro-duct manufacturer for installation of the micro-duct pathway.

During design, conduit placement shall avoid all utilities, wetlands, obstructions, structures, etc., but shall be designed to maximize conduit placement efficiency. In-field adjustments maybe necessary to avoid unanticipated conflicts. In-field adjustments must be monitored by the

Designer and approved by the Engineer so to meet the requirements of conduit placement. In-field adjustments must be document and recorded in the AS-BUILT CONSTRUCTION RECORD-DRAWING PLANS.

To the maximum extent possible, the duct shall be installed at a location along the outside shoulder that is a minimum of 6 feet from the outside edge of paved shoulder and/or a minimum of 6 feet from the existing right-of-way, and shall be routed to make as few roadway, waterway, and railroad crossings as possible. In general, the intent is for the conduit pathway to be as far off the roadway as possible while still considering maintenance access. The intent is also for the conduit pathway to be as straight as possible with minimal and gradual bends/turns to reduce the amount of friction within the conduit with air-blowing in fiber optic cabling. The DBT shall work with ODOT to install the duct pathway in this manner and so it's outside of being impacted, to the greatest extent possible, by any future roadway work or construction projects being planned or designed.

Due to the proximity of an active landfill, In the section of I-71 from Young Rd to SR-665, all work for the conduit pathway, camera poles, etc., shall be along the I-71 Northbound right side of the roadway. No work shall occur within the median or along the southbound side of I-71.

All proposed conduit that crosses an existing culvert with 12' or greater cover, measured from the top of the pipe to the pavement surface, can be installed above the existing culvert. The proposed conduit shall have a minimum of 3'-0" clear distance between the top of the existing culvert and the bottom of the conduit.

All proposed conduit that crosses an existing culvert with less than 12' of cover, measured from the top of the pipe to the pavement surface, MUST be installed underneath the existing culvert. The proposed conduit shall have a minimum of 2'-0" clear distance between bottom of existing culvert and top of conduit.

All proposed conduit that crosses an existing culvert that is less than or equal to 36" diameter may be installed over top of existing culvert as long as a minimum of 1'-0" distance between top of culvert and bottom of conduit can be maintained.

Regardless of depth, all proposed conduit that crosses an existing culvert that is less than or equal to 36" diameter may be installed over top of existing culvert as long as a minimum of 1'-0" distance between top of culvert and bottom of conduit can be maintained.

Parallel installation of conduit underneath existing roadway pavement WILL NOT be permitted.

Acceptable installation techniques include trenching, boring and plowing. Plowing must be a minimum depth of 30 inches. A Frac-Out contingency plan

will be required to cover all proposed horizontal directional drilling activities. A template Frac-Out contingency plan has been provided in Appendix I.

Any duct that is within 6' of existing guardrail shall be trenched and encased with concrete.

No duct shall cross underneath guardrail at any point within the project without prior approval from the engineer. Any locations where duct crosses under guardrail is required to be a minimum of 10 feet below existing grade.

The duct shall be not be coupled/connected together anywhere unless approved by the Engineer.

The duct shall be installed in a manner that does not impact the integrity of the system during freeze / thaw.

Tracer wire shall be furnished and installed as integral to the micro-duct pathway and according to ODOT Supplemental Specification 804 and 904, and Standard Construction Drawings ITS-14.11, ITS-14.20, and ITS-14.60.

The project may involve bridge structure crossings although it's not believed that any should be needed currently. The project will avoid attaching conduit to bridge structures. The preferred path shall generally include trenching down to a location where the conduit can be bored, jacked, or drilled underneath the local side street or obstruction. In these situations, all conduit shall be located outside of all bridge footprints which is defined as 15' horizontally from all bridges and associated approach slabs and conduit shall not be attached to existing bridge components unless approved by the Engineer.

In these bridge attachment situations, a 3" conduit shall be installed and shall be rigid galvanized per CMS 725.04 or fiberglass per Nema TC 14, and shall be attached to the inside of a beam or crossframes, or attached to the parapet wall, as approved by ODOT. The 4 Cell Micro-Duct Pathway shall be installed through the 3" conduit. ODOT shall provide the DBT with previous plan examples and design guidance.

The DBT shall determine the most effective and efficient method of installation generally complying with the locations demonstrated on the contract's *122404 - FRA-71 Fiber Proposed Pathway and Locations* KMZ file. Locations may need to be trenched, plowed, cross roadways, require boring, jacking, drilling, or other necessary installation requirements. The Department may, at its discretion, require reasonable location revisions to improve efficiency. Regardless of the construction method or location, all conduit placements shall be paid under Item 809E20020 MICRO-DUCT PATHWAY, 4 CELL 14/10. The Department shall provide an estimate quantity and adjust this quantity to match final and agreed lengths placed. The Department shall pay for actual length of Micro-Duct Conduit Pathways installed.

2. **Pull Boxes:** All pull boxes shall be round 32-inch diameter in size. 32-inch pull boxes shall comply with ODOT Standard Construction Drawing ITS-14.11.

During design, all pull box placements shall avoid all utilities, wetlands, obstructions, structures, etc., but shall be designed to maximize placement efficiency. In-field adjustments maybe necessary to avoid unanticipated conflicts. In-field adjustments must be monitored by the Designer and approved by the Engineer so to meet the requirements of pull box placement. In-field adjustments must be document and recorded in the AS-BUILT CONSTRUCTION RECORD-DRAWING PLANS.

Pull box placement criteria is provided below:

- Pull boxes shall be spaced at a maximum distance of 2,000 feet, with continuous conduit pathways up to a maximum distance of 4,000 feet by continuing the conduit through the middle of every other pull box via the use of conduit couplers per manufacturer recommendations.
 - Pull boxes shall be placed on both sides of the crossing of any waterway, railroad, or roadway.
 - Pull boxes shall be placed at any point where the conduit changes direction by an angle greater than or equal to 30 degrees or cannot be gradually swept at a bending radius within acceptable manufacturer recommendations.
 - Pull boxes shall be placed near a location where a future device may be located, such as interchange exits, near the point of intersection (PI) of tangents of horizontal curves, as determined by the ITS Engineer.
 - During design, the DBT shall determine the most efficient installation generally complying with the locations demonstrated on the contract's 122404 - FRA-71 Fiber Proposed Pathway and Locations KMZ file. Type of lid assemblies will change based on location factors such as slopes. Installation includes Comm Cable markers/tracer wire tie ins. Regardless of the construction method, location, or final lid type, all ITS pull boxes shall be paid under 809E02000 32" ITS PULL BOX WITH PAD AND STANDARD LID ASSEMBLY. The Department shall pay for actual quantity of ITS pull boxes installed.
3. **Communication Cable Markers:** Communication cable markers shall be furnished and installed per ODOT Supplemental Specification 804 and 904 as well as SCD ITS-14.11 and ITS-14.20, at all new and existing pull box locations which have the micro-duct conduit pathway with tracer wire connected into them. The type 2 communication cable markers shall have tracer wire connected to the terminal at the top of the type 2 marker by providing a connection, unfused bolted, per C&MS 725.15D. The Name of the Owning Agency to be placed on the Marker shall be provided to DBT after contract award.
4. **Cameras:**
Design and construct CCTV cameras, foundations, poles, testing, and all other necessary ancillary items and work to establish fully functioning traffic cameras at designated locations listed below.

Location	Proposed Work
----------	---------------

I-71 at US 62	Quad-view plus PTZ camera mounted on a 70' Camera pole.
I-71 near Young Rd	PTZ camera mounted on a 70' Camera pole
I-71 at SR-665	Quad-view plus PTZ camera mounted on a 70' Camera pole
I-71 near Hoover Rd	PTZ camera mounted on a 70' Camera pole

Conduit and cameras shall be installed based on the environmental study and must be approved by ODOT.

ITS Power Service shall be provided at each camera location unless otherwise specified.

The I-71 at US 62 location shall be placed at the location shown. The installation shall be in alignment with the existing bridge pier and within 15ft of the bridge of I71SB over US-62. The DBT shall design and install barrier protection as necessary.

For the existing camera site located near SR-665, it shall be removed and replaced with a new camera pole site. The conduit pathway shall connect into a new 32" pull box next to the new camera pole and new ITS Cabinet Ground Mounted. The existing power service and underground shall be reused and extended and/or upgraded as needed to serve the new camera site.

For the existing DMS site located near Hoover Rd, the Micro-Duct Conduit Pathway shall connect into the existing 32" pull box at the DMS location; utilize an existing conduit path between the DMS and the new proposed camera pole location. The existing Highway Advisory Radio on a wood pole shall be removed and the new proposed camera pole shall be placed in approximately the same location near the ROW fence. The DBT shall install a new 32" pull box next to the proposed camera pole location to replace the existing 18" Traffic pull box. The DBT shall install the camera pole and pour a work pad around the existing 18" Electric pull box, new 32" pull box, and new camera pole per SCD ITS-10.11 except without a new cabinet. The existing DMS cabinet shall additionally serve as the new camera cabinet. The camera cabling coming from the lowering unit shall be long enough to reach all the way to the DMS cabinet. The DBT shall install 2 - 3" conduits between the new 32" pull box and the new camera pole per SCD ITS-10.11 as well.

5. **Access Drives:** The DBT shall design and construct Access Drives at the locations as depicted in the KMZ file:

- I-71 NB near Young Rd
- I71NB near Hoover Rd
- Stringtown Rd infield

Design shall be per TEM 1303-3 and L&D Vol 1 Section 805.1.

6. **As-Built:** In addition to other as-built requirements in the scope, the DBT shall provide GPS coordinates and depths every 100ft for all conduit installed.

GPS coordinates and as-built plans shall also be provided for all ITS components per Supplemental Specification 809, section 809.16.

7. **Final Inspection:** Upon completion of the installation of all materials, the DBT shall allow a minimum of one month for ODOT to inspect all installed materials, including conduit, pull boxes, cable markers, etc. ODOT shall install fiber optic cable through the micro-duct conduit pathway. The DBT shall be liable for any fixes or repairs needed where ODOT finds items installed incorrectly or where ODOT cannot get fiber installed through the conduit pathway correctly.

Basis of Payment:

The Department shall pay for the actual length of conduit placed, measured from start of the initial location to the terminating location (including length through pullbox locations). The payment includes all sweeps, splice locations, connections, tracer wire, cable markers, pull string, or any other necessary requirement for proper placement and installation of the multicell conduit). Regardless of the construction method or location, all conduit placements shall be paid under Item 809E20020 MICRO-DUCT PATHWAY, 4 CELL 14/10. The Department shall pay for actual length of Micro-Duct Conduit Pathways installed. The Department has estimated a total of 34,740 ft.

The Department shall pay for the actual 32" ITS Pull Boxes placed, as required from start of the initial location to the terminating location. Item 809E02000 EACH 32" ITS PULL BOX WITH PAD AND STANDARD LID ASSEMBLY, 30 EA. The Department shall adjust this quantity to match final and agreed quantities placed.

All other work necessary for the installation, infield adjustments, appurtenances, connections, testing, coordination with the Engineer, or other work necessary for the installation of the ITS conduit, 32" Pullboxes, camera poles/installation, and completion of all other required work shall be paid under ITEM 809E99000 SPECIAL - ITS - Lump Sum.

All work necessary for the installation, coordination, conduit, pullboxes, and completion of all work required for power services shall be paid under ITEM 625E99000 SPECIAL - LIGHTING - Lump Sum.

16 PROJECT SCHEDULE REQUIREMENTS

The current edition of 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 advertising date, shall be met or exceeded.

17 PLAN SUBMITTALS AND REVIEW REQUIREMENTS

17.1 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.

17.2 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 Section 7 (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.

17.3 BUILDABLE UNITS

Buildable Units (BUs) 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 Design, Final Design, and Released for Construction 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.

17.4 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 SharePoint site. Any plan markups shall also be scanned by the DBT and included on SharePoint 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	<p>Either “Non-compliant”, “Preference”, or “Recommendation”.</p> <p>Non-compliant - elements that do not meet requirements of the Contract.</p> <p>Preference - elements which depict the owner’s preferred design method or result but are not required by the Contract.</p> <p>Recommendation - a general noted item intended to make the designer aware of potential troublesome design methods.</p>
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)	<p>Accept - DBT agrees with the comment and addressed the comments</p> <p>Dismiss - DBT disagrees with the comment based on comment no longer applying because the design has changed, reviewer error, or other reasons.</p> <p>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.</p>
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

17.5 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 BUS 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 Project SharePoint 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 SharePoint 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 SharePoint.

17.6 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.

17.7 OPTIONAL OVER-THE-SHOULDER REVIEWS

The DBT may request “Over-The-Shoulder” (OTS) review of designs at any time in the design process. The OTS is a 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.

17.8 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.

17.9 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 for each Buildable Unit.

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.

Unless indicated below, 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 Project Manager & Project Engineer	1
Each affected utility or railroad company	1

17.10 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 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.

If the DBT foregoes an Interim Design Review Submission, the Department will have 15 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.

If the DBT chooses to submit an Interim Design Review Submission, 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 Project Manager & Project Engineer	1
Each affected utility or railroad company	1

17.11 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 Project Manager & Project Engineer	1	1
Each affected utility or railroad company	1	1

17.12 PLAN DISTRIBUTION ADDRESSES

Ohio Department of Transportation, District 6
400 East William St.
Delaware, Ohio 43015
Attn: Laura Wright & Abbey Zimmer

Utility Companies
(As shown in section 11)

17.13 PLAN REVISIONS

Plan Revisions are DBT requested, ODOT directed, or condition necessary changes to the Released for Construction plans which materially modifies the design intent, materially revises the Plan to an extent which would require revised design calculations, materially revises plan dimensions or plan depictions, or otherwise would modify the Released for Construction plans in a manner which a competent engineer would identify as a necessary design re-evaluation.

In-field adjustments of pullboxes, pullbox locations, and conduit locations necessary to avoid conflicts are not intended to be a Plan Revision, however, the final determination if such adjustments constitute a Plan Revision and shall be up to and the responsibility of the Designer. The contractor shall ensure the Designer is aware of necessary in-field adjustments.

Plan Revisions are required to follow Final and Released for Construction review processes. Plan Revision review timeframes and review breadth shall be dependent and commensurable the identifiable impacts of the Plan Revision, as agreed by the DBT and ODOT.

17.14 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 Released for Construction Plans. 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.

The final location of all Pullboxes shall be surveyed and included. The conduit GPS locations, as required in section 21.9.4 shall be included in the as-builts.

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, all original project files and notes utilized in the preparation of the survey, design and construction of the project 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.