ODOT
DESIGN BUILD
SCOPE OF SERVICES

PID #	102329	State Project #	441766
		Federal Project #	E180(428)

PART 1

County:	SUM	Route:	IR-76	Section:	8.24
	SUM		IR-77		9.74
	SUM		SR-8		0.63

PART 2

County:	SUM	Route:	IR-76	Section:	10.99
	SUM		IR-77		11.54
	SUM		SR-8		0.00

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ADDENDUM 6

1 PROJECT IDENTIFICATION

PID # 102329 State Project # 441776 Federal Project Number: E180(428)

1.1 PART 1

County	SUM	Route	IR-76	Section	8.24
	SUM		IR-77		9.74
	SUM		SR-8		0.63

Local Route Name N/A

Highway Functional Classification & Federal Aid System	IR-76 – Urban Interstate
	IR-76 – Urban Interstate
	SR-8 – Other Freeway and Expressway
	Various Local Streets/Ramps

1.2 PART 2

County	SUM	Route	IR-76	Section	10.99
	SUM		IR-77		11.54
	SUM		SR-8		0.00

Local Route Name N/A

Highway Functional Classification & Federal Aid System	IR-76 – Urban Interstate
	IR-76 – Urban Interstate
	SR-8 – Other Freeway and Expressway
	Various Local Streets/Ramps

1.3 DESIGN DESIGNATION

	IR-76	IR-77	SR-8	Ramps
Current ADT (2020):	Attachments L & U **			
Design Year ADT (2040):				
Design Hourly Volume:				
Directional Distribution:				
Trucks:				
Design Speed:	60 MPH	60 MPH	60 MPH	Varies
Legal Speed:	55 MPH	55 MPH	55 MPH	Varies
Design Functional Classification:	Urban Interstate	Urban Interstate	Urban Freeway	Ramp
NHS Route	Yes	Yes	Yes	N/A

** Certified Traffic is shown on Attachments L & U. If data shown on both Attachments then the data on Attachment U will supersede data on Attachment L

1.4 EXISTING PLANS

The following existing plans are available on the ODOT FTP Site at:
ftp://ftp.dot.state.oh.us/pub/Districts/D04/102329/ExistingPlans/

Included with the existing plans is an index file in excel format of all the plans.

These are NOT as-built plans. The Design-Build Team (DBT) is advised to verify the preceding referenced plans to determine if they accurately depict existing field conditions

1.5 PRIMA FACIE SPEED LIMIT

The DBT may request that the Prima Fascia speed on IR-76/IR-77/SR-8 be reduced per section 1203-2.9 in the Traffic Engineering Manual [TEM]. Form 1296-17 Work Zone Speed Zone Evaluation Sheet should be completed by DBT and included with the conceptual MOT submittal. A separate set form should be completed for each distinctively different phase of construction. A speed reduction will generally not be considered for work zones less than 1 mile in length. If approved, the Work Zone Speed Zone shall be documented per section 1203-5.2 of the TEM. The DBT shall submit the completed form 1296-18 Work Zone Speed Zone Tracking Report weekly to the District Project Manager.

1.6 RAILROAD COORDINATION

Coordination with CSX Railroad is required. Refer to Special Provisions in the Proposal for information.

1.7 AIRWAY/HIGHWAY CLEARANCE

The DBT will complete the Airway/Highway Clearance Analysis (Location and Design Manual Section 1404.1). The DBT is responsible for obtaining all necessary approvals from the District's Project Manager and/or the Federal Aviation Administration. The DBT will account for the required time for the approvals in their schedule and will not be able to start work until the approvals are received by the ODOT Project Manager.

Attachment S contains reference material for the Airway Highway Clearance for PART 2 prepared by B&N.

2 PRE-BID MEETING

A Pre-Bid Meeting will not be held for this Project. See the schedule and details included in the Instructions to Offerors.

3 ADDENDA PROCESS

Direct all questions prior to the letting date to the Pre-Bid Website at:
http://www.dot.state.oh.us/Divisions/ContractAdmin/Contracts/Pages/PBQs.aspx

4 PRE-QUALIFICATION

It is required that the bidder be an ODOT pre-qualified Contractor who has engaged the services of an ODOT prequalified Consultant to perform *all* the design and construction work required in these Conceptual Documents. If the Consultant and/or the Sub-Consultant(s) submitted do not meet all the required qualifications, the Office of Contracts may reject the bid.

5 CONTRACTOR'S CONSULTANT

The Contractor must submit an electronic Bid. The Contractor must name the Consultant and all Sub-Consultant(s) in the electronic form on the following webpage prior to Bid submittal:
http://www.dot.state.oh.us/Divisions/ContractAdmin/Contracts/Pages/Scope.aspx.

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)):

1. Complex Roadway
2. Non-Complex Roadway
3. Level 2 Bridge Design
4. Geotechnical Engineering Services
5. Geotechnical Testing Laboratory
6. Geotechnical Field Exploration Services
7. Geotechnical Drilling Inspection Services
8. Sub-Surface Utility Location Services
9. Complex Lighting Design

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 102.14 A and 102.14 Q.

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:

Barr Engineering, Incorporated	**2800 Corporate Exchange Drive, Suite 240**	**Columbus, Ohio 43231**
Burgess & Niple, Inc.	5085 Reed Road	Columbus, Ohio 43220
DLZ Ohio, Inc.	6121 Huntley Road	Columbus, Ohio 43229
Eggeman Engineering and Consulting, LLC	6958 Old Clifton Road, Suite 120	Springfield, Ohio 45502
E. L. Robinson Engineering of Ohio Co.	1801 Watermark Drive, Suite 310	Columbus, Ohio 43215
Gannett Fleming Engineers and Architects, P. C.	2500 Corporate Exchange Drive, Suite 230	Columbus, Ohio 43231
Glaus, Pyle, Schomer, Burns and DeHaven, Inc.	520 South Main Street, Suite 2531	Akron, Ohio 44311-1010
Lawhon & Associates, Inc.	1441 King Avenue	Columbus, Ohio 43212
Northwest Consultants, Inc.	3220 Central Park West	Toledo, Ohio 43617
Ohio Valley Archaeology, Inc.	4889 Sinclair Road, Suite 210	Columbus, Ohio 43229
Richland Engineering Limited	29 North Park Street	Mansfield, Ohio 44902
Surveying and Mapping, LLC	929 Eastwind Drive, Suite 201	Westerville, Ohio 43081
The Mannik & Smith Group, Inc.	1800 Indian Wood Circle	Maumee, Ohio 43537

6 SCOPE OF WORK

6.1 PART 1

IR-76
Project Limits: From: SLM 8.24± To: SLM 10.00±

Project Length: 1.76± miles Work Length will be determined by the DBT.

IR-77

Project Limits:	From:	SLM 9.74±	To:	SLM 11.54±
Project Limits:	Resume:	SLM 15.18± (End overlap with IR-76)	To:	SLM 15.87± (Interface of concrete and flexible pavement)

Project Length: 2.49± miles Work Length will be determined by the DBT.

SR-8

Project Limits:	From:	SLM 0.63±	To:	SLM 1.75± (Perkins Street Overpass)
Project Length:		1.12± miles	Work Length will be determined by the DBT.	

See conceptual plans in Attachments B for project limits, including pavement replacement and resurfacing limits.

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

The Contractor will provide for the furnishing of materials, construction and completion in every detail of all the work described in the Conceptual Documents in order to fulfill the intent of the contract.

6.2 PART 2

IR-76

Project Limits:	From:	SLM 10.99±	To:	SLM 12.23±
Project Length:		1.24± miles	Work Length will be determined by the DBT.	

IR-77

Project Limits:	From:	SLM 11.54±	To:	SLM 12.11±
Project Length:		0.57± miles	Work Length will be determined by the DBT.	

SR-8

Project Limits:	From:	SLM 0.00	To:	SLM 0.63±
Project Length:		0.63± miles	Work Length will be determined by the DBT.	

The work in PART 2 shall be constructed in accordance with the plans and provisions as shown in Attachment C for the limits with the revisions as stated in the Scope of Services.

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

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

6.3 PROJECT DESCRIPTION AND COMPLETION DATE

Project Description (PART 1):	This project consists of full depth pavement replacement on the IR-76 and IR-77 mainline and ramps for the entire project length with the exception that the ramps at the Northwest Interchange (IR-76/IR-77) where they are being resurfaced. All shoulders will be replaced with the same composition and buildup as the mainline pavement.

	In addition, SR-8 will be resurfaced within the Project Limits, capacity improvements will occur on the southbound side between Carroll Street on-ramp and Beacon Street. The SR-8 NB Exit Ramp at Carrol/Fountain Street will be improved to provide a stop condition for NB Fountain Street Traffic along with an improved intersection of the Ramp and Fountain Street. The project will replace the superstructures of the IR-76 bridges over Manchester Road (SUM-76-0914), Bowery Street (SUM-76-0954) & Lakeshore Boulevard (SUM-76-0964). Overhead bridges and mainline bridges along the corridor will undergo maintenance repairs.
Project Description (PART 2):	The Akron Central Interchange Project includes reconstruction of IR-76 EB/WB pavement. This project also includes replacement of two freeway structures (Ramp N and Ramp Q) on new alignments, widening of two existing bridges, capacity improvements along the IR-77/SR-8 Corridor, construction of a new pedestrian/multi-use overpass, and construction of noise walls. The existing IR-76 WB to Inman Street and IR-77 SB to Lovers Lane ramps will be removed permanently, as well as the existing Lafollette Street Bridge over IR-77.
Overall Project Completion date:	07/30/2025

6.3.1 INTERIM COMPLETION DATES

6.3.1.1 THIS PROJECT SHALL HAVE AN INTERIM COMPLETION DATE OF 10/31/2021 FOR THE WORK LISTED BELOW:

1. Pavement replacement including the construction of the new Median Barrier for the existing exposed mainline concrete that starts in the northwest interchange (IR-76/IR-77) (approx. SUM-77-15.18±) and ends in the IR-77/SR-261 Interchange (SUM-77-15.87±)
2. Pavement Resurfacing on IR-76 from STA 507+19.85 to STA 521+51.09 (Brown Street Structure, SUM-76-1127)

For the work listed above to be completed by the Interim Completion the DBT is permitted to skip the Preliminary Design review Submission and proceed directly to Final Design Review Submission (as defined in Section 18 of the Scope of Services).

6.3.1.2 THIS PROJECT SHALL HAVE AN INTERIM COMPLETION DATE OF 07/31/2022 FOR THE WORK LISTED BELOW:

1. All construction work/activities on SR-8 north of the Structure over Beacon Street (SUM-8-0063) (SLM 0.63± to SLM 1.75±)

For the work listed above to be completed by the Interim Completion the DBT is permitted to skip the Preliminary Design review Submission and proceed directly to Final Design Review Submission (as defined in Section 18 of the Scope of Services).

7 FIELD OFFICE

Field office Type C, As Per Plan as required by Attachment N

8 GENERAL PROVISIONS FOR THE WORK

8.1 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 **Announcement of the Shortlist**, 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:

1. Bridge Design Manual
2. Location and Design Manuals
3. Volume One - Roadway Design
4. Volume Two - Drainage Design
5. Volume Three - Plan Preparation
6. Pavement Design & Rehabilitation Manual
7. Specifications for Geotechnical Explorations
8. Survey Manual
9. Construction and Material Specifications
10. Proposal Notes for Construction and Material Specifications
11. Supplemental Specifications for Construction and Material Specifications
12. Item Master
13. Manual for Abandoned Underground Mines - Inventory and Risk Assessment
14. Pavement Design and Rehabilitation Manual
15. State Highway Access Management Manual
    Standard Construction Drawings
16. Plan Insert Sheets
17. Traffic Engineering Manual
18. Ohio Manual of Uniform Traffic Control Devices
19. Real Estate Administration Policies and Procedures Manual:
    a. Appraisal
    b. Acquisition Property Management
    c. Relocation
    d. ROW Plans
    e. Utilities
    f. Wireless Communication Tower Manual
20. Environmental Services Handbooks and Guidelines
21. Waterway Permit Manual
22. Design Mapping Specifications
23. CADD Engineering Standards Manual
24. Geotechnical Bulletins
25. Project Development Process Manual (Appendix B)

26. CADD Standards Manual
27. ODOT Highway Traffic Noise Analysis Manual

The design of the project shall meet or exceed the requirements of the design manuals. Interpret all references to guidelines, recommendations and considerations in the design manuals as minimum requirements except when specifically precluded within the Scope of Services. Perform recommended evaluations unless provided by the Department.

If a recommendation in any design manual cannot be met, perform an analysis and submit to the Department for review and concurrence. The analysis shall indicate the reasons for a deviation from design recommendation guidance and shall propose an acceptable solution. Cost or an incorrect design assumption shall not be a reason for a deviation. A deviation from a design recommendation shall not be included in the design without the ODOT Design Project Manager's concurrence.

8.2 FINAL PAYMENT:

The DBT will prepare and submit the following prior to the request for final payment:

1. All original project files and notes utilized in the preparation of the survey, design and construction of the project
2. Record-Drawings Plans as required below.

8.3 RECORD-DRAWING PLANS:

8.3.1 GENERAL

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

Prior to final acceptance of the Work, the DBT shall furnish the Department formal Record-Drawing construction plans. The formal Record Drawings 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 formal Record Drawings 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 Record Drawings.

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).

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 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 Record-Drawings.

Record-Drawing plans shall be submitted as PDF Files as per PDF Submission Procedure Guidelines as shown on the ODOT Web Site at
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:

A. All deviations from the original approved construction plans which result in a change of location, material, type or size of work.
B. 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.
C. The final option and specification number selected for those items which allow several material options under the specification (e.g., conduit).
D. Additional plan sheets may be needed if necessary to show work not included in the construction plans
E. 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.).
F. The Plan index shall show the plan sheets which have changes appearing on them.
G. Each plan sheet will have its last revised date noted on the sheet and clearly marked as "AS-BUILT"

Each buildable unit Plan index shall show the plan sheets which have changes appearing on them.

Upon approval of all as-built plans by the Department, the DBT shall provide an overall project plan title sheet that shall list each buildable unit with an abbreviated description of each buildable unit.

A copy of the 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 Record-Drawing plans, the associated electronic files shall be delivered to the District Project Manager. 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.

8.3.2 CADD FILES

The Consultant shall comply with ODOT's CADD Standards, and supply files in accordance with the CADD Engineering Standards Manual. All data shall be provided to the Department according to the provisions as detailed under the appropriate CADD links accessed from the Department's Office of Production's web site. 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 web site can be accessed at the following address:
http://www.dot.state.oh.us/Divisions/Engineering/CaddMapping/Pages/default.aspx

The following can be accessed from the above URL addresses:
1. ODOT CADD Standard files by selecting the "Microstation Downloads" link
2. ODOT's Location and Design, Volume 3 by selecting the "L&D Manual Vol. 3" link
3. ODOT's GEOPAK Standards by selecting the "GEOPAK Downloads" link

The Department will accept CADD files on CD ROM, DVD, or USB Stick electronic media.
1. The Consultant 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. This requirement ensures that ODOT receives an end product that is directly usable on ODOT's CADD systems without additional work. The responsibility to provide the Department with correct and complete CADD data rests with the consultant.
2. The Consultant shall submit all GEOPAK information produced in the process of plan development according to L&D Volume 3, Section 1500. The submission shall include all files generated by GEOPAK as the result of the plan processing and these files shall include but are not limited to the following:

a. Coordinate databases (*.gpk)
b. Digital terrain models (*.tin)
c. Original cross section (XS) cell design files
d. Edited observation files (*.obs)
e. ASCII text files containing all raw point data (PT #, X, Y, Z, Linking Code/Mapping Code)
f. ASCII text files containing all adjusted point data (PT #, X, Y, Z, Linking Code/Mapping Code, Attribute data if any)
g. ASCII text file(s) listing chain data for all existing and proposed horizontal alignments; including the centerline of construction, the centerline of right of way and ramp baselines.
h. ASCII text file(s) listing vertical alignment data for all existing and proposed profiles.
i. ASCII text files listing the Northing, easting, station, offset and elevation for all existing and proposed monuments.

A separate file name should be used for each horizontal or vertical alignment. The CADD Engineering Standards Manual provides specific requirements for the content of the required ASCII reports and provides directions on how to create these reports using GEOPAK software.

These requirements and procedures may be updated from time to time with notification in the Design Reference Resource Center (DRRC) website which is located at the following URL, http://www.dot.state.oh.us/drrc/. Organizations exchanging ODOT CADD data are responsible for ensuring they are using the current version of these requirements, CADD reference manuals, ODOT cell files and ODOT seed files.

8.4 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.

8.5 PARTNERING AGREEMENT:

The Contractor is required to enter a Facilitated Partnering agreement with the Department on this project. 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 Contractor. Partnering will not affect the terms and conditions of the contract. It is a document which is solely intended to establish an environment of cooperation between the parties. The cost of the partnering workshop(s), if applicable, will be per the Partnering Note.

8.6 COMMUNICATION

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

District's Project Manager's Name: Thomas J Powell, PE

Phone number:	330-786-4834
E-mail:	Thomas.Powell2@dot.state.oh.us

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

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

8.7 PERMITS:

Contractor will be required to 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.

8.8 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 Section 102.6 (inclusive of Sections 102.61 through 102.66) of 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 102.6 of 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 survey was being 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.

9 HAZARDOUS MATERIALS

The following Asbestos Notification Notes are to appear in the Construction Plans:

9.1 ASBESTOS NOTIFICATION

9.1.1 PART 1

AN ASBESTOS SURVEY OF THE SUM-76-0913 (IR-76 OVER Manchester), SUM-76-0956 (IR-76 OVER BOWERY AND OHIO CANAL), AND SUM-76-0966 (IR-76 OVER LAKESHORE) BRIDGES WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST.

THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE SUM-76-0913 (IR-76 OVER Manchester) BRIDGE STRUCTURE.

THE ASBESTOS INSPECTION DETERMINED THAT NO ASBESTOS IS PRESENT ON THE SUM-76-0956 (IR-76 OVER BOWERY AND OHIO CANAL) AND SUM-76-0966 (IR-76 OVER LAKESHORE) BRIDGE STRUCTURES. HOWEVER, AN EXISTING 2" ELECTRIC CONDUIT (ASBESTOS-CEMENT, CONCRETE ENCASED) WAS MENTIONED IN THE ORIGINAL BRIDGE PLANS. THIS CONTRACTOR SHALL ASSUME THIS MATERIAL CONTAINS ASBESTOS AND DISPOSE OF IT ACCORDINGLY.

THE DISTRICT ENVIRONMENTAL COORDINATOR OR PROJECT ENGINEER SHALL MAKE THE ASBESTOS INSPECTION REPORT AVAILABLE TO THE CONTRACTOR AT THE PRE-CONSTRUCTION MEETING AND THEY SHALL SUBMIT THE NOTIFICATION OF DEMOLITION & RENOVATION FORM AND APPLICABLE FEES 10 DAYS

PRIOR TO CONSTRUCTION, WHICH CONTAINS THE QUANTITIES AND LOCATIONS OF THE ASBESTOS CONTAINING MATERIALS.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:

AKRON REGIONAL AIR QUALITY MANAGEMENT DISTRICT
146 S. HIGH ST. SUITE 904
AKRON, OHIO 44308
BOB HASENYAGER, ACTING ADMIN.
(330) 375 2480
FAX: (330) 375 2402

AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR REHABILITATION, THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER.

INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE, 2088 SOUTH ARLINGTON, AKRON, OHIO 44306

THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM.

9.1.2 PART 2

Asbestos notes and requirements will be performed in accordance with the plans and provisions as shown in Attachment C.

10 ENVIRONMENTAL

The following plan notes and commitments are required (show these as notes in the plans):

10.1 COMMUNITY NOTIFICATION

THE CONTRACTOR WILL ADVISE THE ODOT PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR MUST ALSO PROVIDE NOTIFICATION TO THE ODOT PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO ANY LANE RESTRICTIONS. THE ODOT PROJECT ENGINEER WILL FORWARD THE INFORMATION TO THE ODOT, DISTRICT 4 OFFICE OF PUBLIC INFORMATION FOR USE TO NOTIFY EMERGENCY SERVICES AND THE COMMUNITY A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE START OF PROJECT CONSTRUCTION. INCLUDED IN THIS NOTIFICATION WILL BE THE PROPOSED LANE RESTRICTIONS.

10.2 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT

THE DBT SHALL SUBMIT TO THE ODOT PROJECT MANAGER THE TOTAL NUMBER OF ACRES OF EARTH DISTURBANCE ACTIVITIES FOR BOTH OFF PROJECT AND ON PROJECT WORK IN A TIMELY MANNER. THIS INFORMATION WILL BE USED TO DEVELOP THE NOI IF REQUIRED. THE NOI WILL BE SUBMITTED TO THE OEPA WITHIN 10 DAYS AFTER THIS 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 SO THESE 31 DAYS WILL BE COUNTED FOR IN THE PROJECT.

ALL TEMPORARY EROSION CONTROL IS THE RESPONSIBILITY OF THE CONTRACTOR EVEN IF A SWPPP IS NOT REQUIRED. EARTH DISTURBING ACTIVITY IS NOT PERMITTED PRIOR TO THE OEPA PERMIT APPROVAL. FOR PROJECTS THAT REQUIRE AN NOI, THE SWPPP MUST BE IN PLACE PRIOR TO THE

INITIATION OF ANY EARTH DISTURBING ACTIVITY. ALL TEMPORARY EROSION CONTROL WORK AND THE SWPPP IF REQUIRED WILL BE PER SS832. FOR INFORMATION ABOUT OEPA'S NPDES PERMIT REQUIREMENTS SEE HTTPS://WWW.EPA.OHIO.GOV/DSW/STORM/INDEX

ITEMS USED TO IMPLEMENT THE DBT'S EROSION CONTROL REQUIREMENTS ARE PAID FROM AN ENCUMBERED AMOUNT INCLUDED IN THE PROPOSAL AS A NON-BID REFERENCE NUMBER. THE PROPOSAL SPECIFIES THE UNIT PRICES FOR THE EROSION CONTROL ITEMS. PAYMENTS FOR EROSION CONTROL ITEMS THAT EXCEED THE ENCUMBERED AMOUNT WILL BE MADE BY AN EXTRA WORK CHANGE ORDER USING THE SPECIFIED UNIT PRICES. THE SPECIFIED UNIT PRICES ARE FIXED FOR THE CONTRACT AND MAY NOT BE NEGOTIATED OR ADJUSTED FOR INFLATION OR CLAIMED CHANGED CONDITION.

THE PREPARATION OF THE SWPPP, ALONG WITH ALL REQUIREMENTS OF SS832 FOR MAINTAINING, INSPECTING, MODIFYING AND UPDATING THE SWPPP ARE CONSIDERED INCIDENTAL TO THE PROJECT.

10.3 REMOVAL OF TEMPORARY EROSION CONTROL ITEMS

ALL TEMPORARY EROSION CONTROL ITEMS SHALL BE REMOVED BEFORE THE PROJECT IS ACCEPTED. REMOVED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH THE APPROPRIATE C&MS SPECIFICATIONS.

10.4 WATERWAY PERMITS

THE WATERWAY PERMITS WILL BE OBTAINED BY ODOT PRIOR TO CONSTRUCTION. THE PROJECT WILL BE COVERED UNDER ODOT REGIONAL GENERAL PERMIT – B.

10.5 FLOODPLAIN COORDINATION

FLOODPLAIN COORDINATION IS COMPLETE, AND NO FLOODPLAIN PERMIT IS NEEDED.

10.6 ENDANGERED SPECIES HABITAT

INDIANA BAT/NORTHERN LONG-EARED BAT: THE PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

10.7 SUM-76-0954 BRIDGE INSPECTION FOR BATS

THE CONTRACTOR MUST INSPECT THE SUM-76-0954 BRIDGE OVER BOWERY STREET, THE OHIO CANAL AND THE TOWPATH TRAIL/BUCKEYE TRAIL FOR BATS IF CONSTRUCTION ACTIVITIES ON THE STRUCTURE WILL OCCUR BETWEEN APRIL 1 AND SEPTEMBER 30. THE CONTRACTOR SHALL PROVIDE WRITTEN CONFIRMATION OF THE INSPECTION, INCLUDING A STATEMENT REGARDING WHETHER OR NOT EVIDENCE OF BATS WAS FOUND, TO THE ODOT CONSTRUCTION ENGINEER 15 DAYS PRIOR TO THE START OF CONSTRUCTION. IF BATS OR EVIDENCE OF ROOSTING BATS IS FOUND ON THE UNDERSIDE OF THE BRIDGE STRUCTURE, BRIDGE CONSTRUCTION MAY NOT BE INITIATED BETWEEN APRIL 1 AND SEPTEMBER 30 UNTIL ODOT COORDINATES WITH THE U. S. FISH AND WILDLIFE SERVICE (USFWS). DO NOT REMOVE THE BATS AND DO NOT CONTINUE CONSTRUCTION ACTIVITIES THAT WOULD DISTURB THE BATS. CONTACT THE ODOT DISTRICT 4 ENVIRONMENTAL COORDINATOR AT 330-786-4930 IMMEDIATELY FOR FURTHER INSTRUCTION.

10.8 SECTION 4(F) MEASURES TO MINIMIZE HARM TO THE TOWPATH TRAIL/BUCKEYE TRAIL

1. ACCESS TO THE TOWPATH TRAIL/BUCKEYE TRAIL SHALL BE MAINTAINED VIA DETOUR WHEN UNSAFE CONSTRUCTION ACTIVITIES OCCUR. THE DURATION OF THE TEMPORARY CLOSURE SHALL BE LESS THAN THE TIME NEEDED FOR CONSTRUCTION AT THIS BRIDGE.
2. ODOT SHALL WORK WITH THE CITY OF AKRON ON FINAL DETAILS OF THE TOWPATH TRAIL/BUCKEYE TRAIL DETOUR.
3. CLOSURES OF THE TOWPATH TRAIL/BUCKEYE TRAIL SHALL BE LIMITED TO FOUR SEPARATE CLOSURES, EACH LASTING UP TO 60 DAYS.
4. TO PROTECT THE TOWPATH TRAIL/BUCKEYE TRAIL AND THE PUBLIC, THE CONTRACTOR SHALL INSTALL AND MAINTAIN TEMPORARY CONSTRUCTION FENCING ALONG THE KNOWN BOUNDARIES OF THE TOWPATH TRAIL/BUCKEYE TRAIL WITHIN THE PROJECT CONSTRUCTION LIMITS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES AT THE BRIDGE.
5. PRIOR TO THE START OF CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL INSTALL SIGNAGE APPROVED BY THE PROJECT ENGINEER TO ALERT TOWPATH TRAIL/BUCKEYE TRAIL USERS OF CONSTRUCTION ACTIVITIES AND ACCESS RESTRICTIONS OR CLOSURES, AND TO DIRECT USERS TO THE DETOUR.
6. THE CONTRACTOR SHALL PROVIDE THE CONSTRUCTION SCHEDULE TO THE CITY OF AKRON PUBLIC SERVICE DEPARTMENT AND ODOT 30 DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.

10.9 WETLANDS AVOIDANCE

NO EXCAVATION, GRADING, OR FILLING OPERATIONS SHALL BE PERFORMED IN WETLAND D DELINEATED BEYOND THE PROJECT CONSTRUCTION LIMITS AND DEPICTED IN THE PROJECT PLANS. TO PROTECT AND DELINEATE THE BOUNDARIES OF THE EXISTING RESOURCE, A FILTER FABRIC FENCE AND TEMPORARY CONSTRUCTION FENCE PER SUPPLEMENTAL SPECIFICATION 832, SHALL BE INSTALLED AT THE PROPOSED CONSTRUCTION LIMITS, MAINTAINING A ONE-FOOT BUFFER BETWEEN THE FENCE AND THE WETLAND BOUNDARIES, WHEN PRACTICABLE, PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES, INCLUDING ANY NECESSARY CLEARING AND GRUBBING ACTIVITIES, AND BE MAINTAINED BY THE CONTRACTOR THROUGHOUT PROJECT CONSTRUCTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS IN ANY WETLANDS, ETC. ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS SECTION 107.10 (PROTECTION AND RESTORATION OF PROPERTY) PROHIBIT THE CONTRACTOR FROM CREATING STAGING AREAS NEAR STREAMS AND/OR WETLANDS.

10.10 MAINTENANCE OF PEDESTRIAN TRAFFIC

THE DESIGN-BUILD TEAM WILL INCORPORATE A NOTE INTO THE PROJECT CONSTRUCTION PLANS TO MAINTAIN ESTABLISHED PEDESTRIAN TRAFFIC THROUGH AND ALONG THE IR 76, IR 77 AND SR 8 CONSTRUCTION CORRIDORS AT ALL TIMES DURING PROJECT CONSTRUCTION, AS APPROPRIATE.

11 RIGHT OF WAY (ROW)

All necessary construction work for the project will be performed within the existing right of way or within the right of way as shown in Attachment C.

Existing right of way lines and those shown in Attachment C 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.

The DBT will stake and flag the existing right of way and those shown in Attachment C in the field prior to the start of construction and will maintain said stakes and flags throughout the duration of the project.

The DBT will identify and show all right of way encroachments on the construction plans at the Conceptual Review Submission. ODOT's Project Manager will be responsible for clearing all encroachments on Federal-aid projects in accordance with standard encroachment removal.

12 UTILITIES

Utilities Special Provisions in addition to the Governing Regulations listed in section 8.1 of this document and section 153.64 of the Ohio Revised Code.

12.1 EXISTING UTILITIES:

The District Utility Coordinator, in concurrence with the registered Underground Utility Protection Services- Ohio Underground Protection Service (OUPS) and Oil and Gas Producers Underground Protection Service (OGPUPS) and other utility owners that are non-members of any utility protection services, has determined that the following utilities are located in the area of the project

12.1.1 PART 1

City of Akron – Traffic Engineering 1420 Triplett Blvd., BLDG #2 Akron, OH 44306 Phone: 330-375-2851 Email: traffic@akronohio.gov	City of Akron – Akron Sewer 2460 Akron Peninsula Rd Akron, OH 44313 Attn: Scott Davenport Phone: 330-375-2769 Email: sdavenport@akronohio.gov
City of Akron – Akron Water 146 South High Street, Room 211 Akron, OH 44308 Attn: Joe Okolish Phone: 330-375-2690 Email: jokolish@akronohio.gov	AT&T Ohio 50 W. Bowery Street, 6th Floor Akron, OH 44308 Attn: Lucie Hinshaw Phone: 330-384-3048
Charter Communications 1200 Brownstone Ave Akron, OH 44310 Attn: Jim Long Phone: 330-622-4106 Email: james.long@charter.com	Crown Castle 15565 NEO Parkway Garfield Heights, OH 44128 Attn: Ed Daly Phone: 585-397-5988 Email: ed.daly@crowncastly.com
Dominion Energy 320 Springsdale Dr., Suite 230 Akron, OH 44333 Attn: Kevin Birt Phone: 330-664-2409 Email: relocation@dominionenergy.com	G&O Resources, LTD 96 East Crosier St Akron, OH 44311 Phone: 330-253-2525
Verizon 120 Ravine St. Akron, OH 44303 Attn: Al Guest Phone: 330-253-8267 Email: allan.guest@verizon.com	First Energy 1910 West Market Street, Building #1 Akron, OH 44313 Attn: Michael Janson Phone: 330-830-7092 Email: jansonm@firstenergycorp.com

Ohio Department of Transportation ITS Office 1606 West Broad Street Columbus, OH 43223 Email: CEN.ITS.Lab@dot.ohio.gov Note: Not a member of OUPS	Ohio Department of Transportation District 4 Attn: Michelle Chaney, PE 2088 South Arlington Street Akron, OH 44306 Email: Michelle.Chaney@dot.ohio.gov
Ohio Department of Transportation Office of Technical Services Traffic Monitoring Section 1980 West Broad Street Columbus, OH 43223 Attn: Sandra Mapel Phone: 614-644-0291 Note: Not a member of OUPS	

12.1.2 PART 2

Utilities are shown on PART 2 Plan contained in Attachment C.

12.2 UTILITY COORDINATION RESPONSIBILITIES:

As soon as it is feasible after the final plan is approved by the Department, the DBT shall stake the existing ROW (and new ROW if additional is acquired) in the field and shall perform clearing and grubbing within that ROW as required by the specifications and the proposal documents, in order to allow utility relocation and reduce potential delays. ROW stakes shall be maintained and updated as needed throughout the project length.

The DBT shall be cognizant of the project's impact on utility facilities. In the event utility rearrangements are required, the project shall not be designed to preclude legal occupancy of the highway ROW by the rearranged utility facilities.

The DBT shall coordinate all existing utilities with construction activities on this project. The DBT shall insure that potential delays in coordination and relocation of the affected utilities are minimized. The DBT shall copy the ODOT Project Manager and the District Utility Coordinator on all correspondence or phone calls between the DBT and each utility. This shall include the submittal of plans to each utility.

A meeting at or near the preliminary review shall be held between the DBT, the District Utility Coordinator and the utility owners to determine if any significant utility relocations can be eliminated or mitigated.

Any betterment to the utility's facility and ineligible, or unnecessary, work shall not be a part of the project's expense but the utility company's fiscal requirement. Determination of eligibility can be coordinated through the District Utility Coordinator. Payment for betterments or ineligible costs shall be made by the appropriated utility through ODOT to the Contractor.

The cost of all utility coordination shall be bid as a Lump Sum Item.

12.3 SUBSURFACE UTILITIES LOCATING SERVICES (SULS)

The DBT will perform Level A and Level B SULS

The DBT will use a state approved Subsurface Utilities Locating Service to field verify all underground utilities **prior to beginning of any design work (submit documentation at the Interim Plan submission for the appropriate BU)** and will incorporate the results in the design. The DBT is responsible for verification of all subsurface utility locations, both Public Utilities and Private Utilities.

Payment for the SUE Level B will be included with the Lump Sum Pay Item for Utility Coordination.

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

Provided in Attachment C-1 is reference material for the SULS performed during the development of Attachment C.

12.4 EXISTING UTILITIES NOT TO DISTURB

The DBT shall not disturb the existing power transmission lines over I-76/77 in the Lake Shore and Bowery Street area.

13 DESIGN AND CONSTRUCTION REQUIREMENTS: MAINTENANCE OF TRAFFIC (MOT)

The detailed scope for the Maintenance of Traffic (MOT) is included in Attachment O and is contractual.

14 DESIGN AND CONSTRUCTION REQUIREMENTS: LOCATION & DESIGN

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

14.1 SURVEY

ODOT Survey Responsibilities:
The Department survey crews have provided the necessary survey requirements, listed below:

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

Survey Responsibilities:
All survey data will 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 will not be disturbed. If the Contractor does disturb the monumentation, then it will 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 will be borne by the Contractor. Copies of all monumentation changes will be forwarded to the District Real Estate Administrator.

All control points, provided by ODOT, will be included in the ASCII file supplied by the DBT to ODOT. Retain the original point numbers and coordinate values as assigned by ODOT.
The DBT will provide the following items prior to final acceptance of the Record-Drawing plans:

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

14.2 LIDAR (LIGHT DETECTION AND RANGING) MAPPING

LiDAR mapping was performed by ODOT for this project. This information has been supplied with this Scope of Services. The following has been provided:

1. TIN Model
2. Planimetrics
3. Orthophotos

The DBT must field survey and add to the Basemap the following (before Design and Construction begins): Subsurface Drainage, Ditch Inverts, Channel Inverts, Areas with Dense Brush, Areas with Heavy Vegetation, Areas with Light Vegetation, Pavement Areas, etc.

The DBT will perform a field review to ensure that all features are shown on the basemaping.

The DBT is reminded that the horizontal and vertical accuracy of LiDAR is not as high as traditional ground survey, therefore, the DBT will need to take this into account and in areas where high accuracy is required the DBT will need to perform field checks and revise the Basemap accordingly.

This data is available on the ODOT FTP Site a
ftp://ftp.dot.state.oh.us/pub/Districts/D04/102329/Reference%20Files

14.3 VERTICAL AND HORIZONTAL ALIGNMENT

14.3.1 PART 1

The vertical and horizontal alignments for the various routes are only permitted to be adjusted where indicated in the table below:

	Horizontal - Permitted to be adjusted	Vertical - Permitted to be adjusted
IR-76	No	Yes
IR-77	No	Yes
IR-76 / IR-77 Ramps	No	Yes
SR-8	Yes *	No
SR-8 Ramp –NB Off Ramp at Carrol Street / Fountain Street	Yes	Yes

SR-8 Ramp –SB On Ramp at Carrol Street	Yes	Yes
SR-8 – All other Ramps	No	No
Local Roads	No	No

* Ramp Geometry may be revised to accommodate additional lanes at required by the scope. Ramp terminal spacing shall meet L&D requirements or at a minimum, match existing terminal spacing for individual locations.

14.3.2 PART 2

Horizontal and vertical alignments will be in accordance with PART 2 Plans and Provisions as shown in Attachment C for project limits with the revisions as stated in the Scope of Services.

14.4 GEOTECHNICAL SUBSURFACE INVESTIGATION

In addition to the geotechnical information provided in attachment P, archive borings are available from previous projects. Refer to the link below:

https://gis.dot.state.oh.us/tims

The DBT shall thoroughly review all available geotechnical information in final plan development for the project. Provide additional test borings, laboratory testing and geotechnical analyses as necessary to supplement the existing geotechnical data for the new proposed work to meet the requirements of the Specifications for Geotechnical Exploration and all Geotechnical Bulletins. Incorporate archive all available geotechnical borings available from the ODOT TIMS database into the final design and develop Geohazard Exploration sheets. Submit the Geohazard Exploration sheets with the draft geotechnical report and Preliminary Design Review Submission.

14.5 PAVEMENT

14.5.1 PART 1 -- MAINLINE PAVEMENT – SUM-76 (SLM 8.24*± TO SLM 10.00±) & SUM-77 (SLM 9.74± TO SLM 11.54±)

The mainline full depth pavement and shoulder composition will be one of the following options (Both directions must be constructed of the same pavement material). This will be an Option Bid per PN 138. For these optional pavement types the same type will be required to be selected for both PART 1 and PART 2.

1. Flexible Full Depth Pavement and Full Depth Shoulders Option A (includes mainline pavement, mainline paved shoulders, gores, acceleration/deceleration lanes,)
    a. Item 442 – Asphalt Concrete Surface Course, 12.5 mm, Type A (447), As Per Plan (T=1 ½”) [Plan Note is in Attachment F]
    b. Item 407 - Non-Tracking Tack Coat
    c. Item 442 – Asphalt Concrete Intermediate Course, 19 mm, Type A (446), As Per Plan (T=1 ¾”)[Plan Note is in Attachment F]
    d. Item 407 – Non-Tracking Tack Coat
    e. Item 302 – Asphalt Concrete Base, PG64-22 (T=8”)
    f. Item 304 – Aggregate Base, As Per Plan (T=6”) [Plan Note is in Attachment F]
    g. Treat pavement drop-offs with Item 617 – Compacted Aggregate, As Per Plan with Item 408, Prime Coat, As Per Plan applied to the surface of the 617 [Plan Note is in Attachment F]
    h. Pavement Phasing Joint shall be completed as per the “Phase Joint for Asphalt Pavement” Note contained in Attachment F.
    i. Item 442 - Anti-Segregation Equipment shall be used on all Asphalt Pavements (Lanes Only)
2. Rigid Full Depth Pavement and Full Depth Shoulders Option B (includes mainline pavement, mainline paved shoulders, gores, acceleration/deceleration lanes)

a. Item 452 – Non-Reinforced Concrete Pavement Class QC1P with QC/QA (T=13”) (Longitudinal joints will be located on the lane lines or edge lines, not in a lane)
b. Item 304 – Aggregate Base, As Per Plan (T=6”) [Plan Note is in Attachment F]
c. Treat pavement drop-offs with Item 617 – Compacted Aggregate, As Per Plan with Item 408, Prime Coat, As Per Plan applied to the surface of the 617 [Plan Note is in Attachment F]
d. If the DBT elects this option for the pavement type then the following applies south of the IR-77 Bridge over Waterloo Road in the Southbound direction:
    i. The pavement is required to be required to be flexible and follow the Flexible Pavement Buildup as shown above.

14.5.2 PART 1 -- MAINLINE PAVEMENT –SUM-77 (SLM 15.18± TO SLM 15.87±)

The mainline full depth pavement and shoulder composition will be the following:

a. Item 442 – Asphalt Concrete Surface Course, 12.5 mm, Type A (447), As Per Plan (T=1 ½”) [Plan Note is in Attachment F]
b. Item 407 - Non-Tracking Tack Coat
c. Item 442 – Asphalt Concrete Intermediate Course, 19 mm, Type A (446), As Per Plan (T=1 ¾”)
d. Item 407 – Non-Tracking Tack Coat
e. Item 302 – Asphalt Concrete Base, PG64-22 (T=8”)
f. Item 304 – Aggregate Base, As Per Plan (T=6”) [Plan Note is in Attachment F]
g. Treat pavement drop-offs with Item 617 – Compacted Aggregate, As Per Plan with Item 408, Prime Coat, As Per Plan applied to the surface of the 617 [Plan Note is in Attachment F]
h. Pavement Phasing Joint shall be completed as per the “Phase Joint for Asphalt Pavement” Note contained in Attachment F.
i. Item 442 - Anti-Segregation Equipment shall be used on all Asphalt Pavements (Lanes Only)

14.5.3 PART 1 – SYSTEM RAMPS RESURFACING IN THE NORTHWEST INTERCHANGE (IR-76/IR-77) – RAMPS T, U, V, & W

The resurfacing of the pavement and shoulders will be the following:

a. Item 442 – Asphalt Concrete Surface Course, 12.5 mm, Type A (446), As Per Plan (T=1 ½”) [Plan Note is in Attachment F]
b. Item 407 - Non-Tracking Tack Coat
c. Item 254 – Pavement Planning, Asphalt Concrete (T=1 ½”)
d. Treat pavement drop-offs with Item 617 – Compacted Aggregate, As Per Plan with Item 408, Prime Coat, As Per Plan applied to the surface of the 617 [Plan Note is in Attachment F]
e. The Project Engineer will mark areas of the pavement requiring repairs and they will be repaired using Item 251—Partial Depth Pavement Repairs (442). Payment for this work will be made on a unit cost basis and an estimated quantity has been provided in the Proposal.
f. Item 442 - Anti-Segregation Equipment shall be used on all Asphalt Pavements (Lanes Only)

14.5.4 PART 1 – SERVICE RAMPS RESURFACING AT THE IR-77 & SR-261 INTERCHANGE – RAMPS L, M, N, & P

The resurfacing of the pavement and shoulders will be the following:

a. Item 442 – Asphalt Concrete Surface Course, 12.5 mm, Type A (446), As Per Plan (T=1 ½”) [Plan Note is in Attachment F]
b. Item 407 - Non-Tracking Tack Coat
c. Item 254 – Pavement Planning, Asphalt Concrete (T=1 ½”)

d. Treat pavement drop-offs with Item 617 – Compacted Aggregate, As Per Plan with Item 408, Prime Coat, As Per Plan applied to the surface of the 617 [Plan Note is in Attachment F]
e. The Project Engineer will mark areas of the pavement requiring repairs and they will be repaired using Item 251—Partial Depth Pavement Repairs (442). Payment for this work will be made on a unit cost basis and an estimated quantity has been provided in the Proposal.
f. Item 442 - Anti-Segregation Equipment shall be used on all Asphalt Pavements (Lanes Only)

14.5.5 PART 1 – IR 76/77 ENTRANCE AND EXIT SERVICE RAMPS

Full Depth Pavement and Full Depth Shoulders for Ramps (to the physical gore) composition will be the following:

a. Item 452 – Non-Reinforced Concrete Pavement Class QC1P with QC/QA (T=13”) (Longitudinal joints will be located on the lane lines or edge lines, not in a lane)
b. Item 304 – Aggregate Base, As Per Plan (T=6”) [Plan Note is in Attachment F]
c. Treat pavement drop-offs with Item 617 – Compacted Aggregate, As Per Plan with Item 408, Prime Coat, As Per Plan applied to the surface of the 617 [Plan Note is in Attachment F]

14.5.6 PART 1 -- SUM-8 RESURFACING (MAINLINE PAVEMENT AND RAMPS)

The resurfacing of the pavement and shoulders composition will be the following:

a. Item 442 - Asphalt Concrete Surface Course, 12.5mm, Type B (446), As Per Plan (T=2”) [Plan Note is in Attachment F]
b. Item 407 - Non-Tracking Tack Coat
c. Item 254 – Pavement Planning, Asphalt Concrete (T=2”) (Variable depth planning will be required in areas where the crown is relocated)
d. Treat pavement drop-offs with Item 617 – Compacted Aggregate, As Per Plan with Item 408, Prime Coat, As Per Plan applied to the surface of the 617 [Plan Note is in Attachment F]
e. The Project Engineer will mark areas of the pavement requiring repairs and they will be repaired using Item 251—Partial Depth Pavement Repairs (442). Payment for this work will be made on a unit cost basis and an estimated quantity has been provided in the Proposal.
f. Item 442 - Anti-Segregation Equipment shall be used on all Asphalt Pavements (Lanes Only)

14.5.7 PART 1 -- SUM-8 PAVEMENT WIDENING & NORTHBOUND EXIT RAMP AT CARROL/FOUNTAIN STREET (RAMP S)

Full Depth Pavement and Full Depth Shoulders composition will be the following:

a. Item 442 – Asphalt Concrete Surface Course, 12.5mm, Type B (446), As Per Plan (T=2”) [Plan Note is in Attachment F]
b. Item 407 - Non-Tracking Tack Coat
c. Item 442 – Asphalt Concrete Intermediate Course, 19mm, Type B (446) (T=1 ½”)
d. Item 407 – Non-Tracking Tack Coat
e. Item 302 – Asphalt Concrete Base, PG64-22 (T=9 ½”)
f. Item 304 – Aggregate Base, As Per Plan (T=6”) [Plan Note is in Attachment F]
g. Treat pavement drop-offs with Item 617 – Compacted Aggregate, As Per Plan with Item 408, Prime Coat, As Per Plan applied to the surface of the 617 [Plan Note is in Attachment F]
h. Pavement Phasing Joint shall be completed as per the “Phase Joint for Asphalt Pavement” Note contained in Attachment F.
i. Item 442 - Anti-Segregation Equipment shall be used on all Asphalt Pavements (Lanes Only)

14.5.8 PART 1 -- FOUNTAIN STREET

Full Depth Pavement composition will be the following:

a. Item 452 – Non-Reinforced Concrete Pavement Class QC1 with QC/QA (T=8”) (Longitudinal joints will be located on the lane lines or edge lines, not in a lane)
b. Item 304 – Aggregate Base, As Per Plan (T=6”) [Plan Note is in Attachment F]
c. Item 609 – Curb, Type 2-A (Curb to be integral with the Concrete Pavement)

14.5.9 PART 2

The pavement shall be constructed in accordance with the plans and provisions as shown on the Typical Sections of Attachments C for limits with the revisions as stated in the Scope of Services.

For the mainline pavement, the full depth pavement and shoulder composition will be one of two optional materials, Rigid or Flexible. Both directions must be constructed of the same pavement material. This will be an Option Bid per PN 138. For these optional pavement types the same type will be required to be selected for both PART 1 and PART 2.

If the Rigid Pavement Option is selected the Longitudinal joints will be located on the lane lines or edge lines, not in a lane.

If the Flexible Pavement Option is selected then a Pavement Phasing Joint shall be completed as per the “Phase Joint for Asphalt Pavement” Note contained in Attachment F.

14.5.10 PART 2 – RESURFACING ON IR-76/77

Prior to any construction taking place on IR-76/77 the DBT is required to resurface the pavement (from edge line to edge line in both directions of travel, it is not required to resurface the shoulders) on IR-76 from STA 507+19.85 to STA 521+51.09 (Brown Street Structure, SUM-76-1127) with the following:

a. Item 441 - Asphalt Concrete Surface Course, Type 1, (448), As Per Plan, PG64-22 (T=1 ½”) [Plan Note is in Attachment F]
b. Item 407 - Non-Tracking Tack Coat
c. Item 254 – Pavement Planning, Asphalt Concrete (T=1 ½”) (Variable depth planning will be required in areas where the crown is relocated)

14.5.11 SUBGRADE COMPACTION, STABILIZATION, AND PROOF ROLLING

14.5.11.1 PART 1

The DBT will prepare stable subgrade conforming to CMS 204 and CMS 206. Stable subgrade is defined as subgrade where proof rolling results in permanent rutting of 1 inch or less and elastic (rebound) movement of 1 inch or less. The DBT shall be responsible for repairing areas identified by the required proof rolling or identified during any construction procedures.

Except in the areas noted in the table below, Global Stabilization of the Subgrade is required to be performed on locations where full depth pavement replaced is specified. A minimum of depth of Cement Stabilization shall be 14”.

Location	Type of Stabilization
Sta. 345+00 to 354+00 (IR-77)	Undercut
Sta. 393+00 to 407+00 (IR-77)	Undercut

In sections identified in the table above, soil borings show that the bedrock elevation will be less than or equal to 12” below proposed subgrade and in these areas the rock will be removed and replaced with Embankment. Refer to Section H.5 of Geotechnical Bulletin GB1 for additional information and requirements.

All subgrade stabilization areas shall extend 18 inches beyond the back of proposed curbs. The DBT shall perform Subgrade Compaction and Proof Rolling per C&MS 204 on all stabilizations. The DBT shall account for underdrain installation within and adjacent to the stabilization work and stage the work accordingly.

The DBT shall locate and verify the depth of all existing underground utilities and sewers present in areas of subgrade stabilization to ensure no impacts or damage during construction.

There are no unit price items for subgrade stabilization, excavation and replacement of subgrade, proof rolling or any other subgrade related work. This work will be paid for the under ITEM SPECIAL – EARTHWORK as Lump Sum

14.5.11.2 PART 2

The DBT will prepare stable subgrade conforming to CMS 204 and CMS 206. Stable subgrade is defined as subgrade where proof rolling results in permanent rutting of 1 inch or less and elastic (rebound) movement of 1 inch or less. The DBT shall be responsible for repairing areas identified by the required proof rolling or identified during any construction procedures.

Except in the areas noted in the table below, Global Stabilization of the Subgrade is required to be performed on locations where full depth pavement replaced is specified. A minimum of depth of Cement Stabilization shall be 14".

Location	Type of Stabilization
Sta. 4297+80 to 4309+00 (I-77/SR-8 including gore areas)	Undercut
Ramp N (Anywhere proposed subgrade is at or below existing ground, include gores)	Undercut
Ramp O (Entire Length, including gores)	Undercut
Sta. 7306+11 to 7317+00 (Ramp T, including gores)	Undercut

In sections identified in the table above, soil borings show that the bedrock elevation will be less than or equal to 12" below proposed subgrade and in these areas the rock will be removed and replaced with Embankment. Refer to Section H.5 of Geotechnical Bulletin GB1 for additional information and requirements.

All subgrade stabilization areas shall extend 18 inches beyond the back of proposed curbs. The DBT shall perform Subgrade Compaction and Proof Rolling per C&MS 204 on all stabilizations. The DBT shall account for underdrain installation within and adjacent to the stabilization work and stage the work accordingly.

The DBT shall locate and verify the depth of all existing underground utilities and sewers present in areas of subgrade stabilization to ensure no impacts or damage during construction.

14.6 THERE ARE NO UNIT PRICE ITEMS FOR SUBGRADE STABILIZATION, EXCAVATION AND REPLACEMENT OF SUBGRADE, PROOF ROLLING OR ANY OTHER SUBGRADE RELATED WORK. THIS WORK WILL BE PAID FOR THE UNDER ITEM SPECIAL – EARTHWORK AS LUMP SUMROADWAY

14.6.1 PART 1 – IR-76 & IR-77

The following requirements apply

1. Pavement

a. Mainline –Remove the existing pavement and shoulders full depth. The limits of the full depth removal/replacement are shown in Attachment B – Preliminary Plans.
b. Ramps –on all ramps (except for the ramps listed below) remove the existing pavement and shoulders full depth on the ramps. The limits of the full depth removal/replacement are shown in Attachment B.
c. Ramps – the ramps at the northwest intersection of IR-76/IR-77 will be resurfaced. The limits of the full depth removal/replacement are shown in Attachment B.
d. Ramps – the ramps at IR-77 & SR-261 Interchange will be resurfaced. The limits of the full depth removal/replacement are shown in Attachment B.

2. For the south leg of the project, SUM-77 SLM 9.75 to SLM 11.55, the outside shoulders shall either utilize curb or concrete barrier, to control drainage. All curbed sections shall be protected by guardrail on High Speed Roadways. Please see typical sections in Attachment B – Preliminary Plans.
3. Install new full depth pavement and shoulders (includes mainline pavement, mainline paved shoulders, gores, acceleration / deceleration lanes)
4. The required Lane and Shoulder Configuration will match the Attachment B – Preliminary Plans
5. Ramps -- Upgrade the Ramps acceleration length, deceleration lengths and terminal geometry.
6. Barrier Protection Requirements
    a. Remove and replace all existing barrier protection (guardrail, concrete barrier, etc.) along the mainline and ramps to meet current standards.
    b. Connections between the new Guardrail and any fixed object (i.e. Concrete Barrier, Bridge Parapets, etc.) must be made with current standards; this may require the removal of a portion of the fixed object and replacement.
    c. Guardrail installed without curb will have Paving Under Guardrail [Item 441 - Asphalt Concrete Intermediate Course, Type 1, (448), T=3”]. Pave from the edge of the shoulder to 1'-0" behind the guardrail post at a minimum.
    d. Gaps in guardrail shall not be less than 300’.
7. Median Barrier
    a. All barrier shall be replaced
    b. New median barrier shall be Type B1/C1 for glare screening.
8. Install Shoulder Rumble Strips on the mainline and the ramps of IR-76 & IR-77 as per Standard Construction Drawing BP-9.1.
9. Superelevation and Crown Location
    e. The Superelevation will meet the current Design Standards as per the Location and Design Manual
    a. At the project limits, the roadways are tying in to existing Superelevation transitions. The DBT will need to obtain the existing pavement elevations to match the existing Superelevation and transition rates.
10. All work shall be within the existing ROW.
11. Vertical Clearance over roadways under Structures shall not be reduced. See Attachment A for additional information concerning the Vertical Clearance requirements.
12. The design and construction of the area south of the IR-77 Bridges over Waterloo Road is required to follow details (profiles, cross sections, superelevation and gore details) from the plans prepared for the IR-77 improvements from Arlington Road to Waterloo Road (SUM-77/277/224, PID 106002).

14.6.2 PART 1 – SR-8

The following requirements apply

1. Pavement
    a. SR-8 shall be resurfaced from SLM 0.63 to SLM 1.76±. The limits are shown in Attachment B
    b. SR-8 southbound from the Carroll Street On-Ramp to the Beacon Street Bridge (SUM-8-0063) will be widened and provide an additional lane of traffic. Refer to Attachment B for Limits

c. SR-8 northbound exit ramp at Carroll / Fountain Street will be improved. Refer to Attachment B for details. The DBT will use Intersection Sight Distance for the Stop Condition at the Intersection of Fountain Street and the Ramp.
d. The required Lane and Shoulder Configuration will match the Attachment B. The relocation of the crown will require variable planning in the areas of resurfacing.

2. Barrier Protection Requirements
   a. Remove and replace all existing guardrail along the mainline and ramps to meet current standards.
   b. Connections between the new Guardrail and any fixed object (i.e. Concrete Barrier, Bridge Parapets, etc.) must be made with current standards; this may require the removal of a portion of the fixed object and replacement.
   c. Guardrail installed without curb will have Paving Under Guardrail [Item 441 - Asphalt Concrete Intermediate Course, Type 1, (448), T=3"]. Pave from the edge of the shoulder to 1'-0" behind the guardrail post at a minimum.
   d. Gaps in guardrail shall not be less than 300'.
3. Install Shoulder Rumble Strips on the mainline and the ramps of SR-8 as per Standard Construction Drawing BP-9.1.
4. Superelevation and Crown Location
   a. The Superelevation will meet the current Design Standards as per the Location and Design Manual
   b. At the project limits, the roadways are tying in to existing Superelevation transitions. The DBT will need to obtain the existing pavement elevations to match the existing Superelevation and transition rates.
   c. Relocate the crown as shown on Attachment B

14.6.3 PART 2

Roadway will be constructed in accordance with PART 2 Plans and Provisions as shown in Attachment C for project limits with the revisions as stated in the Scope of Services and with the following revisions:

1. Revisions to the Lane Configurations, Lane Widths, Shoulder Widths, etc. shown in Attachment B will be incorporated in to the Construction Plans
2. All areas within the plans in Attachment C which are shown as resurfacing will be changed to Full Depth Pavement Replacement using the same Pavement Buildup as the Mainline Pavement on IR-77 in Attachment C. This work also includes all appropriate appurtenances including but not limited to: Median Barrier Wall along IR-77/SR-8 (New median barrier shall be Type B1/C1 for glare screening), underdrains, drainage, barrier protection, subgrade stabilization, etc.
3. Install Shoulder Rumble Strips on the mainline and the ramps as per Standard Construction Drawing BP-9.1.

14.6.4 PART 2 – WATER WORK

Water Work will be constructed in accordance with PART 2 Plans and Provisions as shown in Attachment C for project limits

14.7 DRAINAGE

14.7.1 POST-CONSTRUCTION STORM WATER BEST MANAGEMENT PRACTICES (BMP) – PARTS 1 & 2

Post-construction storm water Best Management Practices (BMP) are not required for this Project.

14.7.2 DRAINAGE DESIGN REQUIREMENTS

14.7.2.1 PART 1

The following requirements apply to all areas where full depth pavement replacement (including drainage features that are located between the full depth pavement and the RW/LA Line) is being

performed and the area on SR-8 between Beacon Street and Carroll including the widened portion of SR-8 SB, Carroll Street SR-8 SB On Ramp, and the reconfigured Carrol Street SR-8 NB Off Ramp.. Drainage improvements are not required in the remaining areas of Pavement Resurfacing

1. The drainage design shall follow the current revision of the Location and Design Manual, Volume 2, Drainage Design. Provide all drainage calculations to the Department concurrent with the review of the associated buildable unit(s). Reuse of existing underdrains is not permitted.
2. Underdrain design
    a. Shall follow the Pavement Design Manual, Section 205, except as noted in this scope.
    b. Proposed underdrains shall be 6" in diameter and provided at the locations required per Pavement Design Manual, Section 205, wherever full depth pavement is proposed.
    c. When the existing roadway is being widened by 8' or more, an underdrain shall be placed at the sawcut. The aforementioned widening width of 8' includes both the travel lanes and shoulder.
    d. The maximum spacing between underdrains is 24', as shown in the Pavement Design Manual, Figure 205-9.
    e. In locations with planning and resurfacing, existing underdrains may remain in place.
    f. NOT USED
    g. Per L&D Volume 2, Appendix B, Sample Plan Note D123, provide unobstructed outlets for all existing underdrains encountered during construction.
    h. Pipe Underdrains shall be provided. Prefabricated Edge Drains and Aggregate Drains shall not be used.
    i. The depth of the rock cut underdrain shall be 6 inches below the cut surface of the rock (Pavement Design Manual, Figure 205-9).
    j. Underdrains which outlet to a slope shall be provided with an outlet per SCD DM-1.1.
    k. A fabric filter wrap shall be used when existing soils consist of a sandy or sandy-silt composition.
    l. If lighting will be installed on the project, transition the underdrain alignment within 10' of the lighting foundations to avoid conflicts with lighting foundations.
3. Storm sewer conduits located in or under any MSE walls shall use reinforced concrete pipe per CMS 706.02 with resilient and flexible gasket joint per CMS 706.11.
4. Reuse of existing drainage structures/pipes/etc. within the areas of full depth pavement replacement is NOT permitted and shall be designed and constructed as per the Location and Design Manual Volume 2. With the exception that these Drainage Conduits are permitted to remain and be reused if not impacted by construction activities:
    a. Culvert Located at SUM-77-15.37, CFN (Culvert File Number) 1806507 (Culvert Inventory shows this as a 54" Circular Culvert, original plans show it as a 76"x48" elliptical)
    b. Culvert Located at SUM-77-15.58, CFN (Culvert File Number) 1933923 (Culvert Inventory shows this as a 6'x4' Box Culvert)
5. All existing storm sewer conduits and structures located in the areas of full depth pavement replacement, shall be taken out of service.
    a. Use the following guidelines to determine whether an existing pipe being taken out of service should be abandoned or removed:
        i. Pipes 10 inches through 24 inches in diameter or rise with less than 3 feet of final cover shall be removed; with more than 3 feet of final cover they may be abandoned in place.
        ii. All conduits 24 inches or greater that are not incorporated in the final design shall be removed or abandoned per CMS 202.
        iii. Abandoned conduit shall be filled with Item 613 LSM and the DBT shall include methods to verify complete filling of conduit to be abandoned.
    b. Use the following guidelines to determine whether an existing structure being taken out of service should be abandoned or removed:
        i. Existing structures with less than 4.5' of cover shall be removed per CMS 202.

ii. Existing structures with more than 4.5' of cover shall be removed or abandoned per CMS 202.
iii. Abandoned structures shall be filled with Item 613 LSM and the DBT shall include methods to verify complete filling of structure to be abandoned.

6. Gore areas wider than 8 feet shall be provided with drainage features such that surface runoff from traveled lanes is not conveyed across the gore and onto other traveled lanes.
7. The following table indicates changes to Location and Design, Volume 2, that govern this project:

Section	Subject	Revised Language
1008.1.3	Cambered Flow Line	Where soil conditions at the site indicate that appreciable settlement may be expected, a cambered flow line or other settlement mitigation shall be provided.
1008.2	Rigid Pipe	Where soil conditions at the site indicate that appreciable settlement may be expected, a cambered flow line or other settlement mitigation shall be provided.
1102.3.4.D	Catch Basin Types	The basin shall also be located outside the design clear zone or behind guardrail where the protruding feature of the basin is not objectionable.
1103.5	Drainage; Miscellaneous	Inlets or catch basins shall arbitrarily be placed upstream of all intersections, bridges and pedestrian ramps unless prohibited by physical constraints.
1103.5	Flanking Inlets	The above is prevalent in long flat sag vertical curves, where a flanking inlet (or catch basin) shall arbitrarily be provided on both sides of the low point in a pavement sag.
1103.9	Slotted Drains and Trench Drains	Slotted drains shall not be permitted. Trench drains shall be used per Section 1103.9.
1104.2.2	Storm Sewer Access	Small sewers (under 36 inches in diameter) located under or near the edge of pavement, shall be accessible at intervals not to exceed 300 feet. For sewers sized 36 to 60 inches manholes shall be spaced every 500 feet maximum. Manholes shall be provided every 750 to 1000 feet maximum for larger sewers.
1104.4.2	Hydraulic Grade Line	Starting at the storm sewer system outlet and working upstream, the elevation of the hydraulic grade line at the upper end of each sewer run shall be determined using a 25-year frequency.
1104.4.2	Hydraulic Grade Line	One directional lane of a multiple lane highway or one-half of a lane on a 2- lane highway shall be passable when the sewer system is discharging the 50-year storm.
1106.1	End Treatments	Headwalls shall also be provided for Type D conduits greater than 24 inches in diameter or rise.
1107.2	Rock Channel Protection	A filter shall always be specified to prevent soil piping through the rock. A geotextile fabric shall be specified.

8. In the area on SR-8 between Beacon Street and Carroll including the widened portion of SR-8 SB, Carroll Street SR-8 SB On Ramp, and the reconfigured Carrol Street SR-8 NB Off Ramp:
   a. The DBT shall analyze the existing drainage system to determine if it meets current Design Standards and the requirements as per this Scope of Service
   b. The portions of the drainage system that meet current design standards may remain in place and not be replaced
   c. The portions of the drainage system that do not meet current design standards are required to be upgraded and replaced

d. The DBT is also required to provide upgraded or additional drainage conduits, structures, etc. that are required to meet the current Design Standards

14.7.2.2 PART 2

Perform in accordance with the plans and provisions as shown in Attachment C for project limits with the revisions as stated in the Scope of Services below:

1. In areas shown as resurfacing the in Attachment C the DBT will replace all existing drainage except for:
    a. Trunk line which runs down the center of the mainline along SR-8
    b. 48" Brick Trunk line which crosses the SR-8 at approx. Sta 4321+75±
2. In areas shown as full depth pavement replacement in Attachment C the DBT is not required to replace existing Drainage Conduits and Structures denoted to remain and be re-used provided they are not impacted by construction activities, otherwise they are to be replaced.
3. The Median Inlet (and the exiting conduit to the north) on SR-8 at approx. Sta 4340+30± (just south of the SUM-8-0063 Beacon Street Rear Approach Slab) is not required to be replaced. The Inlet can be modified to accommodate the new Median Barrier. The conduits under the pavement of SR-8 which feed into the Median Inlet are required to be replaced.
4. The Catch Basin (Sta 535+10±, 29.5'± Lt EB IR-76) and exiting 12" CMP to the north shown to remain on sheet 95 of Attachment C shall be removed and replaced.
5. The requirements shown for PART 1 for Drainage will apply

Provided in Attachment C-1 is reference material for a sewer inspection performed during the development of Attachment C.

14.8 DESIGN EXCEPTIONS

14.8.1 PART 1

The DBT will meet all other Design Criteria in Location and Design Manual with the exception of the approved Design Exceptions contained in Attachment E

Approved Design Exceptions

Request Number	Approval Date
1	05/21/2020
2	03/30/2020
3	05/12/2020
4	05/12/2020
5	05/12/2020
6	05/12/2020
7	05/13/2020

14.8.2 PART 2

Design Exceptions for PART 2 are shown on Attachment C and the Approved Design Exceptions are included in Attachment E.

14.9 LANDSCAPE / EROSION CONTROL

14.9.1 PART 1

Permanent Erosion Control as per the Location and Design Manual is required to be performed on this Project.

Within the ROW, all exposed soils not covered by hardened surfaces or other landscaping shall be seeded and mulched, or sodded, at or before the completion of the project. Water, lime, topsoil, commercial fertilizer, repair seeding and mulching, and inter-seeding, shall be provided to promote the growth and care of permanent seeded areas. Water, lime, and commercial fertilizer shall be provided to promote growth and care of permanent sodded areas.

All 2:1 slopes shall have Item 670 Slope Erosion Protection, Type E.

14.9.2 PART 2

Perform in accordance with the plans and provisions as shown in Attachment C.

14.10 FENCING

14.10.1 PART 1

All RW/LA fencing will be removed and replaced within the project limits with the exception that the existing fencing along SR-8 is to remain and not be replaced. Removed fence must be replaced within 24 hours. All existing fence foundations will be completely removed. The proposed fence will be Type CLT.

14.10.2 PART 2

Perform in accordance with the plans and provisions as shown in Attachment C for project limits with the revisions as stated in the Scope of Services and with the following revisions:

1. Removed fence must be replaced within 24 hours.
2. Remove and replace the existing RW/LA fencing between Johnson Street and Beacon Street on the west side of SR-8. All existing fence foundations will be completely removed. The proposed fence will be Type CLT.

15 DESIGN AND CONSTRUCTION REQUIREMENTS: STRUCTURES

15.1 GENERAL

A. All Shop Drawings shall comply with Item 501.
B. Foundation investigation information for the existing structures and for development of this project are available to the DBT. Collection of additional soils information shall be the responsibility of the DBT and considered incidental to this design effort.
C. Stay in place forms are prohibited.
D. Precast concrete deck forms (panels) are not permitted.
E. Precast concrete deck panels are not permitted.
F. Attachment of bridge mounted PCB to new bridge decks is permitted if the following conditions are met:
    a. Through bolts shall not be allowed, partial depth anchorage only.
    b. All interior faces of the re-grout holes shall be “roughened” to the satisfaction of the Engineer to ensure bonding of the non-shrink, non-metallic grout.
    c. Any grout remaining after removal of an anchor shall be drilled out
    d. All holes shall be sealed with High Molecular Weight Methacrylate (HMWM) resin after anchor hole is repaired.
G. Holes will not be permitted to be drilled into the face of the substructure units to support the structure during jacking operations.
H. Bridge railing that will receive decorative form liners shall be constructed using Self Consolidating Concrete (QC SCC).

15.2 BRIDGES

15.2.1 PART 1

The detailed scope for bridges is included in Attachment A and is contractual. The colors of the Sealing, Painting, and Fencing will be supplied to the DBT as the Pre-Design Meeting.

15.2.2 PART 2

The Bridges (SUM-76-1127, SUM-76-1152N, SUM-76-1148Q, SUM-76-1180L & SUM-77-1181) shall be constructed in accordance with the plans and provisions as shown in Attachment C.

The removal of existing Bridges (replaced by SUM-76-1152N & SUM-76-1148Q) shall be removed in accordance with the plans and provisions as shown in Attachments C

15.3 PERMANENT RETAINING WALLS

15.3.1 PART 1

The DBT may utilize retaining walls to avoid impacts to environmental resources, utilities, and to avoid the work extending outside of the Right of Way.

The following requirements are required for Permanent Retaining Walls:

A. The DBT may utilize Type D Concrete Barrier at the edge of paved shoulders
B. All exposed concrete surfaces of retaining walls shall be sealed with Epoxy Urethane. The color of the sealer will be specified by the Department during the review process.
C. All exposed concrete shall have a texture and finish will match one of the ones being utilized on the Retaining Walls in PART 2, the selection of the finish will be specified by the Department during the review process.
D. Top down constructed permanent retaining walls shall utilize a cast-in-place facing or precast panels.
E. Modular Block Walls are not permitted.
F. Timber Walls are not permitted.
G. Utilities shall not be placed within the reinforced soil mass of MSE wall systems, except for roadway and storm drainage systems in drainage conduits. All drainage conduits within MSE wall systems or in the fill of MSE wall systems shall have joints in accordance with CMS 706.11.
H. Drainage for overland flow shall be provided at the top of retaining walls preventing water from flowing across vertical faces of walls.
I. The DBT shall submit a complete set of design calculations for each retaining wall design submittal. A complete set of design calculations includes, but is not limited to, calculations, assumptions, inputs, and outputs.

15.3.2 PART 2

Construction of Permeant Retaining Walls will be as per performed in accordance with the plans and provisions as shown in Attachment C at the locations where shown.

15.4 NOISE BARRIERS – PART 2

The Noise Barriers shall be constructed in accordance with the plans and provisions as shown in Attachment C

16 DESIGN AND CONSTRUCTION REQUIREMENTS: TRAFFIC CONTROL

16.1 PAVEMENT MARKINGS AND DELINEATORS SPECIAL PROVISIONS

in addition to the Governing Regulations listed in section 8.1 of this document:

16.1.1 PART 1

A. Pavement Markings: ☒ Yes ☐ No
   1. Long Line
      a. Supplemental Specification 807 (Wet Reflective Liquid Applied Pavement Markings) (Epoxy) / Supplemental Specification 850 (Grooving for Recessed Pavement Markings)
      b. Width shall be 8" for the Edge Lines and Lane Lines on IR-76/IR-77/SR-8 and ramps
   2. All others: Item 646 (Epoxy)

B. Raised Pavement Marker: ☒ Yes ☐ No
   Install as per Standard Drawings TC-65.10, TC-65.11, & TC-73.20. In addition to what is shown on the Standard Drawings, install Raised Pavement Markers on Lane Lines and Edge Lines.

C. Delineators: ☐ Yes ☒ No

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

E. Object Markers: ☒ Yes ☐ No
   All object markers will conform to Item 630, Sign, Flat Sheet Sign

16.1.2 PART 2

Construction of Pavement Markings and Delineators will be performed in accordance with the plans and provisions as shown in Attachment C at the locations where shown with the following modifications:

A. Long Line Pavement Markings shall have a width shall of 8" for the Edge Lines and Lane Lines on IR-76/IR-77/SR-8 and ramps

B. Raised Pavement Markers shall be installed as per Standard Drawings TC-65.10, TC-65.11, & TC-73.20 on IR-76/IR-77/SR-8 and ramps.. In addition to what is shown on the Standard Drawings, install Raised Pavement Markers on Lane Lines and Edge Lines.

16.1.3 PART 1 & PART 2

In the month of July every year during construction all original existing pavement markings not impacted by construction activities within the work limits (on IR-76, IR-77, SR-8, and ramps) shall be remarked using Item 642 – Paint.

16.2 SIGNING SPECIAL PROVISIONS

In addition to the Governing Regulations listed in section 8.1 of this document:

16.2.1 PART 1 – IR-76 & IR-77

A. The following requirements apply to the Mainline of IR-76 & IR-77 and the Lead In Signs on the City Streets/State Routes/etc.

B. All signs and sign supports placed in areas where Noise Barriers are installed will be placed between Noise Barrier and the Roadway, no sign supports will be permitted to be placed on the outside (Residential Side) of the Noise Barrier.

C. All sign structures shall be constructed on new sign foundations..

D. Flat Sheet Signs: ☒ Yes ☐ No.

a. Replace all existing flat sheet signs with new flat sheet signs. Size the signs in accordance with the OMUTCD.
b. Removed flat sheet signs will become the property of the Contractor.
c. Revise the legends on the new flat sheet signs as needed to incorporate the new lane configurations
d. Add new flat sheet signs as needed to accommodate the new lane configurations
e. Advisory signs warning drivers of reduced right side shoulder widths approaching existing bridges on IR-77 and SR-8 (from Beacon Street to Carrol/Buchtel Exit/Entrance Ramps)

E. Extrusheet Signs: ☒ Yes ☐ No
a. Replace all existing Extrusheet signs with new Extrusheet signs. Size the signs in accordance with the OMUTCD
b. Removal of existing Extrusheet signs is the responsibility of the DBT
c. Tourist-Oriented Directional Signs (TODS) and logo signs are installed and maintained by Ohio Logo, Inc., under contract with and in locations approved by ODOT. Contact Ohio Logos at 1-800-860-5646 to coordinate removals or relocations of TODS and logo signs. The DBT will be responsible for the removals, relocations, and reinstallation as needed.
d. Wherever existing signs are mounted overhead, they are to remain overhead mounted.
e. All Mainline Primary Extrusheet Signs are to mounted overhead, on a Truss or Cantilever.
f. Removed Extrusheet signs will become the property of the Contractor.
g. Revise the legends on the new Extrusheet signs as needed to incorporate the new lane configurations
h. Add new Extrusheet signs as needed to accommodate the new lane configurations.

F. Ground Mounted Post Supports: ☒ Yes ☐ No
a. Replace all existing ground mounted post supports with new ground mounted post supports. New installations will be on new supports. No reuse of existing ground mounted supports will be allowed.
b. SCD TC-41.15, Structural Pipe Sign Support, shall not to be used.Removed ground mounted post supports will become the property of the Contractor.

G. Ground Mounted Beam Supports: ☒ Yes ☐ No
a. Replace all existing ground mounted beam supports with new ground beam supports
b. Supports subject to multidirectional impacts at intersections will use the alternate connection on sizes larger than S4x7.7.
c. Removed ground mounted beam supports will become the property of the Contractor.
d. All Ground Mounted Beam supports shall be breakaway regardless of location.

H. Overhead Supports: ☒ Yes ☐ No
a. Replace all overhead sign supports on properly sized and located overhead supports.
b. Remove sign lighting, including luminaire support assemblies, ballasts, luminaries, disconnect switch, switch enclosure, conduit, and wiring.
c. Removed overhead supports will become the property of the Contractor.
d. Location of all supports shall be as per the Traffic Engineering Manual
e. At all locations, a minimum vertical clearance of seventeen feet shall be maintained.
f. All overhead supports shall be placed be protected by barrier.

16.2.2 PART 1 – SR-8

Signing on SR-8 to remain except for the signs impacted or required by the improvements to SR-8 as shown in Attachment B at these locations:

a. SR-8 Southbound from the Carroll Street On-Ramp to the Beacon Street Bridge including the addition of advisory signs warning drivers of reduced right-side shoulder widths approaching bridges
b. SR-8 northbound exit ramp at Carroll / Fountain Street

All requirements listed above for Signing (PART 1 – IR-76 & IR-77) apply to the signs impacted by the work

16.2.3 PART 2

Perform in accordance with the plans and provisions as shown in Attachment C with the following additional requirements

a. Advisory signs warning drivers of reduced right-side shoulder widths approaching existing bridges
b. Install a 30-mph speed advisory sign along Ramp P (SR 8 SB to I-76/77) approaching the Johnston Street bridge

16.3 LIGHTING SPECIAL PROVISIONS

In addition to the Governing Regulations listed in section 8.1 of this document:

16.3.1 PART 1 – SUM-76 & SUM-77

A. Complete Interchange Lighting: ☒ Yes ☐ No
B. Partial Interchange Lighting: ☐ Yes ☒ No
C. Locations that are getting new lights, poles and circuits shall be designed using 3-wire systems. Lighting circuits will be sized during the design of the Project.
D. Continuous Lighting: ☒ Yes ☐ No -- The continuous lighting within the project limits will be replaced with median mounted low-mast LED lighting.
E. Underpass Lighting: ☒ Yes ☐ No, in addition to the Lighting Standards the following shall be performed
   1. Underpass lighting shall illuminate the Roadway and Sidewalks (if present).
   2. The Ohio/Erie Canal Towpath under the SUM-76-0954 shall be illuminated
   3. LED Lighting is required
F. The following notes from the Traffic Engineering Manual Notes and Drawings will apply:
   1. NOT USED
   2. NOT USED
   3. 1142-11 [LAMPS]
   4. 1142-20 [PADLOCKS AND KEYS]
   5. 1142-2 [PULL BOX CLEANED]
   6. 1142-19 [HIGH VOLTAGE TEST WAIVED]
   7. 1142-21 [MAINTAIN EXISTING LIGHTING]
G. Unless otherwise specified in the plans, all luminaires with asymmetric distribution will be installed so the “arrow” or “street-side” designation on the optical assembly is positioned perpendicular to the centerline or baseline of the pavement from which the tower is stationed. Any optical rotation called for will be expressed as a clockwise [cw] or counterclockwise [ccw] angular measurement from the normal “arrow” position.
H. The power supply agency for this project is Ohio Edison 1910 West Market St, Building 1, Akron, OH 44313,330-436-4055, ATTN: David Miller.
   1. For each power service location, the DBT will provide written concurrence from the power company involved that service will be provided at that location.
   2. Any costs that the power company may charge for providing the requested service will be included in the lump sum cost for lighting.
   3. All power service for 3-Wire Lighting Circuits will be 480V, 3-wire metered with un-fused pre-meter disconnects.
   4. The DBT will provide the locations of all power services, both existing and proposed, to the District, for approval during the preliminary review.
I. Existing light poles, including the bracket arm and transformer base, are to be removed and disposed of by the DBT.
J. All control centers shall be replaced to current standards. The DBT shall coordinate and install power service with Ohio Edison.

K. No proposed light poles shall be placed behind noise walls.
L. The following notes from Attachment F will apply:
    1. Item 625, Power Service, As Per Plan
M. Architectural Lighting – Tow Path Trail under I-76
    The DBT shall be required to design and construct architectural lighting of the main span of I-76 over Tow Path Trail (SUM-76-0954). The lighting plans shall conform to the following requirements, at a minimum:
    1. The architectural lighting plan shall be developed by an experienced decorative/accent lighting designer.
    2. The lighting system shall be comprised entirely of LED lighting. A fixture similar to Color Kinetics "ColorGraze MX Powercore" or approved equal, shall be selected which is capable of producing at least 1,200 lumens per fixture and changeable for at least three colors (red, green, blue). The DBT shall demonstrate that the fixture is appropriate for this application for long-term durability. In addition, the fixture must be rated for 3G vibration, and capable of withstanding the weather exposure anticipated on the structure. The selected fixture must be approved by ODOT prior to preparation of design plans.
    3. The lighting plan shall include:
        a. A fixture mounted to every-other bridge beam, facing upward, and centered over Tow Path Trail. The attachment hardware shall be provided per manufacturer's recommendations.
        b. Details for integration of conduit, power, and control wiring into the bridge superstructure, including system hardware and attachment details.
        c. Specifications for the master controller, which shall be specifically manufactured for the selected fixture. The controller must include a programmable time clock to set various color changing programs based on time of day, day of week, month of year, etc.
        d. The location of master controller, chosen to provide access for maintenance forces and protection from vandals.
        e. Details for the location and mounting mechanism of the photocell.
        f. A separate power service to the controller cabinet.
    4. The DBT shall work with the Project Engineer to orient the fixtures to achieve uniform lighting on the underside of the bridge, to the maximum extent possible.

16.3.2 PART 1 – SUM-8

Lighting on SR-8 to remain except for the lighting impacted or required by the capacity improvements to SR-8 as shown in Attachment B at these locations:

a. SR-8 Southbound from the Carroll Street On-Ramp to the Beacon Street Bridge
b. SR-8 northbound exit ramp at Carroll / Fountain Street

All requirements listed above for Lighting (PART 1 – IR-76 & IR-77) apply to the lighting impacted by the work

16.3.3 PART 2

Perform in accordance with the plans and provisions as shown in Attachment C.

16.4 TRAFFIC SIGNALS

NO TRAFFIC SIGNAL WORK ANTICIPATED WITH THIS PROJECT. If any work would be required it is considered incidental to the project.

16.5 INTELLIGENT TRANSPORTATION SYSTEM (ITS)

In addition to the Governing Regulations listed in section 8.1 of this document:

All ITS work is required to follow the requirements as specified in this document, along with the Traffic Engineering Manual (TEM) Part 13, Supplemental Specification 804, 809, 904, 909, and all ITS Series Standard Construction Drawings which are applicable.

The only ITS item allowed under pavement is conduit perpendicular to the roadway that is used to cross from one side to another.

Any pole, truss, or pedestal mounted ITS cabinet that is impacted by construction shall be replaced by a ground mounted cabinet. Any camera pole or ground-mounted ITS cabinet, which is impacted by construction, shall be replaced along with underground infrastructure and moved to a location accepted by the ODOT ITS Engineer. Any Dynamic Message Sign (DMS) pedestal or truss structure which is impacted by construction shall be replaced in kind along with underground infrastructure at a location accepted by the ODOT ITS Engineer, and the DMS shall be relocated to the new structure.

All fiber optic termination/splicing details shall be provided by the ODOT ITS Engineer. The DBT shall contact the ODOT ITS Engineer (CEN.ITS.LAB@dot.ohio.gov) a minimum of 14 calendar days in advance of needing the details. The DBT shall be responsible for any conversion of the details into plan sheet format.

16.5.1 GPS COORDINATES / AS-BUILT PLANS

The DBT shall supply GPS Coordinate/As-Built Plans for the ITS portion of the project per Supplemental Specification 809 and detailed below.

Prior to the Final Acceptance of the project, the DBT shall provide as-built plans of the entire ITS portion of the project to the ODOT ITS Engineer in the following formats: DGN files, and PDF file. All hard copies shall be submitted in separate 3-ring binders, noting the contents on the outside of the binder.

Included with the pdf and hard copy versions of this documentation, the DBT shall provide actual field data of all sites. This data shall include the following:

A. GPS coordinates in Latitude and Longitude in decimal format at a minimum, if State Plane Northing/Easting is also provided, the Ohio North (Zone 3401) or Ohio South (Zone 3402) shall be provided, within 3 ft (0.91 m) accuracy, of all pull boxes, supports, poles, cabinets, devices, and power services with coordinating device id number. Note device id number on the as-built plans or use the Department ITS Engineer provided id number.
B. Meter numbers and utility of all power services with their service locations

16.5.2 MAINTAINING ITS AND UTILITY LOCATES DURING CONSTRUCTION

The DBT shall Maintain ITS During Construction and perform utility locates per Supplemental Specification 809.

The ITS Infrastructure is not listed as a member of OUPS at this time. All requests for locates shall be coordinated through the Office of Traffic Operations, ITS Field Operations Section. The DBT shall submit requests to CEN.ITS.LAB@DOT.OHIO.GOV . The ITS shall be marked once by ODOT personnel or an ODOT representative and the DBT shall take care to note where the infrastructure is located. After this initial marking has occurred, it shall be the responsibility of the DBT to perform any remarking of the ITS infrastructure when needed. Any damage to the ITS infrastructure, because of project activities shall be repaired immediately (See ITS Device Downtimes Section) and at the cost of the DBT. All newly installed infrastructure shall be the responsibility of the DBT to locate until final project acceptance.

16.5.3 PART 1 – IR-76 AND IR-77

In all areas where new Median Barrier is being installed on the roadway and/or on the bridges is being installed perform the following:

A. Install two 4” Multicell Conduits in the barrier (do not install Fiber Optic Cable)
B. Provide Median Pull Boxes per STD ITS-14.50 spaced at a maximum of 1000 feet
C. Provide Lateral Crossings (two Multicell Conduits) out of the median spaced at a maximum of 4500 feet and at each end of all mainline bridges/structures. The Lateral Crossings will extend all the across the interstate from outside shoulder to outside shoulder.
D. Provide Lateral Crossings (two Multicell Conduits) out of the median to the existing ITS equipment located on the outside shoulders of the freeway
E. Provide Structure Grounding on all Structures the Conduit is installed

16.5.4 PART 2

The ITS shall be constructed in accordance with the plans and provisions as shown in Attachment C with the following additions in all areas where Median Barrier Wall is being installed on IR-77 and SR-8:

A. Install two 4” Multicell Conduits (do not install Fiber Optic Cable)
B. Provide Median Pull Boxes per STD ITS-14.50 spaced at a maximum of 1000 feet
C. Provide Lateral Crossings (two Multicell Conduits) out of the median spaced at a maximum of 4500 feet and at each end of all mainline bridges/structures. The Lateral Crossings will extend across the interstate from outside shoulder to outside shoulder.
D. Provide Lateral Crossings (two Multicell Conduits) out of the median to the existing ITS equipment located on the outside shoulders of the freeway
E. Provide Structure Grounding on all Structures the Conduit is installed

In addition, the following applies to the existing Traffic Monitoring Station located on IR-77

A. Coordination for this work will be made with the Sandra Mapel (ODOT Central Office Technical Services, 614-644-0291)
B. Include Plan Note 1342-14 of the Traffic Engineering Manual in the Plans
C. Remove and dispose of the existing Traffic Monitoring Station located at STA 4293+40± on IR-77
    a. Prior to the removal and any work being performed in the area of the station coordination will be made with Sandra Mapel to coordinate a time for ODOT to disconnect the equipment.
    b. ODOT Office of Technical Services will remove and take possession of the components in the cabinet prior to the DBT removing other items.
    c. The DBT will be responsible for the removal and disposal of the remaining items of the Traffic Monitoring Station.
D. The DBT will install new underground items for ODOT Office of Technical Services to utilize when installing the new Traffic Monitoring Equipment at the completion of the Project. Install the underground items at STA 4295+60 on IR-77. The requirements are:
    a. Install 2 Median Junction Boxes (One on each side of the Median Wall) and connect the two Pullboxes with a 3” conduit
    b. Racepipes
        i. Install 4 (1” diameter) Racepipes from each of the Median Junction boxes that extend toward the traffic side of the freeway
        ii. Extend the Racepipes 12” minimum from the face of the Median
        iii. Center to Center Spacing of the Racepipes shall be 8”
        iv. The Racepipes shall be 4 ½’ below the surface of the pavement
        v. Racepipe ends shall be secured with Plumbers Duct Seal (one-pound block per Racepipe)
        vi. Mark the location of the Racepipes on the face of the Median
    c. Install a 24” Pullbox (725.08) on the outside of both the northbound and southbound sides of the freeway
    d. Connect the Median Pull Boxes to the Pullboxes on the outside of the freeway with 3” conduit

17 PROJECT SCHEDULE REQUIREMENTS

The current edition of Proposal Note 132, including updates released on or before the Shortlisting Announcement, shall be met or exceeded. All bid documents shall be escrowed per PN 110.

18 PLAN SUBMITTALS AND REVIEW REQUIREMENTS

18.1 PLAN COMPONENTS:

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

A. Real Estate Policies and Procedures Manual Section 3100.
   The DBT will also identify all topographic features within the existing and proposed Right-Of-Way limits, including underground utilities.
B. Bridge Design Manual.
C. CADD Standards Manual
D. Location and Design Manual, Volume 3, The following sections of the Location and Design Manual, Volume 3 are **NOT** required:
   1. 1302.13, Plan Signatures
   2. 1307.3, Subsummaries
   3. 1307.4, Quantity Calculations
   4. 1310.3, Earthwork and Seeding Quantities

Units of measure are **NOT** required.

Simplified plans (section 1301.2) are **NOT** allowed, except as noted in other sections of the Scope of Services.

Share Point shall be used for all submittals and as directed by the Department.

18.2 QUALITY CONTROL:

The DBT will be responsible for the professional quality, technical accuracy and adherence to the Governing Regulations listed in section 8.1 of this document, for all plan submittals required under this contract.

The DBT will immediately notify the Department of any apparent discrepancy between the various design and construction manuals and the Conceptual 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.

Unless stated otherwise, review comments do not revise the scope or intent of the project and do not constitute a request for changes beyond the current contracted Scope of Services.

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 8.1 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.

In the event the DBT believes that any review comment, or orders issued by the Department, require a change to the scope of the agreed work, the DBT will first contact the Department for clarification and will, within 10 days of receipt of the comments or orders, provide written notice to the District Project

Manager and Project Engineer concerning the reasons why the DBT believes the scope has been changed.

Additional requirements outlining a comment resolution process are included in Attachment S (Comment Resolution Process).

18.3 SUBMISSION CONTROL

For each required submission, unless otherwise stated, The Department will have fifteen (15) Work Days (the following are excluded as Work Days: State Holidays, Federal Holidays, Saturdays, Sundays, Friday after Thanksgiving Day, day before Christmas Day, days between Christmas Day and New Year's Day) from receipt to review complete submissions. This review time must be shown on the required Progress Schedule.

The start of the review period will begin the day after the submittal is received by the Department except if submitted on a Friday in which case the review period will begin the following Monday (unless Monday is a State holiday in which case the review period will begin on the following Tuesday). Unless listed elsewhere in the Contract Documents, utilities shall receive 30 calendar days to review submittals.

Buildable Unit submissions are limited to no more than three (3) concurrent submittals under review at any given time.

Buildable unit submissions are also limited to a maximum of 200 sheet. Technical reports and drainage calculations are not considered Buildable Units. The buildable unit maximum sheet count excludes cross section sheets.

All PDFs are to be searchable.

18.4 PRELIMINARY DESIGN REVIEW SUBMISSION

For each Buildable Unit, the DBT shall submit the Preliminary Design submission for review by the Department and other 3rd party agencies as appropriate.

Preliminary Design Submission is defined as follows:

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.

These submission milestones must be shown on the baseline schedule.

Each Plan Sheet will be clearly marked “PRELIMINARY DESIGN SUBMISSION – NOT FOR CONSTRUCTION”

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. A disposition of comments is also required.

Plan Review Distribution Table: The DBT shall supply an electronic file (PDF) and half size (11" x 17") paper prints simultaneously to the parties indicated below, except if an affected utility company requires full size (22”x34”) plans.

	Number of half size Sets
ODOT District Planning & Engineering	1 and PDF
ODOT District Construction	1
Each affected utility and railroad	1

18.5 MAJOR DESIGN DECISION:

Separate submittals for concurrence with major design decisions made after the Interim Design Review are required. Major design decisions involve significant utility relocation, unforeseen acquisition of ROW, traffic operation or geometric decisions that involve two or more viable solutions, and any other decision that impacts the public, operation of the facility or future maintenance.

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

18.6 FINAL DESIGN REVIEW SUBMISSION:

For each Buildable Unit the DBT shall submit the Final Design submission for review by the Department and other 3rd party agencies as appropriate.

The Final Design submission shall include submittal requirements as defined as Stage 3 per the ODOT Location & Design, Volume 3, however, subsummary and general summary sheets are not required. Quantity summaries shall be provided in electronic format (Excel and PDF) prior to construction for the Department's use in establishing testing requirements.

Buildable units will be rejected if a submission is incomplete, is of poor quality, or proposes work not acceptable by the design build scope of services. If a buildable unit is rejected or not accepted a complete resubmittal will be required and the 15 working day review period will start over.

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

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 file (PDF) and half size (11" x 17") paper prints simultaneously to the parties indicated below, except if an affected utility company requires full size (22"x34") plans.

	Number of half size Sets
ODOT District Planning & Engineering	1 and PDF
ODOT District Construction	1
Each affected utility and railroad	1

18.7 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 before the DBT submits the construction plans.

The Department shall have 5 work days from receipt to review that all comments have been complied with. The start of the 5 work day review period will begin the day after the submittal is received by the Department except if submitted on a Friday in which case the review period will begin the

following Monday (unless Monday is a State holiday in which case the review period will begin on the following Tuesday). This review time must be shown on the required Progress Schedule.

If the Department determines comments were not addressed, then the DBT is to revise and resubmit to the satisfaction of the Department, and an additional 5 work day review will be performed on the revised plans. If work not generated by a comment, is added after the Final Design Review then the Department has the right to request a formal Final Design review of the new work item(s).

Each plan sheet shall have its last revised date noted on the sheet and clearly marked 'RELEASED FOR CONSTRUCTION'. The Released for Construction (RFC) 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.

Plan Review Distribution Table: The DBT shall supply an electronic file (PDF) and half size (11" x 17") paper prints simultaneously to the parties indicated below, except if an affected utility company requires full size (22"x34") plans.

	# of Half Sets
ODOT District Planning & Engineering	1 and PDF
ODOT District Construction	1
ODOT District Construction Project Engineer	2
Federal Highway Administration	0
Each affected utility company	1

18.8 PLAN DISTRIBUTION ADDRESSES:

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

Ohio Department of Transportation,
District 4
Office of Construction
2088 South Arlington Road
Akron, Ohio 44306
Attn: Anthony Pamer, PE

Federal Highway Administration
200 North High Street, Room 328
Columbus, Ohio 43215-2408
Attn: Charmagne' Crook

Utility Companies
(As shown in section 12)

18.9 TASK FORCE DESIGN MEETINGS

The DBT is required to conduct Task Force Design Meetings. These meetings will be held to discuss specific DB solutions and resolving issues with the design, update the Department with the status of the design. At a minimum, these meetings shall include the Designer (and specifically the design element lead engineer or representative), the Contractor, and the Department. These meetings shall be Integrated Multi-discipline Design Meetings, led by the DBT, focusing on integrating design elements into a single, comprehensive, and buildable design. At these meetings, design conflicts are to be resolved, progress is reviewed, and the schedule is updated to address impacts on both design and construction.

During the design process, these meeting shall occur every two weeks at a location agreeable and accessible to all parties and close to the Project Location. The DBT shall provide an agenda 48 hours prior to the meeting so the Department can have the necessary personnel in attendance. The DBT shall be responsible to notify any interested 3rd parties so they can be in attendance. The 3rd parties shall be given adequate notice, as deemed by the 3rd party, so proper personnel can attend. "On-line" meetings (i.e. Microsoft Teams, WebEx, etc.) are acceptable if approved by the Department.

19 ADDITIONAL REQUIREMENTS

The DBT shall create and maintain a Request for Information (RFI) Log and a Field Change Log. The process for determining, documenting, and tracking both design and construction RFI's shall be prepared by the DBT and approved by the Department.

At a minimum, the RFI Process shall address the following:

1. Controlled in accordance with Department's document management systems
2. Created and retained in electronic systems
3. Approved for adequacy prior to release
4. Reviewed and updated as necessary and re-approved by the same personnel that performed the original approval.
5. Identified to ensure that changes and revision status are known.
6. Available at all points of use, including the Contractor, Sub-Contractors, Designer, and the Department
7. How the RFI's are distributed
8. Prevented from unintended use, if obsolete
9. Organized, indexed and delivered to the Department for Final Acceptance

20 BUILDABLE UNITS (BU)

20.1 DEFINITION

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

20.2 GENERAL

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

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 DBT and no time extensions shall be approved for this.

For projects with railroad involvement, a separate BU shall be submitted (in accordance with Section 14) for review that includes all work components over, under, within and adjacent to the railway that could impact or influence railroad facilities or operations. Subdivision of work components that impact or influence railroad facilitates or operations into multiple BU's shall not be performed unless previously agreed to by the Department and railroad.

21 DOCUMENT INVENTORY

All Attachments have been placed on the ODOT FTP server at
ftp://ftp.dot.state.oh.us/pub/Districts/D04/102329/Reference%20Files

INDEX OF ATTACHMENTS

Attachment	Reference / Contractual	Attachment Description
A	Contractual	Design and Construction Requirements: Structures
B	Reference	Preliminary Roadway Plans
C	Reference	Central Interchange Plans (SUM-76/77/8-10.99/11.54/0.00) Remainder of plan not specified as contractual below
C	Contractual	Central Interchange Plans (SUM-76/77/8-10.99/11.54/0.00) Retaining Walls, sheets 442-529 Lighting, sheets 643-677 Noise Walls, sheets 678-715 Structures, sheets 716-950 Aesthetic Details, sheets 959-1012A
C-1	Reference	Additional Information for Preliminary Central Interchange Plans (SUM-76/77/8-10.99/11.54/0.00)
D	Reference	Conceptual MOT Reference

E	Contractual	Approved Design Exceptions
F	Contractual	Required Plan Notes
G	Reference	Decorative Fence Detail
H	Reference	Decorative Fence Detail
I	Reference	Structure Type Studies
J	Reference	Vertical Clearances
K	Reference	Structure Details – SUM-76-1151L & 1154R
L	Reference	Certified Traffic (2019-05-28)
M	Contractual	Asbestos Surveys
N	Contractual	Field Office
O	Contractual	Maintenance of Traffic
P	Reference	Part 1 Soil Profiles
P-1	Reference	Part 1 Geotech Exploration Report (Part I & II)
P-2	Reference	Part 1 Geotech Exploration Report (NW)
P-3	Reference	Plan Subgrade GB-1
P-4	Reference	Plan Subgrade GB-1
P-5	Reference	Part 1 Geotech Exploration Report (Part III)
Q-1	Reference	Interchange Modification Study (IMS) for SUM-8-0.00 PID 107834 Approval Letter
Q-2	Reference	Interchange Modification Study (IMS) for SUM-8-0.00 PID 107834
Q-3	Reference	Interchange Modification Study (IMS) for SUM-8-0.00 PID 107834 (Appendix)
Q-4	Reference	Interchange Modification Study (IMS) for SUM-76 Central Interchange PID 101402 Approval Letter
Q-5	Reference	Interchange Modification Study (IMS) for SUM-76 Central Interchange PID 101402
R	Contractual	Comment Resolution Process
S	Reference	Airway / Highway Clearance Data for Central Interchange
T-1	Reference	Existing CADD Files – Part 1
T-2	Reference	Existing CADD Files – Part 2
U	Reference	Certified Traffic (2019-05-19)
V	Reference	Central Interchange MOTAA Report
W	Contractual	Environmental Document (Part 1)
X	Contractual	Environmental Document (Part 2)
Y	Reference	Proposal Note 97 with “Tracked Changes” turned on for reference for changes from the CMS
Z-1	Contractual	Special Provision – Testing Foundations With The Thermal Integrity Profiler (T.I.P.)
Z-2	Contractual	Special Provision – Crosshole Sonic Logging (CSL) Testing For Drilled Shafts
Z-3	Contractual	Special Provision – Form Liners For Noise Barriers
ZA-1	Reference	Noise Analysis Report, SUM-86/77/8 Akron Central Interchange, PID 101402
ZA-2	Reference	Revisions to the Noise Analysis Report, SUM-86/77/8 Akron Central Interchange, PID 101402
ZB	Reference	Central (NE) Interchange Feasibility Study – SUM-76 Akron Central Interchange (PID 101402)

The Reference Attachments are provided for informational purposes to assist the Proposers in preparing their proposals, but the Reference Attachments do not represent requirements binding on the DBT. The Department makes no representation or warranty as to the accuracy, adequacy, applicability, or completeness of the Reference Attachments. Except to the extent set forth to the contrary in the

contract, reliance upon the Reference Attachments 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 Attachments, regardless of the contents thereof. The Design-Build Team shall be solely responsible for Project design and construction in accordance with the Contract.

Attachments indicated as "Contractual Requirement" are binding onthe DBT and must be followed in the design bid process.