RED FLAG SUMMARY

(Form Revised November 2004)

The purpose of this Red Flag Summary is to identify concerns that could cause revisions to the anticipated design and construction scope of work, the proposed project development schedule, the estimated project budget, or the potential impacts of the project on the surrounding area.

Date Red Flag Summary Completed:	October 14, 2005
District:	ODOT District 8
Project Name (County, Route and Section):	Western Hamilton County Transportation Study
City, Township or Village Names(s):	City of Cincinnati, City of Harrison, City of Cheviot, Village of Cleves, Village of North Bend, Village of Addyston, Harrison Township, Crosby Township, Colerain Township, Whitewater Township, Miami Township, Green Township, Delhi Township
PID:	75846
Prepared by:	Robyn Bancroft, OKI Corridor Studies Project Manager
ODOT Project Manager:	N/A*

GENERAL PROJECT PLANNING INFORMATION:

Project Description:

The Ohio-Kentucky-Indiana Regional Council of Governments (OKI) has initiated this study to bring together the diverse interests of Western Hamilton County to identify transportation deficiencies and make recommendations for improvements. The purpose is to develop a strategic transportation plan that will improve mobility and safety for residents, commuters, visitors and freight throughout Western Hamilton County. This includes looking at such issues as improving the ability to travel and connect Western Hamilton County with Butler County, Dearborn County, and Downtown Cincinnati. The study will also look at issues affecting the overall traffic flow including new improvement ideas for public transit, the interstate system, and local roadways.

Project Limits/General Location:

The study will include roadways of the western portion of Hamilton County, Ohio stretching east to west from the Mill Creek and Colerain Avenue, all the way to the Indiana state line and north to south from Butler County, Ohio to the Ohio River. This also includes the western suburbs of the City of Cincinnati. Major roadways included are I-74, I-275, U.S. 27, U.S. 50, SR128 and SR264. (refer to Appendix 1: Study Area)

*N/A (Not applicable) = data response could not be made due to size of study area and lack of site-specificity.

Structures: Appendix 2: Inventory of Hamilton County Bridges
Estimated Cost: $800,000
Funding Source(s):

- ☐ Federal
- ☒ State
- ☐ Local _____
- ☐ Private _____

Are funding splits required? ☐ Yes ☒ No Specify: _____
Anticipated quarter and FiscalYear of project award: Third Quarter FY 2005
Project Sponsor: The Ohio, Kentucky, Indiana Council of Governments (OKI)
Is local legislation required? ☐ Yes ☒ No
Is FHWA oversight required? ☐ Yes ☒ No
Is project location on the congestion/safety list? ☐ Yes ☒ No
Problem identified by *(indicate document date)*:

- ☐ District Work Plan _____
- ☐ Congestion Study _____
- ☐ Safety Study _____
- ☐ Major New _____
- ☐ MPO TIP _____
- ☒ MPO LRP: OKI 2030 Regional Transportation Plan
- ☐ Access Ohio _____
- ☒ Other: OKI FY 2006 Unified Planning Work Program

Are there any other projects in the area (ODOT, local or utility) that might conflict with the project (e.g., a local project on the proposed detour route for the ODOT project, a resurfacing project a year after a pavement marking project)? ☐ Yes ☒ No
Specify: _____
Are there growth or land use changes in the area surrounding the project that could have an impact on project scope? ☐ Yes ☒ No
Specify: _____
Are there any known public involvement issues? ☐ Yes ☒ No
Specify: _____

EXISTING INFORMATION:

Check all information that was reviewed for the Red Flag Summary. Not all information is available or necessary for every project. The scope of the Red Flag Summary should be commensurate with the nature of the proposed project.

- ☐ Legal Speed
- ☐ Design Speed
- ☐ Traffic Data:
- ☐ Opening Year ADT:
- ☐ Design Year ADT:
- ☐ Design Hourly Volume:
- ☐ Directional Distribution:
- ☐ Trucks (24 Hour B&C):

(Traffic data does not need to be certified for the Red Flag Summary.)

- ☐ Turning movement traffic counts
- ☐ Functional Classification:
    - Interstate, freeway
    - Arterial
    - Collector
    - Local
    - Locale:
        - Rural
        - Urban
- ☑ National Highway System (NHS) Routes: I-74, I-275, U.S. 27, U.S. 50, SR128 and SR264
- ☑ non-NHS Routes: Examples include; Kilby Rd., Anderson Ferry Rd, Neeb Rd., North Bend Rd., Race Rd., West Fork Rd, Westwood-Northern Blvd, Ebeneezer, Taylor, Warsaw, Guerley, Quebec, and Seton.
- ☐ (3R) Project? ☐ Yes ☑ No
- ☑ Aerial mapping
- ☐ Ohio Utility Protection Service (OUPS) Markings
- ☑ United States Geological Survey (USGS) topographic mapping
- ☑ Federal Emergency Management Agency (FEMA) flood plain study mapping
- ☑ Natural Resources Conservation Services (NRCS) mapping
- ☑ County map(s)
- ☑ Airport locations within 4 miles of project: Greater Cincinnti Northern Kentucky International Airport (CVG); Cincinnati State West (Harrison)
- ☐ Tax maps

- ☐ Property deeds
- ☐ Pavement marking log
- ☐ Original construction plans _____
- ☐ Existing right of way plans _____
- ☐ Bridge inspection reports
- ☐ Bridge Load Ratings
- ☐ Pile Driving Logs
- ☐ Recorded vertical clearances for overpasses and underpasses
- ☐ Old Soil borings
- ☐ Old Geologic reports
- ☐ Pavement Cores
- ☐ Dynaflect Testing
- ☐ Deck Cores
- ☐ Maintenance history
- ☐ Pavement Condition Ratings (PCR's)
- ☑ County Manager concerns
- ☑ Traffic Studies, Highway Safety Program (HSP) Studies
- ☑ Previous Maintenance of Traffic concerns on roadway
- ☑ Accident History/Accident Reports
- ☐ Past project construction diaries
- ☐ Permitted Lane Closure Map
- ☐ Property owner contacts
- ☑ National Register of Historic Places
- ☐ Other: _____

EXISTING GEOTECHNICAL INFORMATION:

Identify all geotechnical references found. It is assumed, based on the project type, that not all reference materials listed herein will be applicable for use during the Red Flag Study. This study should provide a comprehensive review of all existing information available for the project area and should be supplemented with a complete field reconnaissance.

Review of information from ODOT:

- ☐ Original construction plans including plan views, profiles, and cross-sections
- ☐ Construction diaries and inspection reports for original construction
- ☐ Compile information on changes to the plans during construction activities (e.g., slope, spring drains)
- ☒ Interview people knowledgeable with the previous projects
- ☐ Maintenance records
- ☐ Boring log on file with the Office of Geotechnical Engineering
- ☒ History and occurrence of landslides (Appendix 4)
- ☐ History and occurrence of rockfalls
- ☐ Other_____

Review of information from ODNR:
From the Division of Geological Survey

- ☐ Boring logs on file
- ☐ Measured geologic sections
- ☒ Bedrock Geologic Maps (Appendix 5)
- ☒ Bedrock Topography Maps (Appendix 6)
- ☐ Bedrock Structure Maps
- ☒ Geologic Map of Ohio (Appendix 7)
- ☐ Quaternary Geology of Ohio
- ☒ Known and Probable Karst in Ohio (Appendix 8)
- ☐ Bulletins
- ☐ Information Circulars
- ☐ Report of Investigations
- ☒ Location and information on underground mines (none exist)
- ☒ Location and characteristics of karst features (Appendix 9)
- ☒ Landslide maps (Appendix 10-13)
- ☒ Other: Appendix 14: Ohio Coal and Industrial Minerals Map

From the Division of Mineral Resource Management

- ☐ Applications and permits files for surface mines (coal & industrial mineral)
- ☒ Active, reclaimed or abandoned surface mines
- ☒ Abandoned Mine Land (AML) sites
- ☐ Emergency Projects
- ☐ Other_____

From the Division of Soil & Water

- ☒ Water well logs (Appendix 15)
- ☒ Soil Surveys (Appendix 16)
- ☐ Ohio Wetland Inventory Maps
- ☒ National Wetland Inventory Maps (Appendix 17)
- ☐ Presence of lake bed sediments, organic soils or peat deposits
- ☐ Other_____

Other Sources:

- ☒ Aerial photographs
- ☐ Satellite imagery
- ☐ USGS quadrangles
- ☐ USGS publications and files
- ☒ City and County Engineers
- ☐ Academia with engineering or geology programs
- ☐ USGS Open File Map Series #78-1057 “Landslides and Related Features”
- ☐ Other_____

SITE VISIT:

A site visit is required for ALL projects. The site visit shall consist of visual inspection of the entire project area including the ditch lines, cut slopes, stream banks, bridge foundations, pavement, rock/soil slopes, etc.

Date(s) of site visit: ___-___-___ ___-___-___ ___-___-___ **N/A - Study is not site specific.**

ODOT DISCIPLINE INVOLVEMENT:

List name and phone number of individual(s) representing each discipline during the site visit and preparation of the Red Flag Summary. One individual may represent multiple disciplines. Check box if individual attended the site visit.

- ☐ District Project Manager _____
- ☐ Geometrics _____
- ☐ Hydraulics _____
- ☐ Pavements _____
- ☐ Geotechnical _____
- ☐ General Roadway _____
- ☐ Structures _____
- ☐ Traffic Control _____
- ☐ Signals _____
- ☐ Maintenance of Traffic _____
- ☐ Right of Way/Real Estate _____
- ☐ Utilities _____
- ☐ Survey _____
- ☐ Environmental _____
- ☐ Highway Management _____
- ☐ Central Office Program Manager _____
- ☐ ODOT County Manager** _____
- ☐ District Production Administrator** _____
- ☐ District Planning and Programming Administrator** _____

** The County Manager, Production Administrator and Planning/Programming Administrator (or qualified representative) must attend the site visit.

EXTERNAL AGENCY INVOLVEMENT:

Indicate external agency involvement during identification of red flags. List the name and phone number of individual(s) representing each agency during the site visit. Check box if individual attended the field review.

- ☐ Federal Highway Administration (FHWA) _____
- ☒ County Engineer _____
- ☒ City Engineer _____
- ☐ Other local public agency _____
- ☐ Federal Emergency Management Agency (FEMA) _____
- ☐ U.S. Army Corps of Engineers (USACE) _____
- ☐ U.S. Coast Guard _____
- ☐ Ohio Department of Natural Resources (ODNR) _____
- ☐ Ohio Environmental Protection Agency (OEPA) _____
- ☐ Railroad/Railway Company _____
- ☐ State Historic Preservation Office (SHPO) _____
- ☒ Metropolitan Planning Organization (MPO) _____
- ☒ Utility Companies: combine maps were possible and makes best sense
  - o Butler Rural Electric Comp. Cinergy/Cincinnati Gas & Electric (Power/Electric) - Appendix 18
  - o Cincinnati Bell _____ (Telephone)
  - o (numerous, refer to appendix) _____ (Water) - Appendix 19
  - o Cinergy Corp. (Cincinnati Gas & Electric) _____ (Gas) - Appendix 20 and 21
  - o City of Harrison Metropolitan Sewer District (Sanitary) - Appendix 22 and 23
  - o Time Warner Cable Adelphia (Cable) - Appendix 24
- ☐ Other _____ _____

ODOT COUNTY MANAGER CONCERNS:

List any comments/requests from the ODOT County Manager.

ACCIDENT DATA:

Summarize accident history. Indicate any design features that should be revised to increase safety.
Refer to Appendix 25: Traffic Accidents 2003-2004

ENVIRONMENTAL ISSUES:

Make a preliminary determination on whether the following resources will be affected by the proposed project.

Involvement Resource Comments References*

☐ Yes ☐ No ☒ Possible Parkland, nature preserves and wildlife areas ***(Name)*** (Appendix 26-30)
☐ Yes ☐ No ☒ Possible Cemetery ***(Name)*** (Appendix 31)
☐ Yes ☒ No ☐ Possible Scenic River ***(Name)*** EPM: 104.2, 104.2.4
☐ Yes ☐ No ☒ Possible Public Facilities ***(Name)*** (Appendix 32-36)
☐ Yes ☐ No ☒ Possible Threatened and Endangered Species and/or habitat (e.g., Indiana bat trees, etc.) EPM: 104.2, 104.2.6 (Appendix 37)
☐ Yes ☐ No ☒ Possible Existing cat tails *(Location)* (Appendix 38)
☐ Yes ☐ No ☒ Possible Existing wet areas ***(Location)*** EPM: 104.2, 104.2.3 (Appendix 39)
☐ Yes ☐ No ☒ Possible Streams, rivers and watercourses (***Use Designation***) EPM: 104.2, 104.2.4 (Appendix 40)
☐ Yes ☐ No ☒ Possible Historic Building(s) ***(Location)*** *sites, buildings, districts* EPM: 104.3 (Appendix 41-43; additional resource in hard files: Historic Hamilton County, Ohio, 1987 Miami Purchase Association for Historic Preservation)
☐ Yes ☒ No ☐ Possible Historic Bridge(s) ***(Location)***
☐ Yes ☐ No ☒ Possible Farmland ***(Location)*** (Appendix 44)
☐ Yes ☐ No ☒ Possible Landfill(s) ***(Location)*** (Appendix 45)
☐ Yes ☐ No ☒ Possible Total Maximum Daily Load (TDML) Streams
☐ Yes ☐ No ☒ Possible ODOT MS4 Phase 2 Regulated Areas (Appendix 46)
☐ Yes ☐ No ☒ Possible Evidence of hazardous materials *(Location) Superfund Sites* EPM: 104.7 (Appendix 47)
☐ Yes ☐ No ☒ Possible Sensitive environmental justice areas (Appendix 48-52)
☐ Yes ☐ No ☒ Possible Federal Emergency Management Agency (FEMA) floodplains EPM: 104.2, 104.2.5 (Appendix 53)
☐ Yes ☒ No ☐ Possible Lake Erie Coastal Management Area EPM: 104.2
☐ Yes ☐ No ☒ Possible Sole Source Aquifers (Location) (Appendix 54)
☐ Yes ☐ No ☒ Possible Wellhead Protection Areas (Specify) (Appendix 55)
☐ Yes ☐ No ☐ Possible **N/A** Does it appear that noise abatement will be an issue for the project?
☐ Yes ☐ No ☒ Possible Other environmental issues: ☐ Yes ☐ No ☒ Possible Watersheds (Appendix 56)
☐ Yes ☐ No ☒ Possible Industrial Land Uses (Appendix 44)

GEOMETRIC ISSUES:

Use the design speed, design functional classification and available traffic data to make a preliminary determination as to the geometric standards for the project. Compare these requirements to accident data and impacts if deviations are being considered.

Design Exception Required? N/A

				Design Feature Preliminary Comments Regarding Justification	**References***
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Lane Width (including curve widening)	LDV1: 301.1.1
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Graded Shoulder Width	LDV1: 301.2.3
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Bridge Width	LDV1: 302.1
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Structural Capacity	
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Horizontal Alignment (including Excessive Deflections, Degree of Curve, Lack of Spirals, Transition/Taper Rates and Intersection Angles)	LDV1: 202, 401.2
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Vertical Alignment (including grade breaks)	LDV1: 203
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Grades	LDV1: 203.2
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Stopping Sight Distance	LDV1: 201.2
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Pavement Cross Slopes	LDV1: 301.1.5
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Superelevation (Maximum rate, transition, position)	LDV1: 202.4
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Horizontal Clearance	LDV1: 301.2.5
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Vertical Clearance	LDV1: 302.1

Indicate if the following geometric issues are present or should be considered during project development. Consider work on the mainline as well as any side roads or service roads. Provide additional comments as needed.

				Design Issue Comments	**References***
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Does the existing horizontal alignment need to be modified?	LDV1:202
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Does the existing vertical alignment need to be modified?	LDV1:203
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Does stopping sight distance need to be increased?	LDV:201.2
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Does intersection sight distance need to be increased?	LDV1: 201.3
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Are there any hazards in the clear zone? *Specify treatment*.	LDV1: 600.2, 601
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Does existing guardrail need to be replaced (e.g., too low, poor condition)?	LDV1: 602, 603
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Is there sufficient area for guardrail anchor assemblies (E-98 or B-98)?	LDV1: 602, 603

☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Does the number of turn lanes appear to be adequate? LDV1: 401.7, 402
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Does the number of through lanes appear to be adequate? LDV1: 401.7
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are changes to access control required? LDV1: 800, 801, 802
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there any drive locations that will require special attention during design (e.g., very steep grades, high volume commercial drives, drives close to bridges or intersections)? LDV1: 803, 804, 805
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are new mailbox turnouts required? LDV1: 803.1
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is there any evidence of accidents due to substandard vertical clearance on overpass structures?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Will an interchange be added or modified? LDV1: 403, 404
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Do the existing intersection radius returns need to be modified to accommodate larger truck turning movements? LDV1: 401.5
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Does grading need to be upgraded? To what criteria (e.g., clear zone, safety, standard)? LDV1: 307
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there any other geometric issues? *Describe*

HYDRAULIC ISSUES:

Indicate if the following drainage issues are present or should be considered during project development. Side road and service road work should be considered in this assessment. Provide additional comments as needed.

Design Issue	Comments	References*
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Based on visual evidence (height of debris, erosion or other markings left from high water) and approximate drainage areas, does the existing drainage system (culverts, storm sewers and/or ditches) appear to be appropriately sized and functioning properly? *Describe deficiencies.*	LDV2: 1003 - 1006
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is there evidence of alignment or flow velocity problems (e.g., scour, bank erosions, silting) at culvert entrances or exits?	LDV2: 1107
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there sinkholes or other deterioration in the pavement that would indicate separations in the existing pipes?	
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Should guardrail over culverts be eliminated with clear zone grading?	LDV1: 307.2
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Should the existing culverts be replaced?	LDV2: 1105
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Should the existing culverts be extended?	LDV2: 1105
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Will a new alignment concentrate flow (in culverts) that is currently overland flow?	LDV2: 1105
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Will the maximum height of cover (100') be exceeded for any culvert?	LDV2: 1008
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Will bankfull design be used for any culverts?	LDV2: 1105.3.3
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Could materials with long lead times (e.g., large boxes) have an impact on construction schedule?	
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Does the existing drainage system have an odor that might indicate that it includes septic connections?	LDV2: LD-30 Form 1111.1
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is the exposed curb height in existing gutters adequate to contain flow (include height of proposed resurfacing)?	LDV2: 1103
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Do the existing inlets or catch basins need to be raised to meet proposed grade?	
☐ Yes ☐ No ☒ Possible ☐ Not Applicable	Is the project in a FEMA flood zone?	LDV2: 1005 (Appendix 53)
☐ Yes ☐ No ☒ Possible ☐ Not Applicable	Does the project affect a wetland or waterway (e.g., stream, river, jurisdictional ditch)?	LDV2: 1001.2 (Appendix 17 and 40)
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is the existing and/or proposed channel alignment compatible with the	

existing/proposed structure?

☐ Yes ☐ No ☐ Possible ☒ Not Applicable Will channel relocation be required? LDV2: 1102.2.4
☐ Yes ☐ No ☐ Possible ☒ Not Applicable Will Municipal Separate Storm Sewer System (MS4) requirements apply?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable Will post construction flow requirements be required? LDV2: 1115.1 1115.2
☐ Yes ☐ No ☐ Possible ☒ Not Applicable Is there evidence of existing field tiles? LDV2: 1002.3.6, 1108
☐ Yes ☐ No ☐ Possible ☒ Not Applicable Are underdrain outlets functioning properly?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable Will a new storm sewer outfall be required? LDV2: 1104
☐ Yes ☐ No ☐ Possible ☒ Not Applicable Is ditch cleanout required?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable Does the drainage work warrant any special maintenance of traffic considerations?

TEM: PART 6

☐ Yes ☐ No ☐ Possible ☒ Not Applicable Are there any other hydraulic issues? *Describe.*

GEOTECHNICAL ISSUES:

"Geotechnical Red Flag" features may include, but are not limited to, known or suspected geologic hazards (e.g., organic soils, karst, rockfalls, landslides, surface and underground mines, poor subgrade conditions, or difficulty in correcting existing surface or subsurface drainage problems).

GEOLOGY

{Provide a brief geologic description of the project area}

"Underneath a widespread cover of young glacial sediment laid down in the last million years, Ohio is underlain by sedimentary rocks older than 250 million years: mostly limestone and shale, laid down in gentle, shallow seas. Deep beneath these is the ancient core of the North American continent, sloping away to the Illinois Basin to the east. The part that isn't sloping, in the western half of the state, is the Ohio Platform, buried some 2 kilometers deep." Source: http:/geology.about.com/library/bl/maps/blohiomap.htm

{Provide a description of the hydrogeologic setting}

"The lower Great Miami River valley is one of the most productive sources of ground water in midwestern United States. A major buried valley, formed during interglacial intervals of the Pleistocene and subsequently filled with highly permeable sand and gravel outwash, follows essentially the course of the present river. Most favorable areas for development of large supplies are in those environments where 150 feet or more of sand and gravel with no clay layers are close enough to a major stream to permit recharge by induced infiltration; yields could be up to 3,000 gpm. In other areas, yields could reach 1,000 gpm, except where tributary buried

valleys are filled with clay and in upland areas where shale bedrock is overlain by relatively impermeable glacial till. Ground-water resources of much of the region are untapped. Water is generally hard."
Source: http://oh.water.usgs.gov/MIAM/abstracts/spieker2.html

{Describe the characteristics of the soils}
The predominant soil type of the study area is Miamian Soil. The soil profile consists of the following layers; "surface: dark grayish brown silt loam, subsoil-upper: dark yellowish brown clay loam, subsoil-lower: yellowish brown clay and clay loam, and substratum: yellowish brown loam. The Miamian series consists of very deep, well drained soils that formed in a thin layer of loess and in the underlying loamy till, which is high in content of lime. The original vegetation consisted of deciduous forest species, principally white oak, maple, elm, ash and hickory. Miamian soils are the most extensive soils in Ohio. They are productive soils. Corn, soybeans, and winter wheat are the primary crops." Source: The U.S. Department of Agriculture, National Resources Conservation Service website.

{Describe the characteristics of the rock}
During the time of the glaciers, only fine grained silt and clay (mud) reached as far west as Ohio. This fine-grained material formed sedimentary rock mudstone or the thinly, layered shale. "The supply of this eroded material was intermittent. When silt and clay were not being deposited, carbonate mud together with numerous fossils accumulated to form limestone. Periodically, large storms passed over this portion of Ohio. As they did, they stirred up the sea floor. As the sediments settled out, the large particles (fossils and other carbonate grains) settled first, followed by mud" to form conglomerate, sandstone, siltstone and claystone. Sources: http://www.earthsciencewebsite.8m.com/a2GOO.htm & http://geosrv01.bgsu.edu/Yacobucci/Geol_415_515/Dayton%20trip.htm

ORIGINAL CONSTRUCTION PLAN OBSERVATIONS
{Provide a bulleted list of all pertinent features found during the plan and specification review} **N/A**

{Include findings from previous geotechnical reports or investigations} **N/A**

{If general alignment or corridor is known, develop profiles to graphically present subsurface conditions (e.g., soil, rock, groundwater). **N/A**

{Describe soil classifications and problem conditions} **N/A**

{Describe bedrock and problem conditions} **N/A**

DISTRICT NOTATIONS
{Provide synopsis of information compiled through the District and County Garages} **N/A**

{Include construction issues and maintenance problems} **N/A**

FIELD REVIEW
{Summarize the findings from a complete field reconnaissance} **N/A**

{Provide bulleted items with references to locations} **N/A**

{Include conditions of embankments, soil & rock cut slopes, surface water erosion, ground water seeps or springs, settlements, surface deformation, abnormal pavement cracking, etc.} **N/A**

SUMMARY OF GEOTECHNICAL ISSUES

Based on the information compiled during this study indicate whether or not the following geotechnical issues are present or should be further considered during project development. Provide additional comments as needed.

Design Issues	Comments References*
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is there evidence of soil drainage problems (e.g., wet or pumping subgrade, standing water, the presence of seeps, wetlands, swamps, bogs)? SSI: 2.1, 2.2
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is there evidence of any embankment or foundation problems (e.g., differential settlement, sag, foundation failures, slope failures, scours, evidence of channel migrations)? SSI: 2.1, 2.2
☐ Yes ☐ No ☒ Possible ☐ Not Applicable	Is there evidence of any landslides? SSI: 2.1, 2.2 (Appendix 4 and 10)
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is there evidence of unsuitable materials (e.g., presence of debris or man-made fills or waste pits containing these materials, indications from old soil borings)? SSI: 2.1, 2.2
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is there evidence of rock strata (e.g., presence of exposed bedrock, rock on the old borings)? SSI: 2.1
☐ Yes ☒ No ☐ Possible ☐ Not Applicable	Is there evidence of active, reclaimed or abandoned surface mines? SSI: 2.1, 2.2, AUM
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is there information pertaining to the existence of underground mines? SSI: 2.1, 2.2, AUM refer to underground mine map: Appendix #
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are soil borings needed for pavement design, foundations (bridge, headwall, retaining wall, noise wall) or slopes? SSI: 2.1, 2.2
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Does an undercut appear to be needed? SSI: 5.3.2.1
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Should the Office of Geotechnical Engineering be contacted to evaluate the project site? SSI: 1.3
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there any other geotechnical issues? *Specify. Provide a list of bulleted items referencing additional areas of concern or special notation.*

PAVEMENT ISSUES:

Indicate if the following pavement issues are present or should be considered during project development. Side road and service road work should be considered in this assessment. Provide additional comments as needed.

Design Issue Comments References*

☐ Yes ☐ No ☐ Possible ☒ Not Applicable		Are pavement cores needed to determine the existing pavement buildup and/or condition?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable		Is the proposed pavement buildup known? (For pavement preservation projects, pavement treatment, including pavement type & thickness should be specified in the design scope of services)
☐ Yes ☐ No ☐ Possible ☒ Not Applicable		Is the existing pavement concrete or asphalt?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable		Are dynaflect tests available to assess existing pavement condition?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable		Does the proposed pavement buildup need to be approved by the Pavement Selection Committee?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable		Are joint repairs needed?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable		Are pressure relief joints needed?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable		Are pavement repairs needed?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable		Does the maintenance of traffic scheme require additional permanent or temporary pavement?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable		Does curb need to be replaced due to deteriorated condition or lack of curb reveal?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable		Does sidewalk need to be replaced or installed? LDV1: 306.2
☐ Yes ☐ No ☐ Possible ☒ Not Applicable		Are new curb ramps needed? LDV1: 306.3
☐ Yes ☐ No ☐ Possible ☒ Not Applicable		Do truncated domes need to be installed? LDV1: 306.3.5
☐ Yes ☐ No ☐ Possible ☒ Not Applicable		Is there any work on side roads, service roads or ramps?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable		Are there any special drive treatments or preferences (e.g., concrete for all drive aprons, curved aprons, etc.)?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable		Has the site received repeated resurfacings in recent years?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable		Does pavement deterioration appear to be caused by drainage or geotechnical problems?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable		Are there any other pavement issues? *Specify.*

STRUCTURAL ISSUES:

Indicate if the following structure issues are present or should be considered during project development. Provide additional comments as needed. Provide a separate table for each structure.

Structure:

Design Issue	Comments	References*
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Can the structure be replaced with a prefabricated box culvert or 3-sided box?	BDM: 201
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Does the bridge (including foundation) meet current design live loading?	BDM: 301.4, 301.4.1, 301.4.2
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Was the existing structure built according to plan?	BDM: 206, 401.1, 610.1
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is deck coring needed?	BDM: 412
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is the deck delaminated? *Specify.*	BDM: 412
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is non-destructive testing needed to determine the amount of delamination?	BDM: 412
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is the bridge deck in good condition?	BDM: 412
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Has a deck condition survey (Bridge Design Manual, Section 412) been performed?	
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there areas to be patched or repaired on the deck?	BDM: 403.1, 404.3
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is the bridge a good candidate for an overlay? *Specify type of overlay if known.*	BDM: 404.1, 404.2
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Does the bridge rail meet current standards?	BDM: 209.2, 304, 410
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is a fatigue analysis required?	BDM: 402.2, 402.3
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Should all fatigue prone details be retrofitted or replaced? *Specify.*	BDM: 402.2, 402.3
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is the abutment (including backwall, beam seats, breatwall, wingwall, etc.)) in good condition? *Specify location and level of deterioration.*	BDM: 403.1
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is there any evidence of substructure movement (e.g., settlement, rotation)?	
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Should piers be replaced or reused? *Specify*.	BDM: 303.3
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is there any evidence of existing beam deterioration/section loss, strands exposed, shear joints leaking or longitudinal cracks?	BDM: 402.1

☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are the bearings in good condition? BDM: 411
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Can the deck joint be eliminated? If not, specify what modifications are necessary. BDM: 205.8, 205.9, 406
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are new approach slabs needed? BDM: 209.5
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Can hinges be removed to make the members continuous? BDM: 402.8
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Does existing vertical and horizontal clearance meet design standards? BDM: 207.1, 207.3, 209.8
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is the bridge on a curve, skew or superelevation transition? BDM: 207.5, 209.1
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is there any evidence that the bridge does not meet hydraulic capacity? BDM: 202.5, 203
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there existing sidewalks on or adjacent to the bridge? BDM: 209.11
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Will the structure work require any special maintenance of traffic (e.g., closing of roadway for erection of beams, maintenance of waterway, traffic, location of cut line, etc.)? *Specify.* BDM: 208, 409, 304.3.5
☐ Yes ☐ No ☒ Possible ☐ Not Applicable	Is the structure in a Federal Emergency Management Agency (FEMA) flood plain? BDM: 203 (Appendix 53)
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is there any erosion in the existing channel? BDM: 203.3
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is the foundation exposed due to scour? BDM: 203.3, 409.3
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Will there be more than 25’ of channel relocation?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there any opportunities to construct the bridge faster (e.g., precast walls, segmental construction)?
☐ Yes ☐ No ☒ Possible ☐ Not Applicable	Is there any railroad involvement? BDM: 209.8 (Appendix 57 and 58)
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Does the bridge need to accommodate future additional roadway lanes or railroad tracks?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Will temporary shoring be required next to the railroad? BDM: 208.3
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Could materials with long lead times for delivery (e.g., steel beams) have an impact on the construction schedule?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there any problems with existing retaining walls? BDM: 204.9
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there any other structures issues? *Specify.*

TRAFFIC CONTROL ISSUES:

Indicate if the following traffic control (signals, signing, pavement markings, etc.) issues are present or should be considered during project development. Provide additional comments as needed.

Design Issue Comments References*

☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Do the existing signs need to be replaced due to poor condition? TEM: 260
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Are there any obvious deviations from requirements of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD)?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Is a particular type of pavement marking desired (e.g., paint, epoxy, thermoplastic)? TEM: 320
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Will pavement planning affect loop detectors? TEM: 450-10.7 420-5
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Will pavement widening affect pole locations? TEM: 450-6
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Will resurfacing effect signal height? TEM: 450-7
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Does it appear that any traffic control items will fall outside the existing right of way limits (e.g., large signs, strain poles)?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Are there any special pedestrian considerations? TEM: 404
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Are there any accidents that can be related to existing signal deficiencies (e.g., timing, lack of turn lanes)? TEM: 402-3.5
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Do turn lane lengths appear to have sufficient storage capacity? LDV1: 401.7
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Does the controller need to be upgraded? TEM: 460
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Do proprietary materials need to be specified?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Should signs or signal installations be supplemented with lighting? TEM: 408
☐ Yes	☐ No	☒ Possible	☐ Not Applicable	Are any TODS signs present? TEM: 207-3
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Could material with long lead times for delivery have an impact on the construction schedule (e.g., strain poles)?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	If traffic control at an intersection is being changed from stop control to signalization, does the stop condition road need to be upgraded to accommodate faster traffic?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Are there any other traffic control issues? *Specify*.

MAINTENANCE OF TRAFFIC ISSUES:

Indicate if the following maintenance of traffic issues are present or should be considered during project development. Provide additional comments as needed.

Design Issue	Comments	References*
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Can traffic be detoured?	TEM: 602-6
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is the local alternate detour route in good condition? Are there any load limits or bridge width restrictions?	
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Will the detour route have a detrimental impact on emergency vehicles, school buses or other sensitive traffic?	
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there any load limits on the proposed detour route?	
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Does the project fall within the permitted lane closure map?	TEM: 630-4
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is existing bridge width sufficient to maintain traffic?	TEM: 640-2
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Will temporary pavement be required?	TEM: 640-2, 640-11
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Should temporary pavement be retained after project completion?	TEM: 640-11
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Will the speed limit be lowered by more than 10mph during construction?	TEM: 640-18
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Is the existing shoulder in good enough condition to support traffic during construction?	TEM: 640-5
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Does pedestrian traffic need to be maintained?	TEM: 64-25
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Will additional width be required on culverts or bridges to maintain traffic?	TEM: 640-2
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Will a temporary structure/runaround be required?	TEM: 640-11
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Will a cross over be utilized?	TEM: 640-11
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Will the road need to be closed for short durations (e.g., 15 minutes for beam erection)?	TEM: 640-8
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Can drive access be maintained at all times?	TEM: 640-10
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Can trucks make turning movements during construction?	
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Will portable concrete barrier wall obstruct stopping sight distance?	LDV1-201.2
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Will additional signal heads be needed for drives and/or side roads?	TEM: 605-13
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there any issues regarding access to the work site?	TEM: 640-9

☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there any issues regarding construction timeframes (e.g., time of day, time limits)? TEM: 606-3 640-14
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Have innovative contracting ideas been considered? *Specify.*
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there specific requirements for maintaining railroad traffic? TEM: 606-19
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Does it appear that the maintenance of traffic will require additional right of way?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there any other maintenance of traffic issues? *Specify.*

RIGHT OF WAY/SURVEY ISSUES:

Indicate if right of way or survey issues are present or should be considered during project development. Provide additional comments as needed.

Design Issue Comments References*

☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Will there be any work beyond the existing right of way limits?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Will major real estate relocation acquisition be involved?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Will relocation of residences be involved?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Will relocation of businesses be involved?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Does access control need to be revised?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Are there any obvious encroachments?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Can the number of involved property owners be determined? If so, how many?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Will temporary parcels be needed (e.g., for drive work)?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Will right of way need to be acquired for an agency other than ODOT (e.g., county, city)? *Specify*.
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Will additional right of way be needed for utility relocations?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Will right of way need to be acquired for storm sewer outfalls?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Do property owners need to be contacted for the locations of underground items such as leach fields, septic systems or field tiles that might be effected by the proposed take?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Are there any mineral rights considerations?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Are there any specific property owner concerns?
☐ Yes	☐ No	☒ Possible	☐ Not Applicable	Will right of way acquisition from a railroad/railway be involved? (Appendix 57)
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Can work agreements be used?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Does the centerline of construction match the centerline of right of way?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Will right of way be acquired for wetland or stream mitigation?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Are there any other right of way or survey issues? *Specify*.

UTILITY ISSUES:

Indicate if the following utility issues are present or should be considered during project development. Provide additional comments as needed.

Design Issue				Comments	References*
☐ Yes	☐ No	☒ Possible	☐ Not Applicable	Do existing utilities need to be relocated?	(Appendix 18-24)
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Can utility conflicts be minimized (e.g., by careful placement of storm sewer and underdrains)?	
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Would the project benefit from subsurface utility engineering (SUE)?	
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Are there existing utilities on an existing structure that need to be relocated?	
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Are there any specific utility requirements or concerns? *Specify*.	
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Are there facilities that require a large lead time to relocate?	
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Is additional right of way needed to accommodate utility relocations?	
☐ Yes	☐ No	☒ Possible	☐ Not Applicable	Are there water or sanitary lines that will be relocated as part of the ODOT contract?	(Appendix 19,22 and 23)
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Are there any other utility issues? *Specify.*	

PERMIT ISSUES:

Indicate if the following permit issues are present or should be considered during project development. Provide additional comments as needed.

Design Issue Comments References*				
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Will an individual Corps of Engineers/Environmental Protection Agency 404/401 permit be required?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Does it appear that the project can be constructed under a nationwide 404/401 permit? If so, which permit and what specific requirements apply?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Will a Coast Guard permit be required?
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Is review by a local public agency or project sponsor required? *Specify.*
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Is Airway/Highway clearance analysis required?
☐ Yes	☐ No	☒ Possible	☐ Not Applicable	Is Federal Emergency Management Agency approval required? (Appendix 53)
☐ Yes	☐ No	☒ Possible	☐ Not Applicable	Is railroad/railway coordination required? (Appendix 57 and 58)
☐ Yes	☐ No	☒ Possible	☐ Not Applicable	Is State Historic Preservation Office (SHPO) coordination for work involving historic bridges or historic properties required? (Appendix 41-43)
☐ Yes	☐ No	☒ Possible	☐ Not Applicable	Is coordination with ODNR for work involving State Scenic Rivers, State Wildlife Areas or State Recreational Areas required? (Appendix 26-30 and 37-38)
☐ Yes	☐ No	☐ Possible	☒ Not Applicable	Is coordination with any other agency required?

(See Location and Design Manual, Figures 1402-2 through Figure 1402-7.)

MISCELLANEOUS ISSUES:

Indicate if the following issues are present or should be considered during project development. Provide additional comments as needed.

Design Issue Comments References*

☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Will a value engineering study be required due to project cost (total cost greater than $20 million) or project complexity?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Will warranties be used?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there aesthetic concerns? *Specify*.
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there any concerns relating to noise walls?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there areas available within the existing right of way for portable plans or waste and borrow sites?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there specific concerns related to pedestrian access? LDV1: 306
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Any concerns related to landscaping?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there any concerns related to existing or proposed lighting (e.g., light trespass, river navigation, airway clearance)?
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Are there any other concerns? *Specify*

RED FLAG MAPPING:

Is a map showing locations of red flag areas attached? ☒ Yes ☐ No

(**A map showing locations of red flag areas is mandatory for Major Projects**.)

Index (maps and other references showing locations of red flag areas)

Appendix 19: Water Service
Appendix 20: Natural Gas Service
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Appendix 27: Neighborhood Parks
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Appendix 29: Nature Preserves
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Appendix 56: Watersheds
Appendix 57: Railroads and Railroad Yards
Appendix 58: Active Rail Companies

GEOTECHNICAL DELIVERABLES:

*Include copies of plan views, geologic cross-sections, existing boring logs, and soil and rock testing data. This information should be augmented with data from ODOT's archived files of previous projects in the area. Additional information on soil survey data, glacial deposits, bedrock topography, bedrock structure, and aquifer mapping, etc. should be compiled as a GIS workspace. Both digital ortho-quarter quadrangles and U.S.G.S. quadrangles should be available for base mapping. Copies of the reference maps and ArcView files should be provided. (**This information is mandatory for Major Projects**)*

SCOPE, SCHEDULE AND BUDGET CONSIDERATIONS:

Based on the responses to the red flag questions, do any of the following need to be modified?

Issue	Comments	References*
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Conceptual scope?	
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Work limits? LDV3-1303.7	
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Probable environmental document type?	
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Major/Minor/Minimal classification?	
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Schedule?	
☐ Yes ☐ No ☐ Possible ☒ Not Applicable	Budget?	

*Abbreviations: AUM = Manual for Abandoned Underground Mine Inventory and Risk Assessment
BDM = Bridge Design Manual
LDV1 = Location and Design Manual, Volume 1
LDV2 = Location and Design Manual, Volume 2
LDV3 = Location and Design Manual, Volume 3
SSI = Specifications for Subsurface Investigations
TEM = Traffic Engineering Manual
EPM = Environmental Process Manual