

The following is a proposed scope of work based on the ODOT Project Development Process (PDP) Task List for the Lorain State Route 82 (SR 82) Planning Study in Lorain County, Ohio. The project is anticipated to follow a 24-month schedule with work commencing in late 2026 and traffic counts to be performed in spring 2027.

I. PLANNING STUDY TASKS

1 Planning Phase

1.1 Project Start-up

1.1.C Internal Meeting with ODOT

Consultant will attend one kick-off meeting with ODOT and other appropriate agencies. Consultant will prepare meeting minutes and distribute minutes to all attendees.

1.2 Project Initiation Package

1.2.A Define Study Area and Logical Termini

The purpose of this task is to define and confirm the study limits for the project, centered on and around the entirety of SR 82 in Lorain County. The study limits begin at SR 57 (slm 0.00) and end at Marks Rd (slm 10.01) at the Lorain/Cuyahoga County line) and include the following townships: Carlisle, Eaton, and Columbia. These study limits are approximately shown in *Figure 1*, but final termini to be determined by the Consultant and approved by ODOT.

Figure 1. Lorain SR 82 Study Area Map



1.2.B Conduct Field Review (walk through)

Consultant will develop an inventory of transportation geometric features, deficiencies, facilities, and possible flaws in the study area. Photos to be taken at all important locations. During the field review, the consultant will note obvious environmental and engineering issues that may be areas of concern as the project progresses including locations that will entail additional study, coordination, design, right-of-way, or construction cost.

1.2.C Identify Discipline Specific Issues for Project Initiation Package

1.2.C.A Identify Design Issues

Consultant will inventory design issues in the project area for possible fatal flaws and effects on future traffic increases. "Design issues" fall into the following categories:

- Geometric: Sight distance, lane widths, shoulder widths, or horizontal curvature which do not meet current *ODOT Location and Design Manual* standards. Field measurements should be performed at various locations throughout the project area. As part of the field investigation, notations will be made regarding obstructions within clear zone. Additionally, a detailed signing inventory will need to be completed.

- Hydraulic: Identify areas with history of flooding or hydraulic issues based on previous studies, large drainage areas, and floodplain mapping.

1.2.C.B Identify Geotechnical Issues

Issues to be identified based on record plans, field review and other available literature search findings. No geotechnical borings will be conducted as part of this scope.

1.2.C.C Identify Environmental Issues

Issues to be identified based on field review and other available literature search findings.

1.2.C.D Identify Utility Issues

Issues to be identified based on field review, record plans from utility companies, and other available literature search findings.

1.2.C.F Transportation and Land Use Plans

Consultant will gather existing transportation and land use plan data from ODOT District 3, the Lorain County Engineers Office, and all applicable municipalities and townships (Strongsville, Carlisle Twp., Eaton Twp., and Columbia Twp.) to take into consideration planned and recently completed roadway improvements as well as proposed changes in zoning and developments.

In the case where previous or existing studies have been conducted, consultant will review the work and summarize the conclusions and recommended solutions from those studies. A review of the available information will be completed to determine what the existing studies can bring to this project. This will aid in determining what data will need to be collected as original research and help to develop a thorough understanding of the existing travel patterns and system performance. The review will also identify transportation solutions that have been identified for the area in the past. This analysis will help to define the problems facing the study area.

Pedestrian and Bikeways

Consultant will review the project area for pedestrian and bikeway problem areas as well as possible safety and connectivity improvements. Consultant to include available bicycle and pedestrian plans as source documents for this evaluation.

Transit

Consultant will identify and include all current and proposed transit facilities in the project area into the plan through GIS data and coordination with the local transit provider.

1.2.C.G Identify Safety Priorities

Consultant will identify corridor-wide safety priorities based on ODOT's Highway Safety Improvement Plan (HSIP) priority locations, both intersections and segments. Also, consultant shall review crashes within the corridor for the last five years (2022 – 2026) to identify general crash trends and hot-spots. Using this information, the consultant will create an approach for further analysis that addresses crash trends and concerns on the study corridor.

1.2.D Project Initiation Package Preparation and Submittal

Prepare the Project Initiation Package in a report format for review by ODOT District 3.

1.2.E Aerial/Base Mapping Coordination with ODOT

Consultant will compile Geographic Information Systems (GIS) mapping for the study area utilizing available data to include existing transportation facilities, land use, general socio-economic

information, and related assets such as utilities, rail lines, environmental, and geological features. Maps will be developed to a scale and level of detail to allow for update and refining during the various phases in the PDP. Base mapping will identify the study area, logical termini and the extent and limits of alternatives.

1.2.F Concept, Scope and Budget Estimates

As part of the PIP deliverable, information regarding the scope of the project and initiation information regarding conceptual costs will be discussed and coordinated with ODOT District 3 for inclusion.

1.3 Existing Data, Research and Analysis

Develop a no-build traffic forecast, perform a safety and capacity analysis, and develop a Purpose and Need (P&N) for the study corridor. The deliverable for Section 1.3 will be an Existing Conditions Report and a Draft P&N Statement.

1.3.B Crash Analysis

Consultant to review crash history of the study area for the last five years (2022 – 2026). This includes the creation of collision diagrams, evaluation of potential countermeasures, appropriate crash calculations utilizing AASHTOWare Safety and CAM Tool as well as ECAT benefit/cost calculations. As part of the crash analysis, access management should be evaluated based upon operational issues and historical crash locations.

1.3.C Traffic Data

1.3.C.A Turning Movement Counts at Intersections – No Build

Consultant to obtain turning movement counts on an average weekday (Tuesday-Thursday) but not necessarily the same day in winter or spring 2027. Count locations will be determined when the logical termini are agreed upon. It should be noted that not every intersecting roadway/driveway will be counted as part of the data collection program due to the number of locations in this study area. Turning movement counts will generally be performed for a period of 4 hours in the AM and 4 hours in the PM in accordance with ODOT's guidelines for the development of certified traffic. Classification of vehicles (cars and trucks) will be performed. Bicyclists and pedestrians also to be counted where it is thought they may be present. Longer duration counts will also be needed for the evaluation of signal warrants as defined in Task 2.3.E.A. Ideally, 12-hour counts would be gathered for signal warrant purposes, but 8-hour counts supplemented by existing counts and planning level traffic including Average Daily Traffic(ADT)projections will be utilized as supporting information.

1.3.C.C Preliminary Coordination Meeting for Traffic Modeling

Consultant to schedule a meeting with ODOT Modeling and Forecasting to establish a plan for overall traffic modeling and Certified Traffic for the study. This includes preparing and submitting the Early Coordination Checklist for review by District 3 and Modeling and Forecasting.

1.3.D Planning Level Traffic – No Build Condition

Consultant will use count data collected to develop planning level traffic per ODOT's *Certified Traffic Design Manual*. Consultant should work with the Northeast Ohio Area Coordinating Agency (NOACA) to determine a growth rate to grow existing year traffic to Opening Year and Design Year traffic.

1.3.E Certified Traffic - No Build Condition

Consultant to prepare certified traffic application package and submit to ODOT Central Office through ODOT District 3. Package to include Existing Year, Opening Year and Design Year traffic volume plates

and certified traffic application. This will allow for future studies and projects to move forward without delay.

1.3.F Capacity Analysis – No Build Condition

The capacity analysis will identify capacity deficiencies along the corridor. Consultant will perform HCS and/or Synchro capacity analysis of intersections under No Build Conditions for the Existing Year, Opening Year, and Design Year, where No Build represents current conditions. Analyses will be prepared for each signalized intersection and other major driveways or unsignalized locations of primary interest.

1.3.H Develop Purpose and Need

Consultant to develop a P&N statement with primary and secondary need elements to guide the development of feasible alternatives. The P&N statement will be based on the technical studies, certified traffic, analyses, stakeholder discussions, logical termini determination, and the Existing and Future Conditions Analysis (as applicable). The P&N statement will be detailed enough to define the transportation problems and establish the need for the potential project both qualitatively and quantitatively. The statement will evolve throughout the project's development and will provide screening criteria against which future alternatives can be developed, evaluated, and eliminated.

1.4 Stakeholder Involvement and Public Engagement Plan

1.4.A Public Engagement plan

Consultant will prepare a Public Engagement Plan (PEP) that will describe the approach to incorporate stakeholders into the PDP. It will:

- Define and describe the public involvement activities and publications for each phase of the PDP.
- Define the approach to gather information, ideas, and opinions from stakeholders, as well as explain how the ideas will be incorporated into the PDP decision-making process.
- Identify the strategies and steps to inform stakeholders about the issues being studied.
- Identify responsibilities for managing and implementing public involvement.
- Clarify the mechanisms for implementing the PEP during the PDP.

The PEP will be developed early in the PDP, and project stakeholders will be involved with how it is refined.

1.5 Project Management for Planning Phase

1.5.A Meetings

In addition to the kick-off meeting with ODOT and appropriate agencies, consultant to coordinate and lead virtual project progress meetings during study development. These progress meetings will be monthly status update meetings (maximum 24) to review action items, provide status updates, and discuss next steps and future action items. Estimated to be ½ hour virtual meetings.

Also, consultant to give final presentation to ODOT and other appropriate agencies upon study completion. Prior to each meeting, consultant to provide a meeting agenda. Consultant is also expected to prepare and distribute meeting minutes. Stakeholder workshops and public meetings and will be held based on *Table 1 in Section III Schedule of Meetings and Deliverables* at the end of the Scope.

1.5.B General Oversight

Consultant will provide general oversight and project management during study development in conjunction with meetings conducted. Consultant will update the project schedule as needed and consider issues that may change the project scope, schedule, and budget. Consultant will communicate all issues to the stakeholders and ODOT management. Day-to-day project management and administration activities will be performed to guide the project through completion. Activities include:

- Providing project schedule and update as needed.
- Tracking and managing the project budget and tasks.
- Maintaining project files.
- Coordinating with ODOT staff and internal team members including subconsultant(s).
- Processing invoices.
- Submitting monthly progress reports to ODOT.
- Monitoring the quality of the work and deliverables for each task.

1.5.C Project Set Up

This includes setting up the project in the appropriate accounting system, allocating resources, preparing agreements, and developing the critical path schedule for the project.

2 Preliminary Engineering Phase

2.1 Develop Preliminary Alternatives

2.1.A Feasibility Study Development – Consultant will develop highway improvement alternatives based on deficiencies found in no-build capacity analyses or any opportunities apparent to improve travel time, enhance safety, connect origin-destination matrix points, or address transportation needs for all road users. Consultant to evaluate short-term, medium-term, and long-term alternatives. These preliminary alternatives should focus on addressing (P&N) elements.

2.1.A.C Capacity Analysis for Alternatives

The capacity analysis will address capacity deficiencies along the corridor in conjunction with the feasible alternatives. Consultant will perform HCS and/or Synchro capacity analysis of intersections for Build Conditions for the Design Year; where Build Conditions represent improvements needed to achieve required Level of Service for operations. Analyses will be prepared for each of signalized intersection and other major driveways or unsignalized locations of primary interest.

2.1.A.D Safety Analysis for Feasible (Build) Alternatives

All applicable build alternatives will be evaluated in the ECAT tool for each intersection and segment, comparing the no-build option against the build alternatives, as well as comparing each build alternative to one another. ECAT tools should be set up so that benefit/cost analyses can be performed once cost estimates are generated for each build alternative.

2.1.A.G Preliminary Alignment and Profile

Consultant to develop conceptual plans for feasible alternatives for improvements. Horizontal alignments of feasible alternatives will be developed to minimize right of way and environmental impacts, and to ensure adherence to geometric design criteria. The concept design and environmental issues include the following:

- Proposed alignments
- Proposed corridor widths
- Proposed bridge structure locations

- Proposed and existing bicycle and pedestrian facilities
- Existing and proposed right of way
- Railroads
- Side roads
- Major above-ground utilities
- Existing residential and commercial structures
- Environmental concerns such as cemeteries, wetlands, historic properties, and parks.
- Drainage or hydraulic concerns identified in the field or literature reviews

2.1.A.I Mapping

Consultant to provide an overlay of conceptual design and environmental issues within the proposed corridor utilizing available orthographic imagery and GIS data from the Lorain County Auditor.

2.1.A.J Stakeholder Public Involvement

See section 2.6.A for details about stakeholder meeting attendance and materials. The Stakeholder meetings will utilize a breakout format (charrette) where discussions will be led at different tables for the various municipalities since their specific interests vary widely along the corridor. Stakeholder meetings will occur at the following times:

1. Kick-Off Meeting – Introduce project to stakeholders (virtual option)
2. Existing Conditions Meeting* – Allow stakeholders to provide feedback to the existing conditions analysis
3. Stakeholder Workshop – Present potential alternatives and work with the stakeholders to narrow those down into preferred alternatives
4. Recommended Alternatives Meeting* – Present recommended alternatives to the stakeholders and allow them to provide comments and feedback

**Stakeholder meeting to be followed by a public meeting on the same day*

2.1.A.K Prepare Feasibility Study

Consultant to use planning level cost estimates for improvements associated with each alternative (including ROW, utilities, etc.). Impacts on ROW, local access, local travel patterns, and consistency with local plans should be assessed and a prioritization schedule should be developed.

Consultant will create a Feasibility Study and will submit a draft report for review and comment to ODOT District 3. Consultant will provide one round of review and comments and will address comments prior to submitting a final report. The report will be reviewed, and all comments addressed prior to electronic copy distribution to ODOT District 3 and other relevant stakeholders.

Part of the Feasibility Study will be the development of an Access Management Plan. Review existing and proposed land access against the criteria in the State Highway Access Management Manual to determine compliance. Create an access management plan for the corridor to address non-compliant driveways and/or crash patterns at driveways. This may include drive removal, drive relocation, turn movement restrictions, etc.

2.2 Perform Environmental Field Studies (Literature Review)

2.2.C Ecological Survey Report – Ecologically Exempt Project Determination

Complete ESA screening for sites within the feasible alternatives to identify properties to be studied further in a Phase I ESA. Gathering and reviewing regulatory databases, as well as present and historic land use, information for each site is the primary focus in an ESA Screening. All properties

within the project study area are screened at this level. Document the results of the survey on ODOT's Environmental Site Assessment Screening Checklists and compile into an ESA Screening Report, prepared in accordance with ODOT's ESA Guidelines.

2.2.E Social and Economic Resources

Develop baseline conditions for a Community Impacts analysis within the study area using census data sets or Metropolitan Planning Organization data providing information at the most detailed geographic level available to identify disadvantaged and low-income populations. Conduct a windshield survey to help in identifying populations within the area. Provide appropriate documentation and display the locations of any identified populations on a map of the study area. Also map the break point at which areas fall above or below the average for the study area to indicate special areas of consideration when analyzing the effects on the project.

2.2.F 4(f) determinations

Conduct research to identify potential Section 4(f) and 6(f) resources associated with the proposed corridors/alignments. Preliminary determinations shall include all possible cultural resources and recreational eligible facilities. Include all appropriate information to allow ODOT-OES to make an applicability determination. Summarize the results of the preliminary Section 4(f) and 6(f) determinations.

2.3 AER Design

2.3.A Field Survey and Aerial Mapping

2.3.A.B – Monumentation Recovery; Records Research; and Boundary Line Resolution & Mapping

2.3.A.B.1 Records Research Including Deeds and Easements

Field survey is not included in the scope, and aerial survey is not available from ODOT. Therefore, base mapping information for the feasibility study will be acquired from County Auditor/County Engineer sources and will largely be GIS-based.

2.3.G Utilities

2.3.G.A Utility Coordination and Documentation

Consultant to review available utility plans, records, and easements to determine where existing utilities are located, how proposed feasible alternatives would impact them, and if impacted, which entity is responsible for the costs of relocating utilities to avoid said impacts.

2.4 Prepare Cost Estimates

2.4.A Roadway/Interchange Costs

A planning level cost estimate for roadway improvements will be developed based on the anticipated impacts associated with the option(s) identified as feasible alternatives for inclusion in the feasibility study.

2.4.B Right of Way Costs

A planning level cost estimate for right of way acquisition will be developed based on the anticipated impacts associated with the option(s) identified as feasible alternatives for inclusion in the feasibility study.

2.4.C Utility

A planning level cost estimate for public utility relocations will be developed based on the anticipated impacts associated with the option(s) identified as feasible alternatives for inclusion in the feasibility study.

2.6 Public Involvement/Coordination

2.6.A Public Involvement/Coordination

Attendance

Consultant will develop a comprehensive database of all potential and confirmed stakeholders in the project area. The database will be submitted to ODOT in electronic format. Consultant to attend two Public Involvement Meetings; one held prior to the development of purpose and need and feasible alternatives, and the other to be held after feasible alternatives are developed. There will be no more than four consultant personnel at each of the meetings.

Materials

Consultant to prepare/print handouts, comment sheets, and sign-in sheets for the meetings, including media advisory, fact sheet, brief handout of the study and preliminary findings, and PowerPoint presentation. In addition, all exhibits for display at the meetings will be prepared by the consultant.

Consultant to record and document proceedings of the public involvement meeting and write a summary of the meeting including an outline of all comments received.

II. IF AUTHORIZED TASKS

It is anticipated that existing short counts and traffic volumes that ODOT collects will be adequate to develop planning-level traffic for capacity analyses. If additional 24-hour counts are required:

1.3.C.B Machine Counts on Roadways and Ramps - No Build

Consultant to utilize existing 24-hour count data from Automated Traffic Recorder (ATR) units or static tube counts provided by ODOT Office of Technical Services: [ODOT MS2 TCDS](#). If it is determined by ODOT and the consultant that the 24-hour counts provided by ODOT need to be supplemented with additional 24-hour counts, the consultant will obtain twenty-four-hour volume, classification, and speed data counts in the study area during 2027. Data for all 24 hours will be taken on a typical weekday (Tuesday-Thursday). Any additional 24-hour count locations will be determined after the logical termini are agreed upon.

It is anticipated that there will not be any build alternatives that will require additional traffic forecasts beyond the no-build Certified Traffic. If build Certified Traffic plates are required:

2.1.A.A Planning Level Traffic for Feasible (Build) Alternatives

Consultant will use count data collected to develop planning level traffic plates for feasible alternatives per ODOT's Certified Traffic Design Manual. Consultant should work with ODOT and NOACA to determine a growth rate to grow existing year traffic to Opening Year and Design Year traffic.

2.1.A.B Certified Traffic for Feasible (Build) Alternatives

Consultant to prepare certified traffic application package and submit to ODOT Central Office through ODOT District 3. Package to include Existing Year, Opening Year and Design Year traffic volume plates and certified traffic application. This will allow for future studies and projects to move forward without delay.

If feasible alternatives are not able to be sufficiently narrowed down or eliminated from a single stakeholder workshop, an additional workshop may be required.

2.1.A.J Stakeholder Public Involvement

Consultant to hold an additional stakeholder workshop to present potential alternatives and work with the stakeholders to further narrow those down into preferred alternatives.

Signal warrants are not anticipated to be evaluated. It is assumed that the existing signals within the study area are warranted. If the consultant is concerned that any of the signals are not warranted, they could be verified to see if traffic signals are warranted based upon current and opening year conditions.

2.3.E.A Signal Warrant Analyses

If needed, signal warrants will be performed in accordance with ODOT's TEM and the OMUTCD. At least 8 hours of counts are needed to support this task, along with the use of Average Daily Traffic and other available counts along the corridor. The focus of the warrant analyses will be on the volume-based warrants.

III. SCHEDULE OF MEETINGS AND DELIVERABLES

The following table contains a summary of deliverables and meetings for the proposed SR 82 corridor study:

Table 1. Public and Stakeholder Meetings and Deliverables

Study Phase	Meeting(s)	Deliverable(s)
Scoping	Consultant Kick-Off	Scope and Fee Proposal
Kick-Off	Stakeholder Kick-Off (Mtg #1)	Kick-Off Presentation
Existing Conditions	Stakeholder Meeting #2 Public Meeting #1	Existing Conditions Report Draft Purpose & Need
Feasible Alternatives	Stakeholder Workshop (Mtg #3) (IF AUTHORIZED 2 nd Workshop)	Feasible Alternatives Exhibits
Recommended Alternatives	Stakeholder Meeting #4 Public Meeting #2	Recommended Alts. Exhibits Final Purpose & Need
Preferred Alternatives	Final Presentation	Final Planning Study