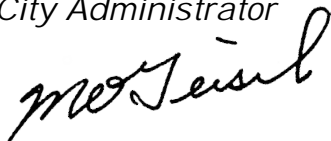


Mike Geisel

City Administrator




690 Chesterfield Pkwy W

Chesterfield MO 63017

Phone 636-537-4711

Fax 636-537-4798

## OFFICE OF THE CITY ADMINISTRATOR

TO: Planning & Public Works Committee of Council  
Finance and Administration Committee of Council

Date: May 6<sup>th</sup>, 2024

RE: North Outer Forty Road & Long Road  
Extension to Chesterfield Parkway  
Long Road – full access interchange

As you are aware, for over two decades, Chesterfield has pursued both the extension of North Outer Forty eastward to Chesterfield Parkway and the improvement of the Long Road interchange to provide full access to\from Interstate 64. These projects were identified in plans prior to construction of the Interstate 64 East Bound Daniel Boone Bridge. It should also be noted and understood that these projects are large projects, each estimated to be in the \$25 million range, a total investment approaching \$50 million. Both projects have identified funding resources committed, although we certainly intend to attempt to identify additional and supplemental funding from alternative sources.

The Long Road interchange improvement is identified as a project within the Chesterfield Valley Transportation District (CVTDD) and along with the final segment of the levee trail, remains as the only two remaining incomplete projects for the CVTDD. While the original CVTDD conceived the improvements would be funded as a Federal project with partial, \$5.625 million, funding to be provided by the CVTDD, the likelihood of Federal funding has become remote. Thus, it is anticipated that the TDD will be required to at least fund a larger proportion of the project or potentially the entire project cost. While the CVTDD is performing well ahead of projections, the super-sinker TDD bonds previously issued require that all revenues be first dedicated to retire the bonds, which results in having no current cash reserves for the Long Road improvements until the TDD debt is re-financed in the next couple of years. That creates a short-term cash flow issue to fund the preliminary studies necessary for the project to progress.

Similarly, the extension and connection of North Outer Forty to Chesterfield Parkway is an identified public project for the Chesterfield Regional Tax Increment Financing District (TIF). No TIF bond financing has been initiated, so there are no

funds to initiate the project studies at this time. Re-financing by the TDD board is anticipated in the near-term future.

These projects are multi-year projects, requiring extensive studies and access justification request (AJR) approval by Federal Highways. Once the studies are complete, and presuming the projects are successful in gaining approval of the Federal AJR, that approval is for a defined time and requires a project financing commitment. As such, it is essential to initiate the studies, preliminary design, and to identify other potential funding sources, such that the City may progress with the projects once the AJR is obtained. These are complicated, lengthy, and bureaucratic processes that require substantial effort, consistent attention and expertise to be successful.

The Department of Public Works solicited Requests for Proposals from multiple firms who specialize in similar projects; to initiate the traffic studies, preparing successful Access Justification Requests for Federal Highways, creating preliminary design configurations, and assisting in securing other funding sources to supplement both the TDD and the TIF. Inasmuch as these projects impact Interstate 64 and are adjacent geographically, in consultation with the Missouri Department of Transportation, we have determined that Federal Highways will require that the entire section of Interstate be studied concurrently, and reports be prepared with both anticipated projects being represented. Subsequently, *the DPW reviewed the qualifications and representative projects from multiple engineering firms and developed a scope of work and fee estimate with Lochmueller Group to perform this work. The total estimated fee for this effort is \$2.1 million.* Lochmueller has secured an impressive project team comprised of planners, traffic engineers, structural engineers, construction engineers, environmental and grant funding experts. If this project is funded, the Lochmueller Team would meet with stakeholders, conduct an option analysis, undertake field surveys and geotechnical services, complete a preliminary design with cost estimate, oversee public engagement, obtain formal agency/utility/AJR approval, and submit grant applications to fund the project.

The City's Engineering Staff believes that this is an important project, supported by the inclusion of the Long Road Interchange in the CVTDD and the North Outer 40 Connection in the Downtown Chesterfield TIF. It should also be understood that while the contract agreement would be concurrent with the acceptance of the proposal, the actual expenditure for the work effort will occur over a period of time, perhaps 2 – 3 years.

I have been somewhat reticent to bring this recommendation to Council, simply due to the magnitude of the request. Any request for funding at this level should only be considered with significant reflection. However, this cost is reasonable, this work effort is essential, and we currently have the most favorable audience for these projects as we have had in several years. This is simply an essential step in the process and if the City continues to support these projects, now is the time to proceed and fund the effort. The complexity of the project, the timeline and funding

availability requires that the preliminary work be completed prior to seeking final approvals, necessitating these efforts in a timely matter.

*Accordingly, I request that both the F&A and PPW Committees recommend that the full City Council authorize a contract with Lochmueller Group for the scope of work associated with Long Road Interchange and North Outer Forty Extension, as described in the attached scope of work, funded by a transfer of \$2.1 million from the General Fund – Fund Reserve, with the expressed intent of being fully reimbursed by the CVTDD and Chesterfield Regional TIF as funds become available. The City of Chesterfield has a healthy General Fund – Fund reserve, far in excess of the 40% policy minimum requirement and this temporary funding will not diminish the City's financial capacity while concurrently providing for the desired and necessary projects.*

## Scope of Services: I-64 Improvements for the City of Chesterfield

### General Description

The agreement between Lochmueller Group and MoDOT will cover engineering services for Phase 1 of the proposed I-64 Improvements within the City of Chesterfield. The City is pursuing two distinct projects: modifications in access along I-64 at Long Road from a partial to a full interchange with service added to and from the west on the interstate and extension of the outer road system on the north side of I-64 within Chesterfield Valley across Bonhomme Creek. The project limits are as follows:

- Long Road Interchange – along I-64 from Spirit of St. Louis Boulevard interchange on the west to Boone’s Crossing on the east, and along Long Road from North Outer Road on the north and Chesterfield Airport Road on the south.
- North Outer Road Extension – along the North Outer Road from Boone’s Crossing on the west to Chesterfield Parkway West on the east, and along Chesterfield Parkway West from Swingley Ridge Road on the north and Wild Horse Creek Road on the south.

Phase 1 would include survey and data collection, identification of a justifiable purpose and need for each project, the analysis of multiple alternatives for each project, identification of a recommended alternative for each project, documentation as required to satisfy FHWA, MoDOT and St. Louis County (Access Justification Report (AJR) documentation, as required), preliminary engineering for each project, public engagement, completion of the NEPA process, identification of funding strategies and grant application development, and programming within the region’s Transportation Improvement Program (TIP).

Subsequent phases would account for design and property acquisition for each project (Phase 2) and construction of each project (Phase 3) and will be scoped once the extent of the associated infrastructure improvements at each location are identified.

### Project Goals

The primary goal of Phase 1 is to achieve consensus with regards to the extent of the improvements at each location, achieve all necessary regulatory agency approvals of the recommended improvements, and identify funding for Phase 2 and/or Phase 3.

### Task 1: Project Management & Administration

This task includes management of the internal consultant team, coordination efforts with FHWA, MoDOT, and St. Louis County (Project Steering Committee), document control, quality management and monthly invoicing with monthly progress reports. It is assumed the Project Management tasks involves services from April 2024 through July 2025 a total of sixteen (16) months.

#### A. Project Management Plan

The Consultant shall develop a Project Management Plan for management coordination and control of the project required for successful and timely completion of this study. The Project Management Plan shall include:

- A detailed work plan comprised of schedule for each sub-task described in this scope of services.

- Method for tracking budget and schedule for the duration of the study.
- Key project contacts within the project team, City of Chesterfield and the Project Steering Committee.
- Establish a meeting schedule (corresponding with Task 1.C) and distribute to Client and other parties.
- Establish the project milestones and estimated review times by Client and other parties.

## **B. Project Administration**

This task covers the following items:

- Initial project setup
- Monitoring of project metrics
- Development of subconsultant agreements
- Quarterly management project review meetings
- Monthly invoice and progress report preparation (assumes 16 invoices)

## **C. Project Team Communications and Document Controls**

This establishes the approach to project team meetings as well as development of document control and sharing of project information with the project team. Meetings will be held virtually unless otherwise described below.

- **Project Kick-Off Meeting** – An in-person project kick-off meeting at the City of Chesterfield will be held to review project scope, schedule, key milestones, as well as discuss project goals and study limits. Consultant task leads will participate. This meeting could be conducted as a hybrid meeting with some attendees participating via the FHWA Division Office. This meeting will be the first Project Steering Committee Meeting (described below).
- **Project Steering Committee Meetings** – Consultant will participate in up to eight (8) Project Steering Committee meetings with the City of Chesterfield, District MoDOT team, St. Louis County DOT, MoDOT Central Office (as needed) and FHWA (as needed). Consultant will prepare and distribute meeting agendas prior to meetings and notes documenting decisions and action items after meeting. It is assumed that all Project Steering Committee Meetings will be virtual.
- **Concept Development Workshop** – Consultant will facilitate a 3-hour workshop with the City, MoDOT, and St. Louis County to evaluate each project and identify two concepts for each project to be carried forward into Concept Development. The workshop will feature break-out sessions where smaller groups will sketch concepts on aerial layouts. Consultant task leads will participate and facilitate the breakout sessions. Consultant will document findings of workshop.

- **Internal Consultant Team Meetings** – Consultant will coordinate and lead virtual monthly progress meetings (16 total). Consultant task leads will participate. Informal brief meeting notes in the form of an email summary will be prepared and distributed to document decisions and track action items.
- **City Management/Elected Official Briefing** – Consultant will prepare material and participate in one (1) City of Chesterfield Senior Management/Elected Official Briefing for each project to update on progress of the study at a time determined by the Client. These briefings will be held in-person at the City of Chesterfield.
- **Consultant Team Sharefile** – Consultant will maintain a secure directory for project files, designs, and documentation as a means of document control and handling for the Consultant Team.
- **Other Stakeholder Meetings** – Consultant will facilitate and participate in up to four (4) meetings with other project stakeholders (Levee District, Property Owners, etc.) that are identified during the Phase 1 process. These meetings may be used to discuss the recommended concept(s) at each location or for informative purposes if a critical stakeholder is identified. It is assumed these meetings will be 1-hour in-person meetings.

## Task 2: Survey / Geotechnical Services

This task includes collection of all necessary survey and geotechnical data to inform the conceptual design and preliminary engineering of Phase 1 as well as survey data necessary to support the design and property acquisition within Phase 2. It is assumed the Survey tasks outlined below involve services from April 2024 through September 2024 for a total of six (6) months.

### A. Topographic Survey

Survey information required for the preparation of preliminary, right-of-way, and final roadway plans includes:

- Perform a thorough review of existing data.
- Set survey control and benchmarks.
- Translate control and benchmarks into sheet drawings to be used in construction plans.

Complete topographic surveys to develop preliminary plans, right-of-way plans, and final roadway plans, including all improvements and existing topography within the limits of the project. Any topographic surveys not shown in Attachment A – Survey Area shall not be included and will be negotiated under a supplemental agreement. Surveys shall consist of pertinent topographic features, including:

- Existing drainage and sanitary structures (pipes, types, flowlines, sizes)
- Trees over four (4) inches in diameter
- Existing retaining wall shots and type of wall
- Building front elevations and pertinent building features

- Pertinent parking lot features
- Driveways, pavement types, and profiles
- Existing signal equipment surveys
- Drainage swales
- Sign posts, size, identification and photo log
- Pavement marking type
- Miscellaneous roadside identification and photo log
- Lighting
- Other

Field-locate visible above-ground evidence of utilities located within the project area. "Missouri One Call" and MoDOT will be contacted, and a formal request will be submitted for marking the locations of member utilities. In the event that "Missouri One Call" fails to respond, in whole or in part, to the formal request, underground facilities, structures, and utilities will be plotted from surveys and/or available records. The locations of all utilities are to be considered approximate. There may be other utilities whose existence may not be known at the time of the survey.

- Communicate with utility coordinator on underground utility one-call locates.
- Perform as-needed punch list surveys due to design updates and/or new development. Five (5) days of additional crew time have been included.

The CONSULTANT will survey eight (8) cross sections of Bonhomme Creek to complete floodplain analysis.

### **B. Right-of-Way Surveys**

Perform right-of-way surveys necessary for the preparation of preliminary, right-of-way, and final roadway plans including:

No more than ten (10) title reports will be ordered. This will be coordinated during the preliminary design phase of the project.

- Locate existing right of way, property lines, and pertinent section lines for the entire project limits.

Clearly identify linework in drawing with text (i.e. property lines (PL), section lines, quarter- quarter section lines, existing right-of-way, existing easements, etc.)

Research impacted parcels. Each impacted parcel within the project limits shall include property owner name, assessor's map number, last deed book and page, and existing size of parcel in square feet.

- All property lines shall have a bearing (to the nearest second) and a length (to the nearest hundredth of a foot) shown and the parcel closed within acceptable tolerances governed by the State of Missouri.
- Incorporate all easements and identified information from the title work into the existing right-of-way drawing.

- Provide a reference tie drawing with three-point ties.
- Establish land corner ties.

Legal descriptions for acquisitions or location surveys are not included in this phase.

### **C. Geotechnical Services**

Geotechnical exploration as necessary to support development of concept alternatives for both projects as it relates to subsurface conditions and the development of design and construction recommendations for the foundations and earth-related phases of the proposed projects.

Obtain up to 18 borings related to the potential for retaining walls at the Long Road interchange, the south approach to the Long Road interchange, retaining walls along the North Outer Road, and/or approaches to a potential roundabout along the North Outer Road.

- Select borings may be substituted with Piezocone Penetration Test soundings.

Prepare one (1) Geotechnical Report that includes the Long Road interchange, the North Outer Road extension, and the bridge over Bonhomme Creek in accordance with MoDOT's EPG Section 320.2.

## **Task 3: Traffic & Safety**

This task includes collection of all necessary traffic and crash data as well as preparation of comprehensive traffic safety and operations analysis. This analysis is structured to satisfy typical requirements of an AJR for both locations. It should be noted that an AJR will be required for the modifications at I-64 and Long Road. The need for an AJR for the extension of the North Outer Road across Bonhomme Creek is dependent upon which alternative is selected by the Client. It is assumed the Traffic and Safety tasks outlined below involve services from April 2024 through July 2025 for a total of sixteen (16) months.

### **A. Study Area Limits**

#### **a. Long Road Interchange**

- Study Area (Safety and Traffic Operations) – Interchange at Long Road plus I-64 between Spirit of St. Louis Boulevard interchange and Boone's Crossing interchange, as well as the intersection of Long Road with Chesterfield Airport Road and the future intersection of Long Road with North Outer Road.

#### **b. North Outer Road Extension**

- Safety Study Area – North Outer Road between Boone's Crossing and Chesterfield Parkway West, including the WB on-ramp to I-64 from the Chesterfield Parkway West. Swingley Ridge Road between Chesterfield Parkway West and the cul-de-sac.
- Traffic Operations Study Area – Along the North Outer Road between Boone's Crossing and Chesterfield Parkway West, including the WB on-ramp to I-64 from Chesterfield Parkway



West. Along Chesterfield Parkway West from Swingley Ridge Road on the north to Wild Horse Creek Road on the south. Along Swingley Ridge between Chesterfield Parkway West and the cul-de-sac.

## **B. Study Peak Periods**

- Weekday AM Commuter Peak Hour (one hour identified between 6 to 9 AM)
- Weekday PM Commuter Peak Hour (one hour identified between 3:30 to 6:30 PM)

## **C. Study Horizons**

- 2024 Existing Conditions
- 2050 Design Year

*Note: Construction Year analysis is presumed NOT required as part of this scope. If required by FHWA and/or MoDOT, the scope and associated fee would need to be revised accordingly.*

## **D. Traffic Data Collection**

- Consultant will obtain the most recent five (5) years of crash summary data for each of the Safety Study Areas defined in Tasks 3.A.a and 3.A.b. This excludes individual crash reports.
- Consultant will obtain from MoDOT traffic counts, speed, and density data from MoDOT sensors on mainline I-64 within the Traffic Operations Study Areas defined in Tasks 3.A.a and 3.A.b.
- Consultant will obtain mainline traffic counts at two (2) locations along I-64, as shown in Attachment B – Traffic Count Locations, during the weekday AM and PM commuter periods, as defined in Task 3.B. One location would be between Spirit of St. Louis Boulevard and Long Road while the other location would be just east of Bonhomme Creek.
- Consultant will perform turning movement counts at the 18 intersections listed below and reflected in Attachment B – Traffic Count Locations during the weekday AM and PM commuter periods, as defined in Task 3.B.
  - Parkway West On Ramp
  - Spirit Roundabout/I-64 WB Off Ramp
  - North Outer Road at Spirit of St. Louis Boulevard
  - Spirit of St. Louis Boulevard and EB I-64 On ramp
  - Chesterfield Airport Road & Long Road
  - Boone’s Crossing at North Outer Road
  - Boone’s Crossing at EB I-64 Ramp Terminal
  - Boone’s Crossing at WB I-64 Ramp Terminal
  - Boone’s Crossing at Chesterfield Airport Road
  - North Outer Road at Top Golf
  - North Outer Road at Chesterfield Parkway West
  - Chesterfield Parkway West at Swingley Ridge
  - Chesterfield Parkway West at Wild Horse Creek Road

- Wild Horse Creek Road at I-64 EB Off ramp
- Swingley Ridge Road at RGA Parking Access
- Swingley Ridge Road at City Hall/RGA Drive
- Swingley Ridge Road at Double Tree Hotel
- Swingley Ridge Road at Dierberg's Drive
- Swingley Ridge Road at Chesterfield Athletic Club

### **E. Methods & Assumptions Report**

Generate a Methods & Assumptions Report consistent with MoDOT EPG 905.3.2.5 and submit to MoDOT, St. Louis County, and FHWA Missouri Division for review and comment prior to proceeding with analysis. The Methods & Assumptions Report will contain a list of the study area intersections, the documentation of selected peak hours for analysis, and key measures of effectiveness.

### **F. Existing Conditions Analysis**

- a. **Safety** – Consultant will analyze existing crash issues within the Safety Study Areas defined in Tasks 3.A.a and 3.A.b. Actual crashes will be compared to expected crashes based on Highway Safety Manual procedures to identify hot spots with higher-than-expected crash frequency or severity.
- b. **Traffic Operations** – Consultant will analyze existing traffic operations in the Traffic Operations Study Areas defined in Tasks 3.A.a and 3.A.b. This will be based on 2024 data obtained in Task 3.D. Speed-flow-density profiles for mainline I-64 approaching the Long Road interchange will be developed to identify times and locations of congestion.
  - i. VISSIM microsimulation models will be developed for the Traffic Operations Study Area defined in Task 3.A.a to quantify levels of service and operating performance along I-64 and the ramps necessary to analyze the Long Road interchange. Required calibration statistics would be provided.
    1. Simulation Calibration Report - Generate a Simulation Calibration Report consistent with MoDOT EPG 905.3.5.3.2.3.5 and submit to MoDOT and FHWA Missouri Division for review and comment. This document will summarize the calibration and validation of the existing conditions VISSIM simulation models for the weekday morning and afternoon peak hours.
  - ii. Synchro and Sidra will be applied for all signalized and roundabout intersections, respectively, within the Traffic Operations Study Areas defined in Tasks 3.A.a and 3.A.b.
  - iii. Highway Capacity Software will be applied for all freeway segments within the Traffic Operations Study Area defined in Tasks 3.A.a and 3.A.b, including basic, merge, diverge, and weaving.

### **G. Define Problem Statement and Project Goals**

The Consultant will leverage the existing safety and traffic operations analysis results to define a problem statement and identify project goals and prioritization for each of the proposed projects (Long Road Interchange and North Outer Road Extension).

## H. Traffic Forecasting

- The Consultant will profile historic growth along I-64 using MoDOT's Traffic Volume Maps.
- The Consultant will coordinate with East-West Gateway Council of Governments to obtain loaded network outputs from the regional travel demand model for the Traffic Operations Study Areas defined in Tasks 3.A.a and 3.A.b. for both Existing Year and Design Year to quantify forecasted growth.
- The Consultant will review the Chesterfield Valley Master Plan and the Chesterfield Village AJR (1998) for insight to previously applied growth projections.
- Identify any future year transportation projects within the Traffic Operations Study Areas defined in Tasks 3.A.a and 3.A.b. that should be incorporated into the future growth analysis (Route 109 improvements, etc.).
- Generate a Traffic Forecasting Report that documents the key assumptions and methodologies for estimating traffic growth for the Traffic Operations Study Areas defined in Tasks 3.A.a and 3.A.b. This document will be submitted to St. Louis County, MoDOT, and FHWA Missouri Division for review and comment.

## I. No Build Analysis

- Safety** – Consultant will evaluate safety for the No Build condition for the design year of 2050 using Highway Safety Manual tools, such as iSATe. This analysis of the Safety Study Areas defined in Tasks 3.A.a and 3.A.b will estimate the expected number of crashes associated with the No Build scenario to serve as a benchmark for comparing the alternatives.
- Traffic Operations** – Consultant will evaluate traffic operations for the No Build condition for the design year of 2050 for the Traffic Operations Study Areas defined in Tasks 3.A.a and 3.A.b. This will utilize VISSIM, Synchro, Sidra, and Highway Capacity Software to quantify levels of service and operating performance, as defined for the Existing Conditions analysis in Task 3.F.b.i through Task 3.F.b.iii.

*Note: Construction Year No Build analysis is presumed NOT required as part of this scope. If required by FHWA and/or MoDOT, the scope and associated fee would need to be revised accordingly.*

## J. Build Analysis

The Consultant will evaluate Build safety and traffic operations analysis for two (2) concept alternatives for each project as defined during the Concept Development Workshop.

- Safety** – Consultant will evaluate safety for the Build condition for each of the alternatives for the design year 2050 using Highway Safety Manual tools, such as iSATe. This analysis of the Safety Study Area defined in Tasks 3.A.a and 3.A.b will estimate the expected number of crashes associated with each alternative, which will then be compared against the No Build to quantify safety improvements.

- b. Traffic Operations** – Consultant will evaluate traffic operations for the Build condition operations for each of the alternatives for the design year 2050 for the Traffic Operations Study Areas defined in Tasks 3.A.a and 3.A.b. This will utilize VISSIM, Synchro, Sidra, and Highway Capacity Software to quantify levels of service and operating performance, as defined for the Existing Conditions analysis in Task 3.F.b.i through Task 3.F.b.iii, of the alternatives for comparison to the No Build.

*Note: Construction Year Build analysis is presumed NOT required as part of this scope. If required by FHWA and/or MoDOT, the scope and associated fee would need to be revised accordingly.*

### **K. Access Justification Report for Long Road Interchange**

This task involves the documentation necessary to satisfy MoDOT and FHWA requirements for modifications to the Long Road Interchange.

- Prepare one (1) draft AJR
- Submit one (1) draft AJR to Client for review and comment. Respond to the comments and modify the document accordingly.
- Submit one (1) draft AJR to St. Louis County and MoDOT for concurrent review and comment. Respond to the comments and modify the document accordingly.
- Submit one (1) draft AJR to MoDOT for submittal to FHWA Missouri Division for review and comment. Respond to the comments and modify the document accordingly.
- Resubmission of revised AJR to FHWA Missouri Division would accompany a request for Determination of Safety, Operational, and Engineering Acceptability.
- Upon completion of NEPA process, issue one (1) FINAL AJR to all agencies involved.
- Coordinate with MoDOT to submit the official request for AJR Final Approval.

### **L. Conceptual Report for Extension of North Outer Road Extension**

This task involves the documentation necessary to satisfy St. Louis County and MoDOT requirements for extension of the North Outer Road over Bonhomme Creek.

- Prepare one (1) draft concept report
- Submit one (1) draft concept report to Client for review and comment. Respond to the comments and modify the document accordingly.
- Submit one (1) draft concept report to St. Louis County and MoDOT for review and comment. Respond to the comments and modify the document accordingly.
- Provide one (1) concept report for final approval.
  - It should be noted that if an alternative for extending the North Outer Road that modifies the existing WB on-ramp to I-64 from Chesterfield Parkway West is selected, it is likely an

AJR would be required for FHWA approval. Should this be the case, a separate AJR from the Long Road modifications would be prepared in place of a Conceptual Report.

## Task 4: Concept Development

This task includes services relating to the development of conceptual alternatives for both projects including utility coordination, roadway engineering, drainage, right of way impacts, cost estimating, and line work. Two concept alternatives are assumed for the interchange at Long Road and two concept alternatives are assumed for the North Outer Road extension across Bonhomme Creek. It is assumed the Concept Development tasks outlined below involves services from April 2024 through September 2024 for a total of six (6) months.

### A. Utility Coordination

This task involves performing the following utility coordination tasks:

- Coordinate to obtain One-Call tickets to have utilities located in identified areas of proposed project.
- Obtain maps from utilities of their known locations and adjust survey limits as needed.
- Coordinate with surveyor to complete utilities survey and verify completeness and accuracy of utility topographical survey.
- Coordinate submittal of concept plans to utility companies.
- Identify locations for power service needs, and coordinate with the power company to obtain estimated costs.
- Review Concept Plans to assist in the identification of potential conflicts.
- Prepare colored utility line exhibits for coordination.

**B. Concept Design** - The concept design effort will be coordinated concurrently with the traffic and safety analysis completed in Task 3. The two alternatives for each project will be the recommended alternatives from the Concept Development Workshop.

- Obtain as-built plans for:
  - I-64 at Long Road
  - I-64 mainline within the study area limits
  - All interchange ramps within the study area limits.
  - North Outer Road east of Top Golf
  - North Outer Road from Chesterfield Parkway West onto I-64 WB
  - Swingley Ridge Road
- Establish a quality control process for Concept Development
- a. **Alternative Development for Long Road Interchange** – This task will develop two (2) concept plans for a new full access interchange at Long Road to determine a viable design relative to interchange layout, roadway alignments, structures, drainage, right-of-way, utility impacts, and probable estimate of cost.

- Up to two (2) site visits
- Develop Design Criteria

The following tasks will be conducted for each concept unless specified otherwise:

- Roadway
  - Establish horizontal and vertical geometry
  - Establish concept typical section
  - Review and develop roadside safety options
  - Develop concept cross sections
  - Develop concept retaining wall layouts
  - Estimate area of any right-of-way needs
  - Identify potential design exceptions that may be required
- Drainage
  - Review existing drainage and sanitary sewer plans
  - Review potential utility impacts
    - Sanitary
    - Storm sewers
  - Coordination with MSD
  - Perform drainage calculations to determine the viability of concepts relative to necessary drainage improvements. The calculations and models shall include concept level analyses of one (1) layout. Findings shall be used to aid in determining the recommended alternative.
  - Perform a conceptual levee risk review relative to Chesterfield-Monarch Levee District criteria
  - Perform crossroad culvert analysis of two (2) culverts
  - Water quality concepts development
- Structures
  - Review existing as-built plans
  - Review geotechnical report
  - Determine potential bridge layout concepts for one (1) structure
    - Develop potential span arrangements
    - Develop potential superstructure depths for use in designing vertical roadway alignments
- Preparation of Workshop Stripmaps
- Develop Concept Plan Sheets
  - Title
  - Typical sections
  - Plans
  - Profile
  - Bridge layout sheets

- Evaluate constructability
- Develop concept estimate and quantities
- Develop pavement marking layouts (recommended alternative only)
- Develop signing plans necessary for AJR submittal (recommended alternative only)

**b. Alternative Development for North Outer Road Extension** – This task will develop two (2) concept plans for a new connection of the North Outer Road between Chesterfield Parkway West to the east entrance of Chesterfield Nursery to determine a viable design relative to ramp alignments, structures, drainage, right-of-way, utility impacts, and probable estimate of cost. It is assumed there is only one parallel alignment for North Outer Road across Bonhomme Creek from the east entrance of Chesterfield Nursery to Swingley Ridge Road. In the first alternative, the North Outer Road would connect to a proposed intersection at Swingley Ridge Road. In the second alternative, the North Outer Road would connect to a proposed roundabout at Swingley Ridge Road and to a ramp connection from Chesterfield Parkway West.

- Up to two (2) site visits
- Develop Design Criteria

The following tasks will be conducted for each concept unless specified otherwise:

- Roadway
  - Establish horizontal and vertical geometry
  - Establish concept typical section
  - Review and develop roadside safety options
  - Determine pedestrian connections (one proposed trail alignment) from Swingley Ridge across Bonhomme Creek to connect to Chesterfield-Monarch Levee Trail (applicable to both alternatives)
  - Develop concept cross sections
  - Develop concept retaining wall layouts
  - Estimate area of any right-of-way needs
  - Identify potential design exceptions that may be required
- Drainage
  - Review existing drainage and sanitary sewer plans
  - Review potential utility impacts
    - Sanitary
    - Storm sewers
  - Coordination with MSD
  - Perform drainage calculations to determine the viability of concepts relative to necessary drainage improvements. The calculations and models shall include concept level analyses of one (1) HEC Analysis at Bonhomme Creek (applicable to both concept alternatives) and one (1) concept layout. Findings shall be used to aid in determining the recommended alternative.

- Perform a conceptual levee risk review relative to Chesterfield-Monarch Levee District criteria
- Floodplain Risk Review
  - HEC RAS Analysis for bridge layout
  - Floodplain Memo with Preliminary Findings
- Perform crossroad culvert analysis of two (2) culverts
- Water quality concepts development
- Structures
  - Review existing as-built plans
  - Review geotechnical report
  - Determine potential bridge layout concepts for one (1) structure (applicable to both concept alternatives)
    - Develop potential span arrangements
    - Develop potential superstructure depths for use in designing vertical roadway alignments
- Preparation of Workshop Stripmaps
- Develop Concept Plan Sheets
  - Title
  - Typical Sections
  - Plans
  - Profile
  - Bridge Layout Sheets
- Evaluate constructability
- Develop concept estimate and quantities
- Develop pavement marking layouts (recommended alternative only)
- Develop signing plans, if necessary, for AJR submittal (recommended alternative only)

### **C. Alternatives Screening**

Perform a review of the concept alternatives for both projects with regards to their design and constructability, as informed by the traffic and safety analysis, roadway, drainage, structural and environmental analysis in Tasks 3, 4 and 6. Two concept alternatives are assumed for the Long Road Interchange, and two concept alternatives are assumed for the North Outer Road Extension across Bonhomme Creek. This review will be used to compare the alternatives within the criteria matrix.

Establish Screening Criteria – Consultant will coordinate with City, St. Louis County and MoDOT to establish evaluation criteria for screening concept alternatives for comparison. Criteria may include safety, traffic flow, constructability, right-of-way/utility impacts, cost, etc.



Consultant will filter the concept alternatives through the screening criteria to produce a criteria matrix. Quantitative and qualitative analysis from Tasks 3, 4, and 6 will be utilized to inform the criteria matrix.

- Consultant will work with Client, St. Louis County, MoDOT and FHWA to select a recommended alternative to be presented in the AJR for Long Road.
- Consultant will work with Client, St. Louis County, and MoDOT to select a recommended alternative for the extension of the North Outer Road over Bonhomme Creek.

## **Task 5: Preliminary Plan Development**

This task will further develop the recommended alternative for each project with regards to its design and constructability. The recommended concept alternatives for the interchange at Long Road and for the North Outer Road extension across Bonhomme Creek will be analyzed in greater detail and preliminary plans will be created in preparation for NEPA documentation, funding applications, and inclusion in the regional TIP. The development of more detailed plans will be utilized to reduce costing and constructability risks.

### **A. Roadway**

- Review draft AJR and comments for incorporation into Preliminary Plans
- Revise Roadway plan linework
- Revise Wall Layout (assumes 4 total)
- Update right-of-way linework
- Update Signing Layout / Pavement Markings (recommended alternative)

### **B. Drainage**

- Delineate drainage areas and perform hydrologic calculations
- Perform hydraulic calculations for open and closed drainage systems
- Perform hydraulic calculations for sanitary system
- Water quality and quantity analysis
- Determine TCE/easement limits for drainage impacts
- Field visit with team
- Quality control
- Submit preliminary plans and calculations to MSD
- Submit preliminary plans and calculations to Levee District
- Respond to comments

### **C. Structures**

- Refine Structure Layout

### **D. Preparation of Preliminary Plan Sheets**

#### **a. Long Road Interchange**

- Title
- Typical Sections (8 sheets)
- Plan Sheets (Geometry shown, 50 scale; 13 sheets)
- Profile Sheets (50 scale; 13 sheets)
- Develop drainage plan sheets (assumes 28 sheets)
- Preliminary Signing Plan Sheets (no quantity or details)
- Preliminary Lighting Sheets
- Wall Plan and Elevation (2 sheets)
- Conceptual Bridge Layout (2 sheets)
- Quality Control Process
- Quantities
- Estimate

**b. North Outer Road Extension**

- Title
- Typical Sections (8 sheets)
- Plan Sheets (Geometry shown, 14 sheets)
- Profile Sheets (14 sheets)
- Develop drainage plan sheets (assumes 14 sheets)
- Develop sanitary plan sheets (assumes 14 sheets)
- Preliminary Signing Plan Sheets (no quantity or details)
- Preliminary Lighting Sheets
- Wall Plan and Elevation (2 sheets)
- Conceptual Bridge Layout (2 sheets)
- Quality Control Process
- Quantities
- Estimate

## **Task 6: Environmental**

This task includes environmental efforts including resource collection, purpose and need, screening of alternatives, Class of Action determination, coordination with MoDOT Environmental and various technical studies throughout conceptual development and into preliminary engineering with the intention of obtaining a CEII environmental determination for each project. It is assumed the Environmental tasks outlined below involves services from April 2024 through July 2025 for a total of sixteen (16) months.

### **A. Conceptual Design and NEPA Scoping**

- a. Resource Collection** – Perform a data records search and review for publicly available information related to environmental resources in the study area. This will include, but not be limited to, land use categorization, social and demographic statistics, historic features, protected species, natural areas, hazardous-waste sources, and sensitive noise receptors. Neither detailed field reviews or studies nor consultation with resource agencies will be included at this stage.

Activities will include the collection of materials, effort to review and disseminate the information, and development of a master geodatabase to manage the geographical data.

- b. Development of Problem Statement** – Prepare a problem statement and project goals for inclusion in the concept development and AJR documentation. The Conceptual Study is prepared during the “pre-NEPA” phase and is classified as NEPA scoping; the purpose of the problem statement is to provide supporting documentation for the purpose and need.
- c. Development of Purpose and Need** – Prepare a defensible purpose and need for use in the concept development, AJR documentation, and later in the NEPA class of action document. The AJR technical reviews for project purpose within FHWA are conducted independent from the NEPA review in preliminary engineering phase and can sometimes create conflict during NEPA approvals; this item will include the agency coordination effort to maintain alignment of the project purpose and need for both the AJR and NEPA document.
- d. Conceptual Alternatives Screening** – Develop screening criteria and process for preparation of appropriate selection matrix based on key benefits and impacts within the conceptual report and later NEPA document.
- e. Class of Action Determination** – Consolidation of resource data, purpose and need, and alternative screenings into the conceptual report and AJR. Coordination with MoDOT and FHWA to assign the class of action. For the purposes of scoping, it is assumed the result will be a federally approved categorical exclusion (CEII).

## **B. Long Road Interchange NEPA Processing (Phase I)**

- a. MoDOT Environmental Coordination** – Following award of federal funding, a Request for Environmental Review (RER) will be initiated with MoDOT. This item will involve management of the coordination effort and administrative record following the MoDOT Local Public Agency (LPA) process for compliance with NEPA and FHWA policy.
- b. Technical Studies**
  - **Water Resource Survey** – Prepare a completed Water Resources Survey Report which identifies and delineates water resources (wetland and other waters) in conformance with the standards set by the U.S. Army Corps of Engineers (USACE) and in accordance with the 1987 Corps of Engineers Wetland Delineation Manual and subsequent related guidance memoranda. Existing portions of the project study area within active row crop agricultural fields will follow the U.S. Department of Agriculture-Natural Resource Conservation Services’ (NRCS) farmed wetland determinations protocol.
  - **Special Lands Analysis** – The project area contains Section 4(f) and may potentially contain 6(f) resources. It is assumed for the purposes of scoping the preferred alternative will not create a 4(f) Use that exceeds de minimis and further assumes any Section 6(f) lands identified will not result in a conversion. If Section 4(f) properties have temporary occupancy or de minimis impacts; communication with the Official with Jurisdiction (OWJ) will occur for documentation. Coordination with MoDOT/FHWA will occur for official determinations and approvals.

- EJ Analysis – The project study area will be analyzed for sensitive / Environmental Justice populations. A formal Community Impact Assessment is not anticipated; however, detailed socioeconomic data collected during the conceptual phase will be used to complete an analysis of protected populations. Coordination with MoDOT/FHWA will occur. Documentation will draw information from the public involvement activities scoped under Task 7.
  - Regulated Substances Analysis – A Regulated Substances Memo will be prepared for the sites identified during the conceptual phase in accordance with MoDOT policies and procedures; MoDOT procedures exclude requirement for landowner interviews as part of the assessment. A draft and final report will be submitted.
  - Cultural Resources Survey – Preparation of a combined Cultural Resources Survey Report; this will include an historic property assessment and Phase I archaeological survey. For the purposes of scoping, it is assumed a finding of “no historic properties affected” or “no historic properties adversely affected” will result from the survey. A draft and final report will be submitted to MoDOT and the final report submitted to MO SHPO for approval. This assumes no deep trench excavations.
  - Highway Traffic Noise Analysis – Preparation of a Highway Traffic Noise Report. The project will result in a substantial horizontal and vertical change to the alignment of the roadway which will classify the project as a Type I and require analysis for noise abatement. A Highway Traffic Noise Assessment will be conducted in accordance with MoDOT procedures (127.13) using the FHWA TNM 2.5 model. Completion of the model includes the following assumptions for scoping: Only the preferred alternative will be modeled for the build option; no barriers will be determined feasible or reasonable; and the submittals will include a draft and final report.
  - Protected Species Analysis – Preparation of agency consultation forms with the U.S. Fish and Wildlife Service and MO Department of Conservation, and coordination with MoDOT to obtain agency clearance letters. For the purposes of scoping, no detailed field surveys are expected or included.
- c. **NEPA Document** – Preparation of a NEPA document following the format of the MoDOT CEII.
- Up to two (2) drafts and a final report will be submitted.

### C. North Outer Road NEPA Processing (Phase I)

- a. **MoDOT Environmental Coordination** – Following award of federal funding, a Request for Environmental Review (RER) will be initiated with MoDOT. This item will involve management of the coordination effort and administrative record following the MoDOT Local Public Agency (LPA) process for compliance with NEPA and FHWA policy.
- b. **Technical Studies**

- Water Resource Survey – Prepare a completed Water Resources Survey Report which identifies and delineates water resources (wetland and other waters) in conformance with the standards set by the U.S. Army Corps of Engineers (USACE) and in accordance with the 1987 Corps of Engineers Wetland Delineation Manual and subsequent related guidance memoranda. Existing portions of the project study area within active row crop agricultural fields will follow the U.S. Department of Agriculture-Natural Resource Conservation Services’ (NRCS) farmed wetland determinations protocol.
- Special Lands Analysis – The project area contains Section 4(f) and may potentially contain 6(f) resources. It is assumed for the purposes of scoping the preferred alternative will not create a 4(f) Use that exceeds de minimis and further assumes any Section 6(f) lands identified will not result in a conversion. If Section 4(f) properties have temporary occupancy or de minimis impacts; communication with the Official with Jurisdiction (OWJ) will occur for documentation. Coordination with MoDOT/FHWA will occur for official determinations and approvals.
- EJ Analysis – The project study area will be analyzed for sensitive / Environmental Justice populations. A formal Community Impact Assessment is not anticipated; however, detailed socioeconomic data collected during the conceptual phase will be used to complete an analysis of protected populations. Coordination with MoDOT/FHWA will occur. Documentation will draw information from the public involvement activities scoped under Task 7.
- Regulated Substances Analysis – A Regulated Substances Memo will be prepared for the sites identified during the conceptual phase in accordance with MoDOT policies and procedures; MoDOT procedures exclude requirement for landowner interviews as part of the assessment. A draft and final report will be submitted.
- Cultural Resources Survey – Preparation of a combined Cultural Resources Survey Report; this will include an historic property assessment and Phase I archaeological survey. For the purposes of scoping, it is assumed a finding of “no historic properties affected” or “no historic properties adversely affected” will result from the survey. A draft and final report will be submitted to MoDOT and the final report submitted to MO SHPO for approval. This assumes no deep trench excavations.
- Highway Traffic Noise Analysis – Preparation of a Highway Traffic Noise Report. The project will establish new through lanes which will classify the project as a Type I and require analysis for noise abatement. A Highway Traffic Noise Assessment will be conducted in accordance with MoDOT procedures (127.13) using the FHWA TNM 2.5 model. Completion of the model includes the following assumptions for scoping: Only the preferred alternative will be modeled for the build option; no barriers will be determined feasible or reasonable; and the submittals will include a draft and final report.

- Protected Species Analysis – Preparation of agency consultation forms with the U.S. Fish and Wildlife Service and MO Department of Conservation, and coordination with MoDOT to obtain agency clearance letters. For the purposes of scoping, no detailed field surveys are expected or included.
- c. **NEPA Document** – Preparation of a NEPA document following the format of the MoDOT CEIL.
- Up to two (2) drafts and a final report will be submitted.

## Task 7: Public Engagement

This task includes all efforts associated with public engagement necessary to satisfy NEPA requirements and inform the City of Chesterfield community. It is assumed the Public Engagement tasks outlined below involve services from April 2024 through July 2025 for a total of sixteen (16) months.

### A. Information for City of Chesterfield’s Website

The Consultant will review the project information and craft two (2) project overviews, one (1) for each project, suitable for the City of Chesterfield’s website. Graphics will be created to accompany the overviews based upon the efforts undertaken as part of Task 4.

Deliverables will include:

- Website copy and graphic for Long Road Interchange modifications
- Website copy and graphic for North Outer Road extension

### B. Public Informational Meetings

The Consultant will plan and execute two (2) in-person public meetings, one (1) for the Long Road Interchange modifications and the other for the North Outer Road Extension. Each meeting will be “open house” style where attendees can walk around at their leisure, view the informational boards, and talk one-on-one to project team members. Each two-hour public meeting will also include a 20-minute presentation. The Consultant will perform the following tasks for each public meeting:

- Schedule meeting with the City of Chesterfield to discuss coordination
- Conduct facility meeting site visit
- Coordinate audio/visual for presentation
- Work with Client to design meeting format
- Write and design meeting announcement flyers for City to email to residents and business owners, post on the City website and post at City Hall
- Develop a press release
- Create informational boards
- Write and design welcome/station guide handout
- Write and design comment form (hard copy and electronic version for iPads)
- Create sign-in sheet
- Host sign-in table and public involvement/comment station
- Analyze public comment data and prepare comment summary report

Deliverables for each Public Meeting:

- One (1) pdf meeting announcement flyer
- One (1) press release
- Public involvement informational boards
- One (1) welcome/station guide handout
- One (1) comment form
- One (1) public meeting comment summary report

**a. Optional – Virtual Public Meetings**

The Consultant will plan and moderate two (2) virtual public meetings, one (1) for each project. The meetings will be hosted on Zoom and recorded. The meetings will be conducted as a webinar where participants will write questions into a private chat room, and the Consultant moderator will ask the questions. The same presentation that will be given during the in-person public meetings will be used for the virtual ones. The comment form will be uploaded to the chat room for participants to download, complete and email to the project team. As another option to obtain feedback, the Consultant can conduct live polling using Mentimeter. The Consultant will perform the following tasks for each virtual meeting:

- Set up a registration form and respond to RSVPs by sending registrants a meeting link
- Host a dry run with the Consultant team members and Client staff who will participate in the virtual meeting
- Moderate and run back of the house during meeting
- Write virtual meeting comment summary report

Deliverables for each Virtual Public Meeting:

- One (1) video recording of the virtual meeting
- One (1) virtual meeting comment summary report

## **Task 8 Funding Strategy**

This task includes all necessary efforts associated with the identification of funding opportunities, prioritization of the identified opportunities and submittal of applications for Phase 2 and/or Phase 3. It is assumed the Funding Strategy tasks outlined below involve services from September 2024 through July 2025 for a total of eleven (11) months.

**A. Screen Funding Programs**

The Consultant will screen funding programs and identify those applicable to Phase 2 and/or Phase 3. A spreadsheet will be developed to identify key program attributes, such as cost share, application cycles, eligibility, benefits, and likelihood of award.

Standard funding programs will be screened, such as CMAQ, STP, and TAP. Bipartisan Infrastructure Law discretionary programs, such as RAISE and Reconnecting Communities, will also be screened.

**B. Funding Priority Strategy**

A combination of funding sources will be prioritized and selected to pursue as a complete funding package for Phase 2 and/or Phase 3.

An application strategy plan will be prepared to delineate the timeline of funding package pursuit, including application cycles and contingent actions.

### **C. Application**

Up to three (3) standard grant applications will be prepared.

*Note: Discretionary grant applications are NOT part of this scope. If a discretionary grant opportunity is pursued, the scope and associated fee for application preparation and submittal would need to be revised accordingly.*

## **Task 9: Programming in Transportation Improvement Program (TIP)**

This task includes coordination with East-West Gateway Council of Governments (EWG) to incorporate Long Road Interchange modifications and the North Outer Road Extension in the region's Transportation Improvement Program (TIP). This step is necessary for any projects proposed in the region that will receive federal funding. Preliminary Plans and the NEPA Class of Action document cannot be approved until a project is listed in the TIP. The TIP includes state and locally funded projects that are proposed to be implemented in the next four years and could have a significant effect on traffic flow and thus must be included in the air quality model for the area. It is assumed the Programming tasks outlined below involves services from September 2024 through July 2025 for a total of eleven (11) months.

### **A. Coordination with St. Louis County, MoDOT & EWG**

Facilitate coordination between St. Louis County, MoDOT and EWG to incorporate the proposed modifications to the road system in Chesterfield into the TIP. This effort would include meetings (virtual or in-person) as necessary to determine timing of the request, need for an amendment, coordination of any supplemental data, and facilitate inclusion of the project(s) within the Air Quality Conformity analysis.

### **B. Air Quality Conformity**

Prepare a separate conformity submittal for Long Road Interchange modifications and the North Outer Road extension, as requested by EWG for incorporation into the regional air quality model. Traffic volumes, lane descriptions and documentation of funding sources to be provided.



Attachment A – Survey Area (for each project)





Attachment B – Traffic Count Locations



## Attachment C – Fee Schedule

- Lochmueller Group \$940,353.61
- Trekk Design Group. LLC \$1,022,136.82
- SCI Engineering, Inc. \$71,913.73
- Vector Communications \$38,790.97
- HR Green, Inc. \$14,890.80

**\$2,088,085.93**

DRAFT



**Firm: Lochmueller Group - All**  
**City of Chesterfield I-64 Improvements Phase 1**

**EXHIBIT A: Estimate of Costs**

	Senior Project Manager III	Senior Project Manager (ITS)	Project Liaison (N)	Project Liaison (T)	Senior Engineer I	Project Engineer I	Engineer III	Senior Project Manager (EMV)	Environmental Specialist IV	Environmental Specialist II	Historian/Section 106 Specialist IV	Historian/Section 106 Specialist III	Historian/Section 106 Specialist I	Total Hours
<b>1 PM &amp; Admin</b>														
1A Project Management Plan			20	20										40
1B Project Administration			40	16										56
1C Project Team Communications & Control			8	8										16
Project KO Meeting (prep/attend/summary)			8	13				8						
Project Steering Committee Meetings (8 - 1 hour)			10	16				8						
Concept Development Workshop (3 hour plus prep)			12	20			20	20						80.00
Internal Team Meetings (16 - 1 hour)	4	4	16	16			32	16	16					80.00
City Management Briefing (2 total; 1 hour; prep/attend)			10	15										55.00
Set up Sharefile			2	4										
4 Stakeholder Meetings			8	8				8						16
Task 1 - Subtotal Manhour by Classification	4	4	134	128	0	52	36	96	0	0	0	0	0	128
Unburdened Rate	\$94.06	\$67.18	\$87.67	\$87.67	\$65.66	\$43.84	\$37.15	\$67.18	\$51.25	\$36.14	\$53.50	\$43.59	\$27.37	
Labor	\$376.24	\$268.72	\$11,747.78	\$11,221.76	\$0.00	\$2,279.68	\$1,337.40	\$3,762.08	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$30,993.66
Overhead Rate (186.8%)	\$702.82	\$501.97	\$21,944.85	\$20,962.25	\$0.00	\$4,258.44	\$2,498.26	\$7,027.57	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$57,896.16
Total Labor & OH	\$1,079.06	\$770.69	\$33,692.63	\$32,184.01	\$0.00	\$6,538.12	\$3,835.66	\$10,789.65	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$88,889.82
Fixed Fee = 12% X Total Labor & OH Rate	\$129.49	\$92.48	\$4,043.12	\$3,862.08	\$0.00	\$784.57	\$460.28	\$1,294.76	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$10,666.78
Task 1 - Total Including Labor, OH & Fixed Fee	\$1,208.54	\$863.17	\$37,735.75	\$36,046.09	\$0.00	\$7,322.70	\$4,295.94	\$12,084.40	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$99,556.59
<b>2 Survey / Geotechnical Services</b>														
Coordination with topo, ROW, geo			8	4	4	0	0	0	0	0	0	0	0	16
Task 2 - Subtotal Manhour by Classification	0	8	4	4	0	0	0	0	0	0	0	0	0	16
Unburdened Rate	\$94.06	\$67.18	\$87.67	\$87.67	\$65.66	\$43.84	\$37.15	\$67.18	\$51.25	\$36.14	\$53.50	\$43.59	\$27.37	
Labor	\$0.00	\$537.44	\$350.68	\$350.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,238.80
Overhead Rate (186.8%)	\$0.00	\$1,003.94	\$655.07	\$655.07	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,314.08
Total Labor & OH	\$0.00	\$1,541.38	\$1,005.75	\$1,005.75	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,552.88
Fixed Fee = 12% X Total Labor & OH Rate	\$0.00	\$184.97	\$120.69	\$120.69	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$426.35
Task 2 - Total Including Labor, OH & Fixed Fee	\$0.00	\$1,726.34	\$1,126.44	\$1,126.44	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,979.22
<b>3 Traffic &amp; Safety</b>														
3D Coordinate Traffic Counts / Crash Data			4	4			12	8						24
3E Methods & Assumptions Report			2	40			20	20						80
3Fa Existing Safety Analysis			2	8	16		80	120						226
3Fb Existing Traffic Operations Analysis			4	16	40		200	240						500
3G Define Project Statement and Project Goals			2	4	8		8							22
3H Traffic Forecasting			2	16	40		8	60						134
3Ia No Build Safety Analysis			4	4	8		40	60						112
3Ib No Build Traffic Operations Analysis			4	4	8		40	120						196
3Ia Build Safety Analysis			2	8	24		80	160						274
3Ib Build Traffic Operations Analysis			2	24	50		240	240						556
3K Long Rd AIR			4	80	120		50	75	24		18			371
3L Conceptual Report for North Outer Rd			4	60	80		40	60						244
Task 3 - Subtotal Manhour by Classification	28	0	228	410	40	838	1163	24	0	18	0	0	0	2749
Unburdened Rate	\$94.06	\$67.18	\$87.67	\$87.67	\$65.66	\$43.84	\$37.15	\$67.18	\$51.25	\$36.14	\$53.50	\$43.59	\$27.37	
Labor	\$2,633.68	\$0.00	\$19,988.76	\$35,944.70	\$2,626.40	\$36,737.92	\$43,205.45	\$1,612.32	\$0.00	\$650.52	\$0.00	\$0.00	\$0.00	\$143,399.75
Overhead Rate (186.8%)	\$4,919.71	\$0.00	\$37,339.00	\$67,144.70	\$4,906.12	\$68,626.43	\$80,707.78	\$3,011.81	\$0.00	\$1,215.17	\$0.00	\$0.00	\$0.00	\$267,870.73
Total Labor & OH	\$7,553.39	\$0.00	\$57,327.76	\$103,089.40	\$7,532.52	\$105,364.35	\$123,913.23	\$4,624.13	\$0.00	\$1,865.69	\$0.00	\$0.00	\$0.00	\$411,270.48
Fixed Fee = 12% X Total Labor & OH Rate	\$906.41	\$0.00	\$6,879.33	\$12,370.73	\$903.90	\$12,643.72	\$14,869.59	\$554.90	\$0.00	\$223.88	\$0.00	\$0.00	\$0.00	\$49,352.46
Task 3 - Total Including Labor, OH & Fixed Fee	\$8,459.80	\$0.00	\$64,207.10	\$115,460.13	\$8,436.42	\$118,008.08	\$138,782.82	\$5,179.03	\$0.00	\$2,089.57	\$0.00	\$0.00	\$0.00	\$460,622.94
<b>4 Concept Development</b>														
4A Utility Coordination			4	4	4									12
4Ba Concept Design Long Road			8	16	24									48
4Bb Concept Design for NOR			8	16	24									48
4C Alternatives Screening (criteria, filter, selection of recommended alts)			4	30	50		20	20	8					132
Task 4 - Subtotal Manhour by Classification	0	24	66	102	0	20	20	8	0	0	0	0	0	240
Unburdened Rate	\$94.06	\$67.18	\$87.67	\$87.67	\$65.66	\$43.84	\$37.15	\$67.18	\$51.25	\$36.14	\$53.50	\$43.59	\$27.37	
Labor	\$0.00	\$1,612.32	\$5,786.22	\$8,942.34	\$0.00	\$876.80	\$743.00	\$537.44	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$18,498.12
Overhead Rate (186.8%)	\$0.00	\$3,011.81	\$10,808.66	\$16,704.29	\$0.00	\$1,637.86	\$1,387.92	\$1,003.94	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$34,554.49
Total Labor & OH	\$0.00	\$4,624.13	\$16,594.88	\$25,646.63	\$0.00	\$2,514.66	\$2,130.92	\$1,541.38	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$53,052.61
Fixed Fee = 12% X Total Labor & OH Rate	\$0.00	\$554.90	\$1,991.39	\$3,077.60	\$0.00	\$301.76	\$255.71	\$184.97	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$6,366.31
Task 4 - Total Including Labor, OH & Fixed Fee	\$0.00	\$5,179.03	\$18,586.26	\$28,724.23	\$0.00	\$2,816.42	\$2,386.63	\$1,726.34	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$59,418.92
<b>5 Preliminary Plan Development</b>														
Coordination during PE			8	12	20									40
QA/QC			16	2	2									20
Task 5 - Subtotal Manhour by Classification	0	24	14	22	0	0	0	0	0	0	0	0	0	60
Unburdened Rate	\$94.06	\$67.18	\$87.67	\$87.67	\$65.66	\$43.84	\$37.15	\$67.18	\$51.25	\$36.14	\$53.50	\$43.59	\$27.37	
Labor	\$0.00	\$1,612.32	\$1,227.38	\$1,928.74	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,768.44
Overhead Rate (186.8%)	\$0.00	\$3,011.81	\$2,292.75	\$3,602.89	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$8,907.45
Total Labor & OH	\$0.00	\$4,624.13	\$3,520.13	\$5,531.63	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$13,675.89
Fixed Fee = 12% X Total Labor & OH Rate	\$0.00	\$554.90	\$422.42	\$663.80	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,641.11
Task 5 - Total Including Labor, OH & Fixed Fee	\$0.00	\$5,179.03	\$3,942.54	\$6,195.42	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$15,316.99
<b>6 Environmental</b>														
6A NEPA Scoping			4	4			22	30	48	6	16	10		140
6B Long Road NEPA Processing			12	20			98	78	233	32	108	623		623
6C North Outer Road NEPA Processing			12	20			10	83	67	200	22	20	140	574
Task 6 - Subtotal Manhour by Classification	0	0	28	44	0	0	20	203	175	481	60	68	258	1337
Unburdened Rate	\$94.06	\$67.18	\$87.67	\$87.67	\$65.66	\$43.84	\$37.15	\$67.18	\$51.25	\$36.14	\$53.50	\$43.59	\$27.37	
Labor	\$0.00	\$0.00	\$2,454.76	\$3,857.48	\$0.00	\$0.00	\$743.00	\$13,637.54	\$8,968.75	\$17,383.34	\$3,210.00	\$2,964.12	\$7,061.46	\$60,280.45
Overhead Rate (186.8%)	\$0.00	\$0.00	\$4,581.49	\$7,205.77	\$0.00	\$0.00	\$1,387.92	\$25,474.92	\$16,753.63	\$32,472.08	\$5,396.28	\$5,536.98	\$13,190.81	\$112,603.88
Total Labor & OH	\$0.00	\$0.00	\$7,040.25	\$11,063.25	\$0.00	\$0.00	\$2,130.92	\$39,112.46	\$25,722.38	\$49,855.42	\$9,206.28	\$8,501.10	\$20,252.27	\$172,884.33
Fixed Fee = 12% X Total Labor & OH Rate	\$0.00	\$0.00	\$844.83	\$1,327.59	\$0.00	\$0.00	\$255.71	\$4,693.50	\$3,086.69	\$5,982.65	\$1,104.75	\$1,020.13	\$2,430.27	\$20,746.12
Task 6 - Total Including Labor, OH & Fixed Fee	\$0.00	\$0.00	\$7,885.08	\$12,390.84	\$0.00	\$0.00	\$2,386.63	\$43,805.96	\$28,809.06	\$55,838.07	\$10,311.03	\$9,521.23	\$22,682.54	\$193,630.45

Notes: Assumed Mileage

800.00  
800.00  
550.00





**Firm: Lochmueller Group - All**  
**City of Chesterfield I-64 Improvements Phase 1**

**EXHIBIT A: Estimate of Costs**

	Senior Project Manager III	Senior Project Manager I (TS)	Project Liaison (N)	Project Liaison (T)	Senior Engineer I	Project Engineer I	Engineer III	Senior Project Manager I (ENV)	Environmental Specialist IV	Environmental Specialist II	Historian/Section 106 Specialist IV	Historian/Section 106 Specialist III	Historian/Section 106 Specialist I	Total Hours
<b>7 Public Engagement</b>														
<b>7A</b> Review of Copy for website / Graphics			2	2										6
<b>7B</b> Public Info Meetings (2, prep & attend)			16	26		20		20		12				94
Coordination with PE tasks			2	6						2				10
Task 7 - Subtotal Manhour by Classification	0	0	20	34	0	20	20	16	0	0	0	0	0	110
Unburdened Rate	\$94.06	\$67.18	\$87.67	\$87.67	\$65.66	\$43.84	\$37.15	\$67.18	\$51.25	\$36.14	\$53.50	\$43.59	\$27.37	
Labor	\$0.00	\$0.00	\$1,753.40	\$2,980.78	\$0.00	\$876.80	\$743.00	\$1,074.88	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$7,428.86
Overhead Rate (186.8%)	\$0.00	\$0.00	\$3,275.35	\$5,568.10	\$0.00	\$1,637.86	\$1,387.92	\$2,007.88	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$13,877.11
Total Labor & OH	\$0.00	\$0.00	\$5,028.75	\$8,548.88	\$0.00	\$2,514.66	\$2,130.92	\$3,082.76	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,305.97
Fixed Fee = 12% X Total Labor & OH Rate	\$0.00	\$0.00	\$603.45	\$1,025.87	\$0.00	\$301.76	\$255.71	\$369.93	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,556.72
Task 7 - Total Including Labor, OH & Fixed Fee	\$0.00	\$0.00	\$5,632.20	\$9,574.74	\$0.00	\$2,816.42	\$2,386.63	\$3,452.69	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$23,862.69
<b>8 Funding Strategy</b>														
<b>8A</b> Screen Funding Programs			4	30										34
<b>8B</b> Funding Priority Strategy														24
<b>8C</b> Application (3 standard)			6	72			24	12	6	20				140
Task 8 - Subtotal Manhour by Classification	0	0	14	122	0	0	24	12	6	20	0	0	0	198
Unburdened Rate	\$94.06	\$67.18	\$87.67	\$87.67	\$65.66	\$43.84	\$37.15	\$67.18	\$51.25	\$36.14	\$53.50	\$43.59	\$27.37	
Labor	\$0.00	\$0.00	\$1,227.38	\$10,695.74	\$0.00	\$0.00	\$891.60	\$806.16	\$307.50	\$722.80	\$0.00	\$0.00	\$0.00	\$14,651.18
Overhead Rate (186.8%)	\$0.00	\$0.00	\$2,292.75	\$19,979.64	\$0.00	\$0.00	\$1,665.51	\$1,505.91	\$574.41	\$1,350.19	\$0.00	\$0.00	\$0.00	\$27,368.40
Total Labor & OH	\$0.00	\$0.00	\$3,520.13	\$30,675.38	\$0.00	\$0.00	\$2,557.11	\$2,312.07	\$881.91	\$2,072.99	\$0.00	\$0.00	\$0.00	\$42,019.58
Fixed Fee = 12% X Total Labor & OH Rate	\$0.00	\$0.00	\$422.42	\$3,681.05	\$0.00	\$0.00	\$306.85	\$277.45	\$106.83	\$248.76	\$0.00	\$0.00	\$0.00	\$5,042.35
Task 8 - Total Including Labor, OH & Fixed Fee	\$0.00	\$0.00	\$3,942.54	\$34,356.43	\$0.00	\$0.00	\$2,863.96	\$2,589.51	\$988.74	\$2,321.75	\$0.00	\$0.00	\$0.00	\$47,061.93
<b>9 Programming in TIP</b>														
<b>9A</b> Coordination with Agencies			15	20				24						59
<b>9B</b> Air Quality Conformity			4	4		8		24						40
Task 9 - Subtotal Manhour by Classification	0	0	19	24	0	8	0	48	0	0	0	0	0	99
Unburdened Rate	\$94.06	\$67.18	\$87.67	\$87.67	\$65.66	\$43.84	\$37.15	\$67.18	\$51.25	\$36.14	\$53.50	\$43.59	\$27.37	
Labor	\$0.00	\$0.00	\$1,665.73	\$2,104.08	\$0.00	\$350.72	\$0.00	\$3,224.64	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$7,345.17
Overhead Rate (186.8%)	\$0.00	\$0.00	\$3,111.58	\$3,930.42	\$0.00	\$655.14	\$0.00	\$6,023.63	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$13,720.78
Total Labor & OH	\$0.00	\$0.00	\$4,777.31	\$6,034.50	\$0.00	\$1,005.86	\$0.00	\$9,248.27	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$21,065.95
Fixed Fee = 12% X Total Labor & OH Rate	\$0.00	\$0.00	\$573.28	\$724.14	\$0.00	\$120.70	\$0.00	\$1,109.79	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,527.91
Task 9 - Total Including Labor, OH & Fixed Fee	\$0.00	\$0.00	\$5,350.59	\$6,758.64	\$0.00	\$1,126.57	\$0.00	\$10,358.06	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$23,593.86
<b>Total Including Labor, OH &amp; Fixed Fee</b>	<b>\$9,668.34</b>	<b>\$12,947.57</b>	<b>\$148,408.51</b>	<b>\$250,632.96</b>	<b>\$8,436.42</b>	<b>\$132,090.19</b>	<b>\$153,102.63</b>	<b>\$79,196.00</b>	<b>\$29,796.80</b>	<b>\$60,249.39</b>	<b>\$10,311.03</b>	<b>\$9,521.23</b>	<b>\$22,682.54</b>	<b>\$927,043.61</b>
ODC (see summary)														\$13,310.00
<b>Grand Total</b>														<b>\$940,353.61</b>

Notes: Assumed Mileage 850.00

\$ 2,010.00

ODC:  
 \$ 2,010.00 Mileage @ \$0.67/mile for various meetings/field recon  
 \$ 300.00 Printing  
 \$ 11,000 Misc.  
 \$ 13,310.00 Subtotal

Misc includes:  
 Miovision Counts \$8,600  
 hotel for HT (9 nigh \$2,000 Enviro and PL from Springfield office  
 Per diem \$400

TREKK Project # 23-0474

Chesterfield AJR  
(Long Road Interchange and North Outer Road Connector)

<b>PHASE</b>	<b>HOURS</b>	<b>Percent of Project Total Hours</b>	<b>COST</b>	<b>Percent of Project Total Cost</b>
Task 1 - Project Coordination	437.0	8%	\$ 86,984.01	9%
Task 2 - Survey	916.0	16%	\$ 146,879.40	14%
Task 3 - Utility Coordination	312.0	5%	\$ 46,408.48	5%
Task 4 - Conceptual Phase	2170.0	38%	\$ 373,417.34	37%
Task 5 - Preliminary Phase	1924.0	33%	\$ 342,310.39	33%
Task 6 - Final Plans	0.0	0%	\$ -	0%
Expenses			\$ 12,150.00	1%
LiDAR Expenses			\$ 11,200.00	1%
Mileage			\$ 2,787.20	0%
	0		\$ -	0%
<b>PROJECT TOTAL =</b>	<b>5,759.0</b>		<b>\$ 1,022,136.82</b>	
<b>Design Totals =</b>	4843.0	84%	\$ 851,907.42	83%
<b>Survey Totals =</b>	916.0	16%	\$ 170,229.40	17%

**EXHIBIT III - ESTIMATE OF COSTS**  
**TREKK DESIGN GROUP**  
**MoDOT Proj. No.**  
**TREKK Proj. No. 23-0474**  
**Chesterfield AJR**  
**3/13/2024**

<b>Direct Salary</b>	<b>Hourly</b>	<b>Estimated</b>	<b>Total Labor</b>
<b>Classification</b>	<b>Rate</b>	<b>Hours</b>	<b>Cost</b>
Principal	\$ 100.00 @	23.00	\$ 2,300.00
Project Manager	\$ 80.00 @	329.00	\$ 26,320.00
Sr. Prof. Engineer	\$ 70.00 @	584.00	\$ 40,880.00
Prof. Engineer I	\$ 70.00 @	480.00	\$ 33,600.00
Prof. Engineer II	\$ 55.00 @	837.00	\$ 46,035.00
Prof. Engineer III	\$ 50.00 @	738.00	\$ 36,900.00
Sr. Project Engineer	\$ - @	-	\$ -
Project Engineer I	\$ 50.00 @	232.00	\$ 11,600.00
Project Engineer II	\$ 42.00 @	162.00	\$ 6,804.00
Project Engineer III	\$ 35.00 @	443.00	\$ 15,505.00
Sr. Project Designer	\$ 60.00 @	236.00	\$ 14,160.00
Project Designer I	\$ 45.00 @	633.00	\$ 28,485.00
Project Designer II	\$ - @	-	\$ -
Project Designer III	\$ - @	-	\$ -
CADD Technician I	\$ - @	-	\$ -
CADD Technician II	\$ - @	-	\$ -
CADD Technician III	\$ - @	-	\$ -
Admin	\$ 35.00 @	26.00	\$ 910.00
Sr. Prof Land Surveyor	\$ 70.00 @	106.00	\$ 7,420.00
Prof. Land Surveyor I	\$ - @	-	\$ -
Prof. Land Surveyor II	\$ 42.00 @	242.00	\$ 10,164.00
Prof. Land Surveyor III	\$ - @	-	\$ -
Survey Technician I	\$ 32.00 @	294.00	\$ 9,408.00
Survey Technician II	\$ - @	-	\$ -
Utility Coordinator I	\$ 33.00 @	138.00	\$ 4,554.00
Survey Crew	\$ 64.00 @	176.00	\$ 11,264.00
LiDAR Crew	\$ 75.00 @	80.00	\$ 6,000.00
<b>Subtotal</b>		<b>5759</b>	<b>\$ 312,309.00</b>
Overhead Rate @ 183.29%			\$ 572,431.17
Fixed Fee @ 12%			\$ 106,168.82
FCCM @ 1.63%			\$ 5,090.64
<b>Subtotal</b>			<b>\$ 995,999.63</b>
<b>Direct Expenses</b>			
Equipment			
Mobile LiDAR Equipment	4 @ \$2,500.00	per hour	\$ 10,000.00
Aerial LiDAR Equipment	2 @ \$ 600.00	per hour	\$ 1,200.00
Survey Base Station	0 @ \$1,500.00	per each	\$ -
Survey Equipment	256 @ \$ 14.00	per hour	\$ 3,584.00
Miovision Camera	0 @ \$ 5	per hour	\$ -
Vehicles			
Survey Vehicles	1720 @ \$ 0.670	per mile	\$ 1,152.40
Personal and Company Cars	2440 @ \$ 0.670	per mile	\$ 1,634.80
Others			
Printing & Plotting			\$ -
Postage & Delivery			\$ -
Hotel	13 @ \$ 150.00	per day	\$ 1,950.00
Titlework Documents	10 @ \$ 500.00	per each	\$ 5,000.00
Titlework Updates	0 @ \$ 200.00	per each	\$ -
Deeds	40 @ \$ 5.00	per each	\$ 200.00
Per Diem-Breakfast	0 @ \$ -	per day	\$ -
Per Diem-Lunch	0 @ \$ -	per day	\$ -
Per Diem-Dinner	0 @ \$ -	per day	\$ -
Per Diem-Full Day	24 @ \$ 59.00	per day	\$ 1,416.00
<b>Subtotal</b>			<b>\$ 26,137.20</b>
Subconsultants			
	0		0
	0		0
<b>TOTAL ESTIMATED FEE</b>			<b>\$ 1,022,136.83</b>

**ESTIMATED HOURS**

TREKK Design Group  
 MoDOT Proj. No.  
 TREKK Proj. No. 23-0474  
 Chesterfield AJR

CLASSIFICATION	Principal	Project Manager	Sr. Prof. Engineer	Prof. Engineer I	Prof. Engineer II	Prof. Engineer III	Project Engineer I	Project Engineer II	Project Engineer III	Sr. Project Designer	Project Designer I	Admin	Sr. Prof Land Surveyor	Prof. Land Surveyor II	Survey Technician I	Utility Coordinator I	Survey Crew	LiDAR Crew	TOTAL
<b>Task 1 - Project Coordination</b>																			
Project Management Plan (Work Plan and Schedule input)		4			8														
Project Admin (setup, one-hr quarterly review meetings, invoicing - 16 months)		24			8							16							
Project Team Communications and Document Controls																			
Kick-off meeting (virtual)		4	12		4				4							4			
Steering committee meetings		24			4														
Concept Development Workshop (4 attendees)		8	24																
Internal team meetings		80	24		24				24		24	10				24			
Elected Official briefing		4																	
Stakeholder meetings		12	12																
Core Team Meetings (7 one-hour virtual meetings)		7	14		7	7			7		7					2			
<b>Task 1 - Subtotal</b>	<b>0</b>	<b>167</b>	<b>86</b>	<b>0</b>	<b>55</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>35</b>	<b>0</b>	<b>31</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>0</b>	<b>0</b>	<b>437</b>
<b>Task 2 - Survey</b>																			
control - long													1	2	4		10		
control - Outer													1	2	4		10		
property-long													1	8	20		20		
Property-outer														8	20		20		
scans under bridge and railroad- outer														2	4		20		
Topographic Survey (Long-road) plus 2 pick up days													1	4	10		32		
Topographic Survey(outer road) plus 3 pick up days														4	10		40		
Hydraulic Cross sections (8 locations) (outer road)														4	4		24		
Base Map and DTM Surface- long													1	25	30				
Base Map and DTM Surface- outer													1	25	30				
Quality Control Process-long	1												2	4	4				
Quality Control Process-outer	1												2	4	4				
Lidar field-long road	6												30					60	
Lidar Office-long road	6												30	90	90				
Lidar field-outer road	2												18					20	
Lidar office-outer road	2												18	60	60				
<b>Task 2 - Subtotal</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>106</b>	<b>242</b>	<b>294</b>	<b>0</b>	<b>176</b>	<b>80</b>	<b>916</b>
<b>Task 3 - Utility Coordination</b>																			
One-Call Tickets					8						8								
Acquisition of mapping					12														
Survey coordination / verification of One Call markings					16											32			
Field visits (assume 8 on site) (2 attendees for 4 visits, 1 attendee for 4 visits)					20											40			
Concept Plan submittal					4						4								
Concept Phase Conflict review		2			16						16					16			
Preliminary Phase Conflict review		2			16						16					16			
Relocation discussions		4	8		8														
Utility Exhibits			8		8						32								
<b>Task 3 - Subtotal</b>	<b>0</b>	<b>8</b>	<b>16</b>	<b>0</b>	<b>108</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>76</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>104</b>	<b>0</b>	<b>0</b>	<b>312</b>



**ESTIMATED HOURS**

TREKK Design Group  
 MoDOT Proj. No.  
 TREKK Proj. No. 23-0474  
 Chesterfield AJR

<b>Task 4 - Conceptual Phase</b>												
Phase Kickoff (internal)		4	12		12	8			8		8	4
As Built requests and existing information gathering		2	2			8						
Review traffic analysis and lane recommendations		2	4			4				4		
<b>Long Road Interchange (&lt;2 miles)</b>												
<b>Roadway - Alternatives Development ( 2 alternatives)</b>												
Develop Design Criteria		4	8			16						
Existing Geometry Layout			2			4				40		
Alternatives Geometry Layout		4	8			8		30		30		
Linework (EOP/Shoulder)			4			24		24		24		
Template development						16				16		
Model (3D) and sections (50 ft spacing)						60				60		
Roadside Safety Analysis		8	40					40				
Wall Layout (assumes 2 total, end bent locations)			4			8		24		4		
Proposed R/W linework		2	8							16		
Lighting Layout (Preferred Alternative)			8			16		16				
Signing Layout / Pavement Markings (Preferred Alternative)			32							32		
<b>Drainage</b>												
Team Meetings (assumes 4 virtual)		4			4							
Coordination with MoDOT/City to obtain existing data		2			4							
Coordination with MSD/Levee District to obtain existing data		4			8							
Acquire Existing Contours outside survey limits						4						
Review of existing storm sewers					2	6						
Site visit					3	3						
Analyze Drainage Impacts (up to two alternatives)					12	40						
Crossroad Culvert Analysis (assumes 2)					4	12						
Water quality and quantity analysis					4	12						
CADD Linework		1			2			12				
<b>Structures</b>												
Review As-Built Plans/Record Drawings			8		8	8						
Develop Concept span arrangements			12		24	50						
Develop Concept Superstructure depths			12		24	50						
Wall layout review			8		8	8						
Quantities / Unit Costs (SF)			8		8	8						
<b>North Outer Road ( Chesterfield Parkway West to Chesterfield Valley Nursery east entrance)</b>												
<b>Roadway - Alternatives Development ( 1 alternative, includes one-way connection from Chesterfield Parkway West option)</b>												
Develop Design Criteria		1	4			4						
Existing Geometry Layout			2			8				24		
Alternatives Geometry Layout		2	8			16				24		
Linework (EOP/Shoulder)			4			8		16		8		
Template development						16				16		
Model (3D) and sections (25 ft spacing)						32				32		
Roadside Safety Analysis		2	12					24				
Pedestrian Connection Layout		2	16			16		32				
Wall Layout (assumes 2 total, one way ramp extension, Swingley intersection)			4			8		24		4		
Lighting Layout (Preferred Alternative)			8			12		12				
Signing Layout / Pavement Markings (Preferred Alternative)			20							20		
<b>Drainage</b>												
Team Meetings (assumes 4 virtual)		4			4							

**ESTIMATED HOURS**

TREKK Design Group

MoDOT Proj. No.

TREKK Proj. No. 23-0474

Chesterfield AJR

Coordination with MoDOT/City to obtain existing data		2		4																		
Coordination with MSD/Levee District to obtain existing data		4		8																		
Acquire Existing Contours outside survey limits																						
Review of existing storm and sanitary sewers																						
Site visit																						
Analyze Drainage Impacts																						
Analyze Sanitary Impacts																						
Levee Risk Review																						
Floodplain Risk Review																						
HEC RAS Analysis for Preliminary Plans																						
Floodplain Memo with Preliminary Findings																						
Crossroad Culvert Analysis (assumes 2)																						
Water quality and quantity analysis																						
CADD Linework		1		2						12												
<b>Structures</b>																						
Review As-Built Plans/Record Drawings				8	8				8													
Develop Concept span arrangements				12	24				50													
Develop Concept Superstructure depths				12	24				50													
Wall layout review				8	8				8													
Quantities / Unit Costs (SF)				2	4				4													
<b>Concept Estimate and Quantities</b>																						
Quantities and Estimate of Cost			2	2					8			8										
Design Exceptions				8	8																	
Quality Control Process	1		16	16					8			8										
Workshop Stripmaps			3	3								32			32							
<b>Concept Plan Sheets (Long Road)</b>																						
Title			1																	4		
Typical Sections (8 sheets)				4								14			14							
Plan Sheets (Geometry shown, 50 scale; 13 sheets)			2	4					13			52			52							
Profile Sheets (50 scale; 13 sheets)			1	2					6			20			20							
Concept Signing Plan Sheets (no quantity or details)				8											40							
Wall Plan and Elevation (2 sheets)			2	4								24			32							
Conceptual Bridge Layout (2 sheets)			8	12								30			30							
Quality Control Process	1		4	12					12			12			12							
<b>Concept Plan Sheets (North Outer Road)</b>																						
Title			1																	4		
Typical Sections (8 sheets)				4								14			14							
Plan Sheets (Geometry shown, 14 sheets)			2	4					13			52			52							
Profile Sheets (14 sheets)			1	2					6			20			20							
Concept Signing Plan Sheets (no quantity or details)				8											20							
Wall Plan and Elevation (2 sheets)			2	4								24			32							
Conceptual Bridge Layout (2 sheets)			8	12								30			30							
Quality Control Process	1		4	12					12			12			12							
<b>Task 4 - Subtotal</b>	<b>1</b>	<b>84</b>	<b>329</b>	<b>248</b>	<b>236</b>	<b>552</b>	<b>0</b>	<b>24</b>	<b>298</b>	<b>0</b>	<b>394</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>2170</b>
<b>Task 5 - Preliminary Phase</b>																						
<b>Long Road Interchange (&lt;2 miles)</b>																						
<b>Roadway Design</b>																						

**ESTIMATED HOURS**

TREKK Design Group

MoDOT Proj. No.

TREKK Proj. No. 23-0474

Chesterfield AJR

Template refinement						4					4								
Model Cleanup (3D) and sections (50 ft spacing)						8				24	24								
Wall Layout (assumes 2 total, end bent locations)			2			16				16									
Update R/W linework		1	1									6							
Update Signing Layout / Pavement Markings (Preferred Alternative)			24			24						32							
<b>Drainage</b>																			
Team Meetings (assumes 5 virtual)		5		5															
Coordination and Admin		6		14	14														
Delineate drainage areas and perform hydrologic calculations				6	18			18											
Perform hydraulic calculations for open and closed drainage systems				14	72			36											
Water quality and quantity analysis				8	36														
Determine TCE/easement limits for drainage impacts				2	8														
Field visit with team				4	4														
Quality control		2		24															
Submit to MSD				6															
Submit to Levee Dist.				6															
Address comments		2		2	12			12											
<b>Structures</b>																			
Refine Structure Layout		4	10	20				20											
<b>Preliminary Plan Sheets (Long Road)</b>																			
Title		1									1								
Typical Sections (8 sheets)			2							2	2								
Plan Sheets (Geometry shown, 50 scale; 13 sheets)		1	2			8				4	4								
Profile Sheets (50 scale; 13 sheets)		1	1			2				10	10								
Develop drainage plan sheets (assumes 28 sheets)					64			94											
Preliminary Signing Plan Sheets (no quantity or details)			4								12								
Preliminary Lighting Sheets		1	2								12								
Wall Plan and Elevation (2 sheets)		2	4							8	8								
Conceptual Bridge Layout (2 sheets)		1	2							8	8								
Quality Control Process		1	4	12		12				12	12								
Quantities		1	2	4	4	4	6	8		8	8								
Estimate			1	4			8												
<b>North Outer Road ( Chesterfield Parkway West to Chesterfield Valley Nursery east entrance)</b>																			
<b>Roadway Design</b>																			
Template refinement						4						4							
Model Cleanup (3D) and sections (25 ft spacing)						8				24	24								
Wall Layout			2			16				16									
Update R/W linework		1	1									6							
Update Signing Layout / Pavement Markings (Preferred Alternative)			24			24						32							
<b>Drainage</b>																			
Team Meetings (assumes 5 virtual)		5		5															
Coordination and Admin		6		14	14														
Delineate drainage areas and perform hydrologic calculations				6	18														
Perform hydraulic calculations for open and closed drainage systems				14	72			28											
Perform hydraulic calculations for sanitary system					8			18											
Quality Control			1	4															
Water quality and quantity analysis				8	18														
Determine TCE/easement limits for drainage impacts				2	8														



**DIRECT EXPENSES**

TREKK Design Group  
MoDOT Proj. No.  
TREKK Proj. No. 23-0474  
Chesterfield AJR

---

Equipment				
Mobile LiDAR Equipment	4 @	\$	2,500.00 per hour	\$ 10,000.00
Aerial LiDAR Equipment	2 @	\$	600.00 per hour	\$ 1,200.00
Static Scanner Charge	@	\$	500.00 per day	\$ -
Survey Base Station	@	\$	1,500.00 per each	\$ -
Survey Equipment	256 @	\$	14.00 per hour	\$ 3,584.00
Miovision Camera	@	\$	5.00 per hour	\$ -
Vehicles				
Survey Vehicles	1,720 @	\$	0.670 per mile	\$ 1,152.40
Personal and Company Cars	2,440 @	\$	0.670 per mile	\$ 1,634.80
Others				
Printing & Plotting				\$ -
Postage & Delivery				\$ -
Hotel	13 @		150 per day	\$ 1,950.00
Titlework Documents	10 @	\$	500.00 per each	\$ 5,000.00
Titlework Updates	@	\$	200.00 per each	\$ -
Deeds	40 @	\$	5.00 per each	\$ 200.00
Per Diem-Breakfast	@		per day	\$ -
Per Diem-Lunch	@		per day	\$ -
Per Diem-Dinner	@		per day	\$ -
Per Diem-Full Day	24 @		59 per day	\$ 1,416.00
		<b>Subtotal</b>		<b>\$ 26,137.20</b>
Subconsultants				
				\$ -
				\$ -

---

**TOTAL ESTIMATED DIRECT EXPENSES** **\$ 26,137.20**



**SCI ENGINEERING, INC.**  
 130 Point West Boulevard  
 St. Charles, Missouri 63301  
 636-949-8200  
 www.sciengineering.com

**Project Name** Chesterfield Valley Interstate 64 Improvements  
**SCI Project Number** 2024-0480.10  
**Location** Chesterfield, Missouri

**Date Prepared:** March 13, 2024

Task Item	Sr. Engineer II	Staff Engineer OT	Staff Engineer	Field Manager I	GIS/CAD	Tech I	Sr. Admin	Subtotal	Direct Costs	Total Cost
G1 - Coordination and Field Exploration	5	63	24	0	3	0	0	95	41,162.10	
G2 - Geotechnical Report	15	0	80	0	7	0	6	108		
G3 - Meetings	4	0	4	0	0	0	0	8	26.80	
G4 - QA/QC	7	0	0	0	0	0	0	7		
G5 - Project Administration	7	0	0	0	0	0	0	7		
<b>TOTAL HOURS</b>	<b>38</b>	<b>63</b>	<b>108</b>	<b>0</b>	<b>10</b>	<b>0</b>	<b>6</b>	<b>225</b>	<b>41,188.90</b>	
<b>Hourly Salary Rate (Average)</b>	<b>68.42</b>	<b>45.35</b>	<b>30.23</b>	<b>24.00</b>	<b>30.80</b>	<b>21.18</b>	<b>29.01</b>			
<b>Direct Labor</b>	<b>2,599.96</b>	<b>2,856.74</b>	<b>3,264.84</b>	<b>0.00</b>	<b>308.00</b>	<b>0.00</b>	<b>174.06</b>	<b>9,203.60</b>		
<b>Overhead Rate</b>	<b>190.64%</b>	<b>4,956.56</b>	<b>5,446.08</b>	<b>6,224.09</b>	<b>0.00</b>	<b>587.17</b>	<b>0.00</b>	<b>331.83</b>	<b>17,545.73</b>	
<b>FCCM</b>	<b>0.471%</b>	<b>12.25</b>	<b>13.46</b>	<b>15.38</b>	<b>0.00</b>	<b>1.45</b>	<b>0.82</b>	<b>43.35</b>		
<b>Profit</b>	<b>14.70%</b>	<b>1,110.81</b>	<b>1,220.51</b>	<b>1,394.87</b>	<b>0.00</b>	<b>131.59</b>	<b>0.00</b>	<b>74.37</b>	<b>3,932.15</b>	
<b>Total Labor Cost</b>		<b>\$8,679.58</b>	<b>\$9,536.78</b>	<b>\$10,899.18</b>	<b>\$0.00</b>	<b>\$1,028.21</b>	<b>\$0.00</b>	<b>\$581.07</b>	<b>30,724.83</b>	
<b>TOTAL COST</b>									<b>Total</b>	<b>71,913.73</b>
Average Rate per Classification	2.9064	\$228.41	\$151.38	\$100.92	\$0.00	\$102.82	\$0.00	\$96.85		

Cost per Task	Sr. Engineer II	Staff Engineer OT	Staff Engineer	Field Manager I	GIS/CAD	Tech I	Sr. Admin	Total Labor per Task	Direct Costs	Total Per Task
G1 - Coordination and Field Exploration	1,142.05	9,536.78	2,422.04		308.46			13,409.34	41,162.10	54,571.44
G2 - Geotechnical Report	3,426.15		8,073.47		719.75		581.07	12,800.44	0.00	12,800.44
G3 - Meetings	913.64		403.67					1,317.31	26.80	1,344.11
G4 - QA/QC	1,598.87							1,598.87	0.00	1,598.87
G5 - Project Administration	1,598.87							1,598.87		1,598.87
<b>TOTALS</b>	<b>8,679.58</b>	<b>9,536.78</b>	<b>10,899.18</b>	<b>0.00</b>	<b>1,028.21</b>	<b>0.00</b>	<b>581.07</b>	<b>30,724.83</b>	<b>41,188.90</b>	<b>71,913.73</b>

DIRECT LABOR BREAKDOWN

		CONSULTANT				Hour Breakdown							
		NO. OF	TOTAL	TOTAL	RESPONSIBLE	President	SNR ENG II	STF ENG OT	STF ENG	TECH I	TECHII	GIS	ADMIN
		Reports	HOURS/Report	HOURS	CONSULTANT								
<b>G1 Coordination and Field Exploration</b>				<b>95</b>		0	5	63	24	0	0	3	0
1	Coordinate with Utilities			4	SCI				3			1	
2	Boring Layout			9	SCI		1		6			2	
3	Log Soil Borings and Set Up Signage			63	SCI			63					
4	Coordination/Management Field Exploration Program			4	SCI		2		2				
5	Coordination/Management Laboratory Testing			5	SCI		1		4				
6	Develop Boring Logs (gINT)			10	SCI		1		9				
<b>G2 Geotechnical Report</b>				<b>108</b>		0	15	0	80	0	0	7	6
1	Generate Soil Profile Sheet	1	7	7	SCI		1		2			4	
2	Site Investigation / Generalized Subsurface Conditions	1	3	3	SCI		1		2				
3	Bearing Capacity Calculation	1	5	5	SCI		1		4				
4	MSE Wall Analysis and Recommendations	1	55	55	SCI		5		50				
5	Pavement Recommendations	1	5	5	SCI		1		4				
6	Bridge Foundation Parameters	1	5	5	SCI		1		4				
7	Unsuitable Material Recommendations	1	3	3	SCI		1		2				
8	Settlement Evaluation	1	5	5	SCI		1		4				
9	Construction Considerations	1	3	3	SCI		1		2				
10	Print and Submit Report	1	9	9	SCI		1		2			2	4
11	Revisions After Review	1	8	8	SCI		1		4			1	2
<b>G3 Meetings</b>				<b>8</b>		0	4	0	4	0	0	0	0
1	City - Assume One In Person			4	SCI		2		2				
2	Prime - Assume Two Calls			4	SCI		2		2				
<b>SUBTOTAL</b>				<b>211</b>									
<b>G4 Qa/Qc</b>				<b>7</b>	3%	0	7	0	0	0	0	0	0
1	Field Investigation			3	SCI		3						
2	PGR			4	SCI		4						
<b>SUBTOTAL</b>				<b>218</b>									
<b>G5 Administrative/Management</b>				<b>7</b>	3%	0	7	0	0	0	0	0	0
1	Field Investigation			3	SCI		3						
2	PGR			4	SCI		4						
<b>GRAND TOTAL</b>				<b>225</b>	<b>SCI</b>	<b>0</b>	<b>38</b>	<b>63</b>	<b>108</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>6</b>



SCI ENGINEERING, INC.  
130 Point West Boulevard  
St. Charles, Missouri 63301  
636-949-8200  
www.sciengineering.com

Location Chesterfield, Missouri

SCI Direct Costs

G1 - Coordination and Field Exploration

		Rate	Totals	
Soil Test Borings (Midwest Drilling) 18 borings with 2 days of Skid Steer Clearing	1	\$ 20,821.00	\$	20,821.00
Traffic Control Signage (1 week expected)	1	\$ 185.50	\$	185.50
Mileage	280	\$ 0.670	\$	187.60
		<b>Subtotal</b>		<b>\$21,194.10</b>

G1 - Laboratory Testing

Visual Classification and Moisture Contents (ASTM D2488/D2216)	92	\$ 14.00	\$	1,288.00
Atterberg Limit Tests (ASTM D4318)	18	\$ 85.00	\$	1,530.00
Percent Finer than #200 (ASTM D422)	18	\$ 60.00	\$	1,080.00
Unconfined Compression Test (ASTM D2166)	74	\$ 115.00	\$	8,510.00
One Dimensional Consolidation Test (ASTM D2435)	2	\$ 625.00	\$	1,250.00
Direct Shear (ASTM D3080)	6	\$ 365.00	\$	2,190.00
Consolidated Undrained Triaxial Strength Test (ASTM D4757) - 3 points	4	\$ 1,030.00	\$	4,120.00
		<b>Subtotal</b>	<b>\$</b>	<b>19,968.00</b>

G3 - Meetings

Mileage	40	\$ 0.670	\$	26.80
		<b>Subtotal</b>		<b>\$26.80</b>

---

**Subtotal Direct Costs \$41,188.90**





**Firm: Vector Communications Corporation**  
**City of Chesterfield I-64 Improvements Phase 1**

**EXHIBIT A: Estimate of Costs**

	Project Manager	Staff Consultant	Staff Associate Consultant I	Staff Associate Consultant II	Classification	Classification	Classification	Classification	Classification	Classification	Total Hours
<b>7 Website</b>											
Write website copy	2			6							8
Task 1 - Subtotal Manhour by Classification	2	0	0	6	0	0	0	0	0	0	8
Unburdened Rate	\$90.00	\$44.00	\$37.00	\$35.00							
Labor	\$180.00	\$0.00	\$0.00	\$210.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$390.00
Overhead Rate (82%)	\$147.60	\$0.00	\$0.00	\$172.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$319.80
Total Labor & OH	\$327.60	\$0.00	\$0.00	\$382.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$709.80
Fixed Fee = 12% X Total Labor & OH Rate	\$39.31	\$0.00	\$0.00	\$45.86	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$85.18
<b>Task 1 - FIRM NAME Total Including Labor, OH &amp; Fixed Fee</b>	<b>\$366.91</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$428.06</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$794.98</b>
<b>7 Public Meetings (2x)</b>											
Plan and execute public meetings (2x)	20	60	50	90							220
Task 2 - Subtotal Manhour by Classification	20	60	50	90	0	0	0	0	0	0	220
Unburdened Rate	\$90.00	\$44.00	\$37.00	\$35.00							
Labor	\$1,800.00	\$2,640.00	\$1,850.00	\$3,150.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$9,440.00
Overhead Rate (82%)	\$1,476.00	\$2,164.80	\$1,517.00	\$2,583.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$7,740.80
Total Labor & OH	\$3,276.00	\$4,804.80	\$3,367.00	\$5,733.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$17,180.80
Fixed Fee = 12% X Total Labor & OH Rate	\$393.12	\$576.58	\$404.04	\$687.96	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$2,061.70
<b>Task 2 - FIRM NAME Total Including Labor, OH &amp; Fixed Fee</b>	<b>\$3,669.12</b>	<b>\$5,381.38</b>	<b>\$3,771.04</b>	<b>\$6,420.96</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$19,242.50</b>
<b>7 Virtual Public Meeting (Optional)</b>											
Plan and moderate virtual public meetings (2x)	20		30	20							70
Task 3 - Subtotal Manhour by Classification	20	0	30	20	0	0	0	0	0	0	70
Unburdened Rate	\$90.00	\$44.00	\$37.00	\$35.00							
Labor	\$1,800.00	\$0.00	\$1,110.00	\$700.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,610.00
Overhead Rate (82%)	\$1,476.00	\$0.00	\$910.20	\$1,274.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,660.20
Total Labor & OH	\$3,276.00	\$0.00	\$2,020.20	\$1,974.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$7,270.20
Fixed Fee = 12% X Total Labor & OH Rate	\$393.12	\$0.00	\$242.42	\$236.88	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$872.42
<b>Task 3 - FIRM NAME Total Including Labor, OH &amp; Fixed Fee</b>	<b>\$3,669.12</b>	<b>\$0.00</b>	<b>\$2,262.62</b>	<b>\$2,210.88</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$8,142.62</b>
<b>1 &amp; 7 Project Administration</b>											
Attend project kick-off meeting	4			4							8
Attend one Long Road AJR client coordination meeting	4			4							8
Attend one Outer Road extension client coordination meetings	4			4							8
Attend 2 internal team meetings for Long Road AJR	8			8							16
Attend 2 internal team meetings for Outer Road extension	8			8							16
Submit up to 5 monthly project reports	12			0							12
Task 4 - Subtotal Manhour by Classification	40	0	0	28	0	0	0	0	0	0	68
Unburdened Rate	\$90.00	\$44.00	\$37.00	\$35.00							
Labor	\$3,600.00	\$0.00	\$0.00	\$980.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,580.00
Overhead Rate (82%)	\$2,952.00	\$0.00	\$0.00	\$803.60	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$3,755.60
Total Labor & OH	\$6,552.00	\$0.00	\$0.00	\$1,783.60	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$8,335.60
Fixed Fee = 12% X Total Labor & OH Rate	\$786.24	\$0.00	\$0.00	\$214.03	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,000.27
<b>Task 4 - FIRM NAME Total Including Labor, OH &amp; Fixed Fee</b>	<b>\$7,338.24</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$1,997.63</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$9,335.87</b>
<b>Total Including Labor, OH &amp; Fixed Fee</b>	<b>\$15,043.39</b>	<b>\$5,381.38</b>	<b>\$6,033.66</b>	<b>\$11,057.54</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$37,515.97</b>
ODC (see summary)											\$1,275.00
<b>Grand Total</b>											<b>\$38,790.97</b>

ODC:  
 \$ 375.00 Mileage @ \$0.67/mile for various meetings/field recon  
 \$ 400.00 Printing  
 \$ 500.00 Misc  
 \$ 1,275.00 Subtotal

1.0 Exclusions

Misc Includes:  
 iPads for electronic comment at open houses  
 Wi-fi for iPads  
 Graphic designer



Firm: HR Green, Inc.  
City of Chesterfield I-64 Improvements Phase 1

EXHIBIT A: Estimate of Costs

	Senior Project Manager - Transportation	Regional Manager - Construction	Lead Structural Engineer	Construction Engineer III	Administrative Assistant	Classification	Classification	Classification	Classification	Classification	Total Hours
<b>1 PROJECT MANAGEMENT</b>											
Coordination with Lochmueller	4										4
Invoicing	2				2						4
											0
											0
											0
											0
Task 1 - Subtotal Manhour by Classification	6	0	0	0	2	0	0	0	0	0	8
Unburdened Rate	\$76.92	\$70.93	\$65.14	\$63.76	\$28.89						
Labor	\$461.52	\$0.00	\$0.00	\$0.00	\$57.78	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$519.30
Overhead Rate (181.10%)	\$835.81	\$0.00	\$0.00	\$0.00	\$104.64	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$940.45
Total Labor & OH	\$1,297.33	\$0.00	\$0.00	\$0.00	\$162.42	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,459.75
Fixed Fee = 12% X Total Labor & OH Rate	\$155.68	\$0.00	\$0.00	\$0.00	\$19.49	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$175.17
Task 1 - FIRM NAME Total Including Labor, OH & Fixed Fee	\$1,453.01	\$0.00	\$0.00	\$0.00	\$181.91	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,634.92
<b>2 CONCEPTUAL DESIGN PHASE</b>											
Brainstorming Workshop with City	4	4									8
Review of Interchange Concepts (3)	6	6	3		6						21
Review of Outer Road Extension Concepts (2)	4	4	2		4						14
Cost Estimates for Recommended Alternatives (2)	4	4	1		8						17
											0
											0
Task 2 - Subtotal Manhour by Classification	18	18	6	18	0	0	0	0	0	0	60
Unburdened Rate	\$76.92	\$70.93	\$65.14	\$63.76	\$28.89						
Labor	\$1,384.56	\$1,276.74	\$390.84	\$1,147.68	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$4,199.82
Overhead Rate (181.10%)	\$2,507.44	\$2,312.18	\$707.81	\$2,078.45	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$7,605.87
Total Labor & OH	\$3,892.00	\$3,588.92	\$1,098.65	\$3,226.13	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$11,805.69
Fixed Fee = 12% X Total Labor & OH Rate	\$467.04	\$430.67	\$131.84	\$387.14	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1,416.68
Task 2 - FIRM NAME Total Including Labor, OH & Fixed Fee	\$4,359.04	\$4,019.59	\$1,230.49	\$3,613.26	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$13,222.38
<b>3 TASK NAME</b>											
											0
											0
											0
											0
											0
Task 3 - Subtotal Manhour by Classification	0	0	0	0	0	0	0	0	0	0	0
Unburdened Rate	\$76.92	\$70.93	\$65.14	\$63.76	\$28.89						
Labor	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Overhead Rate (181.10%)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Labor & OH	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Fixed Fee = 12% X Total Labor & OH Rate	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Task 3 - FIRM NAME Total Including Labor, OH & Fixed Fee	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>4 TASK Name</b>											
											0
											0
											0
											0
											0
Task 4 - Subtotal Manhour by Classification	0	0	0	0	0	0	0	0	0	0	0
Unburdened Rate	\$76.92	\$70.93	\$65.14	\$63.76	\$28.89						
Labor	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Overhead Rate (181.10%)	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total Labor & OH	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Fixed Fee = 12% X Total Labor & OH Rate	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Task 4 - FIRM NAME Total Including Labor, OH & Fixed Fee	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Including Labor, OH &amp; Fixed Fee</b>	<b>\$5,812.05</b>	<b>\$4,019.59</b>	<b>\$1,230.49</b>	<b>\$3,613.26</b>	<b>\$181.91</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$14,857.30</b>
ODC (see summary)											\$33.50
Grand Total											<b>\$14,890.80</b>

Notes: Assumed Mileage

50.00

5 33.50

ODC:  
\$ 33.50 Mileage @ \$0.67/mile for various meetings/field recon  
Printing  
Misc  
\$ 33.50 Subtotal



---

690 Chesterfield Pkwy W • Chesterfield MO 63017-0760  
Phone: 636-537-4000 • Fax 636-537-4798 • [www.chesterfield.mo.us](http://www.chesterfield.mo.us)

---

December 7, 2023

Dear Consultant:

The City of Chesterfield is requesting the services of a professional engineering firm to lead a potential multi-phase project for improvements to Interstate 64 (I-64) in Chesterfield from Chesterfield Parkway West through Long Road. More specifically, the project is to consider, evaluate, design, and facilitate construction of enhancements to the Long Road / I-64 interchange and connect vehicular and pedestrian/bike facilities on North Outer 40 Road over Bonhomme Creek to Swingley Ridge Road / the Chesterfield Parkway West on-ramp / I-64 (see attached Exhibit A). Please understand that through this Request for Qualifications (RFQ) process the City is desirous of establishing a long-term relationship with an engineering firm that will continue working with the City throughout this entire project.

The first phase of this project shall include evaluations, studies, agency coordination, public involvement, preliminary design, cost estimating and all other work necessary to create and submit an Access Justification Report (AJR) to the Missouri Department of Transportation (MODOT) and the Federal Highway Administration (FHWA) for the desired improvements to I-64. The AJR shall address all MoDOT and FHWA policy requirements (see MoDOT EPG 234.1 and FHWA System Access Informational Guide). The ideal team will have a strong track record of obtaining final AJR approval from MoDOT and FHWA and have personnel with the in-depth knowledge and experience necessary to lead this effort.

If the first phase of the project is successful and the AJR receives final approval from FHWA, the second phase will be to design the projects. Currently, the City expects design and construction of the improvements to be two separate projects: Long Road / I-64 Interchange Improvements and North Outer 40/Swingley Ridge/I-64 Improvements. The second phase of work will be to create complete design documents, construction plans, and bid documents for each project. This phase will include but not be limited to furthering and finalizing design documents, leading grant submittal efforts, conducting field surveying necessary for detailed design and right-of-way acquisition, coordinating with all involved agencies/utilities, leading public engagement, providing bid documents and

creating detailed cost estimates. The ideal team will have significant experience in the design and permitting of improvements to the interstate system.

The third phase of the project will include professional services as the design engineer of record, bidding assistance, construction monitoring, materials testing, submittal review, utility coordination, and may also include oversight of a separate construction management contract. The ideal team will have personnel experienced in construction oversight, project management, cost tracking, and material testing, to fully oversee, coordinate, and ensure successful completion of the construction projects within budget.

The City wishes to pursue the first phase of this project now and obtain a determination on the AJR by December 2024. The schedule for phases two and three has not been set. Additional information on specific tasks expected in each project phase is included as Exhibit B.

Please limit your Statement of Qualifications to no more than eight (8) pages. The statement of qualifications should include:

- A statement of your firm's interest in this project, including anything that makes your firm qualified to lead this multi-phase project
- Key project personnel and their backgrounds, including sub-consultants
- Similar size/scope projects completed in the recent past including references
- Preliminary scope of services and project approach
- Anticipated schedule, as well as current and anticipated workload and staffing availability

Lengthy submittals of general company information are not necessary and will not be considered. Any sub-consultants needed to complete the professional services requested by the City must be listed.

The City of Chesterfield will evaluate submittals based upon a) experience and competence (35%); b) the capacity of the firm to perform the work in the timeframe needed (35%); and c) past performance (30%). Please be advised that the City of Chesterfield may choose to interview a limited number of firms to select the firm most qualified to perform the required professional services.

In addition to your firm's Statement of Qualifications, it is required that an Affidavit of Compliance with the Federal Work Authorization Program along with

Request for Qualifications  
Chesterfield Valley Interstate 64 Improvements  
December 7, 2023

a copy of your firm's E-Verify Memorandum of Understanding (15 CSR 60-15.020) be submitted. These are NOT included in the eight-page limit.

Once a firm is selected, a project scope and fee will be negotiated for phase one and incorporated into a contract that will be submitted to the Chesterfield City Council for approval. Services for the second and third phases of the project will be negotiated separately with the selected firm if the project progresses.

All Statements of Qualifications and additional required documents must be submitted via email to [jeckrich@chesterfield.mo.us](mailto:jeckrich@chesterfield.mo.us) by 3:00 pm, local time, on Tuesday, January 16 to be considered. Should you have questions or require additional information, please contact me via email or at 636-537-4764.

Sincerely,

James A. Eckrich, PE  
Director of Public Works / City Engineer

Enclosures:           Exhibit A – Project Aerial  
                              Exhibit B – Detailed Anticipated Work Items by Phase

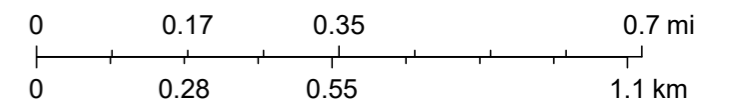


# I-64 Improvements - Exhibit A



10/18/2023, 2:44:28 PM

1:18,000



Esri, Inc., City of Chesterfield, Missouri



## Exhibit B

### Phase 1 – Access Justification Report

- Topographic and Boundary Survey Work
- Environmental Assessment
- Agency and Utility Coordination, including but not limited to FHWA, Monarch-Chesterfield Levee District, US Army Corps of Engineers, MoDOT, St. Louis County, and Missouri Eastern Railroad.
- Analysis of access improvements to the Long Road Interchange, including consultation with the City on selection. Options include a full-access interchange with connection to North Outer 40 to multiple limited access interchange options also with connection to North Outer 40.
- Analysis of options to connect North Outer 40 Road to Swingley Ridge / Chesterfield Parkway West on-ramp, including consultation with City on selection, including connection of pedestrian/bike facilities between Chesterfield Parkway to the Monarch Chesterfield Levee Trail system
- Public Meetings and presentation materials
- Preliminary Design Plans
- Budgetary Cost Estimate
- Submittal of an AJR to MODOT and FHWA
- Address questions / concerns from MODOT and FHWA regarding the AJR, including re-submittals as necessary
- Obtain final determination on AJR

### Phase 2 – Design and Property Acquisition

- Lead effort in writing/submitting grant applications to fund the projects, in consultation with the City
- Additional surveying, as necessary
- Property Title Research
- Right-of-Way Plans and Easement Exhibits, if necessary
- Drainage Design and MSD Permitting, including water quality if applicable
- Bridge Design
- Geotechnical Investigation and design (slopes, retaining walls, foundations, bridge abutments, etc.)
- Hydraulic analysis and floodplain permitting, if required
- Public Meetings and presentation materials
- Final Construction Plans
- Detailed Cost Estimates
- Technical Specifications, Job Special Provisions, Methods of Measurement and Payment

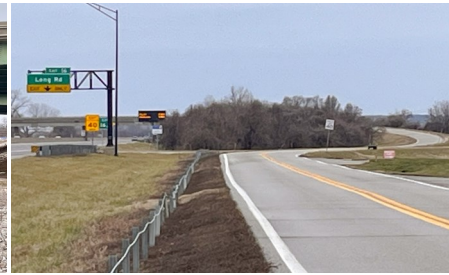
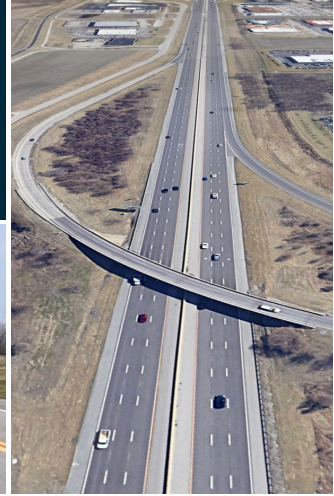
- Agency and Utility Coordination, including but not limited to FHWA, Monarch-Chesterfield Levee District, US Army Corps of Engineers, MoDOT, St. Louis County, and Missouri Eastern Railroad.
- Detailed Construction Cost Estimates
- Permitting

### Phase 3 – Construction and Construction Management

- Bidding Assistance
  - The City of Chesterfield will compile the bidding documents and manage the bidding process
- Bid Evaluation
- Bid Award Recommendation in consultation with the City, MoDOT, and St. Louis County, as necessary
- Construction Staking/Layout, if necessary
- As-Built Drawings
- Construction Engineering Services
  - Quantity Tracking
  - Project Daily and Payment Diaries
  - Review and response to RFI, Change Orders, Field Changes, etc.
- Selection of a Construction Management Firm, in consultation with the City, if necessary



# INTERSTATE 64 IMPROVEMENTS FOR THE CITY OF CHESTERFIELD



Lochmueller Group (Lochmueller) is honored to submit this proposal to the City of Chesterfield (City) to provide professional engineering services for this multi-phased I-64 improvement project from Chesterfield Parkway West through Long Road. **The study, design, approval, and construction oversight of a new interchange and creek crossing is precisely where our firm excels.** We also recognize this is a critical project that will spur economic development, benefitting the City and its residents. For this reason, Lochmueller is committing its most experienced traffic engineers, roadway engineers, and environmental scientists to help the City bring this project to life.

**This project's history is well understood by Lochmueller.** In 1998, the Federal Highway Administration (FHWA) approved the City's master plan for access within Chesterfield Valley, which included an improved interchange at Long Road. Then, in 2016 FHWA conceptually approved the Chesterfield Village Access Justification Reports (AJR), which included the extension of the North Outer Road across Bonhomme Creek and into Chesterfield Valley. Our mission is to partner with you to bring these improvements to fruition.

**As one of the leading highway and traffic design firms in the Midwest, Lochmueller is the clear choice.** Over the past 8 years, we have submitted several successful AJRs to the Missouri Department of Transportation (MoDOT) and the FHWA. This has earned us a reputation for outstanding and effective traffic analyses that lead to successful design and implementation of interchange improvements.



## HISTORY OF SUCCESSFUL AJRs AND INTERCHANGE IMPROVEMENTS

As you are aware, FHWA approval of an AJR is a critical initial milestone. Lochmueller has a consistent history of delivering successful AJRs and interchange improvements in Missouri and Illinois that are similar in nature and scope to this proposed project. Locally, we have secured 5 AJR approvals over the last 8 years, some of which were also fully designed and managed by our firm. You can trust Lochmueller to bring this same level of success to Chesterfield by operating as an extension of your staff, with minimal oversight required.



## AMPLE LOCAL CAPACITY TO PERFORM THE WORK QUICKLY

Lochmueller has 75 employees local to the St. Louis metro, including 29 PEs, 5 PTOEs, 3 AICPs, 2 RSP1s, and 1 RSP2i licensees. Combined with our four subconsultants (detailed on the following page), we have assembled a diversely talented team with exceptional expertise in interchange design and construction. This team will have plenty of dedicated talent and capacity to ensure each project is constructible and delivered on-time.



## FAMILIARITY WITH MODOT AND FHWA

Our recent interchange improvement projects such as I-64, I-70, and I-44 have allowed our team to become familiar with FHWA and MoDOT requirements for AJR approval, design standards, and permits. Julie Nolfo, PE, PTOE, our proposed overall project liaison, and each phase's Project Manager (PM), have deep working relationships with staff at both agencies and have a firm understanding for how to get reports and plans approved and permitted for construction.

Lochmueller is excited to partner with the City of Chesterfield. **Our highest priority is to help communities like Chesterfield reinvent their futures through large-scale transportation improvements. Addressing traffic challenges and improving the lives of growing communities is the cornerstone of why our firm was founded.** We are looking forward to your review.

Let's get started!

**Scott J. Smith, PE**  
Missouri Regional Leader | Principal  
ssmith@lochgroup.com | 314.941.6657

**Julie Nolfo, PE, PTOE**  
Overall Project Liaison & Phase 1 Project Manager  
jnolfo@lochgroup.com | 314.363.5074

Founded in 1980, Lochmueller has grown from a small planning firm to a regional engineering consultant firm with 13 offices and over 355 employees in four Midwestern states: Missouri, Illinois, Indiana, and Kentucky.

We are proud to offer a comprehensive range of services and be a single source for our clients' planning and engineering needs. We utilize our creativity and decades of successful project delivery to help all our clients reinvent their futures.

This year we ranked 404 out of 500 Top Design Firms by the Engineering News Record (ENR). We are proud of this recognition and are ready to put our talents to use for the City.

Our team of professionals are also **well-versed in multi-phased transportation developments requiring AJR approvals, grant applications and funding, permitting, preliminary and final design, and construction management.** For decades we have provided these services to various municipalities. Lochmueller's experience and learned lessons will save the City time and money as they embark to complete the access improvements that were envisioned over 25 years ago.

## TEAM BREAKDOWN

### TREKK Design Group, LLC (TREKK)

is a multi-disciplined, woman-owned civil engineering firm with a staff of over 200 that is dedicated to

**improving lives** in the markets they serve. They are proud to be certified as a Disadvantaged/Woman Owned Business Enterprise (D/WBE). The firm offers full-service civil engineering, including traffic engineering, construction inspection, utility coordination, structural engineering, lighting design, water resources, and survey services across Missouri.

They will provide **surveying, transportation and structural design services, utility coordination, right-of-way services, cost estimates, bidding assistance, and water permitting and hydraulics.**



**SCI Engineering, Inc. (SCI)** is a multi-discipline engineering firm that has been providing environmental and geotechnical services as well as natural resources, cultural resources, and construction materials testing services since 1978.

Since their founding, they have steadily grown to six offices and more than 170 employees located in Missouri, Illinois, Colorado, and Texas. Their staff prides itself on their ability to provide consulting services with quality, professionalism, and responsiveness to clients during the development, design, and construction phases of projects.

They will provide **NEPA support, geotechnical and construction services.**



**HR Green, Inc. (HRG)** is a privately held, employee-owned company, fully committed to the success of their clients and the well-being of their employees. Over its 110-year history, HR Green has grown and established a reputation for innovation, leadership and accountability to the business concerns of their clients. HR Green combines engineering services with a diverse array of professional offerings including technical and management services with a company staff of over 700 employees.

They will provide **transportation and structural design services, cost estimates, and construction management.**



Reach. Engage. Communicate. For more than 25 years, **Vector Communications (Vector)** has been seeking input from

people on issues affecting how they live, work, and play. Their 12-person, award-winning engagement and communications firm focuses on transportation, economic development, education, health and human services, and parks and greenways. Its core competencies include engagement, outreach, event planning, communications planning, crisis communications, media relations, video production, and brand awareness. Over the years, Vector has worked on more than 400 regional projects, including numerous environmental studies and the New I-64 Project, the largest transportation project in Missouri's history.

They will provide **public engagement services.**





## PROJECT MANAGEMENT

Julie will be your primary point of contact across all three phases of this project, thereby providing the City with a consistent project leader. This approach facilitates continuity throughout the project's life cycle, improves efficiency and adds a layer of QA/QC.

**Julie will work closely with each phase's Project Manager (PM) and act as an advocate for the City's goals.**

## ADDED-VALUE STAFF



### HEIDI THOMAS, PE GRANT WRITING

Heidi was a Transportation Engineer for FHWA prior to joining

Lochmueller.

Heidi is a licensed civil engineer with 19 years of experience and is our lead grant writing specialist, having managed multiple successful funding applications for transportation projects in the last 2 years. She also worked on the I-64/I-70/US-62 AJR in Wentzville, MO. Her familiarity with FHWA design standards and grant writing will benefit the City in this project.



### MIKE KLASING, PLS SURVEY LEAD (TREKK)

Michael brings more than 28 years of experience in land surveying for transportation projects.

Mike is responsible for oversight of TREKK's surveying team across the company. His project experience includes topographic surveying for interchange projects such as the I-70 and US 65 Safety and Interchange Improvements in Saline County, MO and the I-44 Outer Road Bridge project in Laclede County, MO. He will lead all survey and aerial LiDAR tasks for this project.



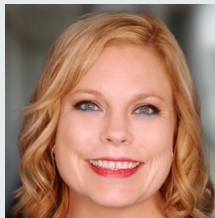
### JULIE NOLFO, PE, PTOE

#### OVERALL PROJECT LIAISON & PHASE 1 PM

Julie has managed many successful AJRs throughout Missouri, including the planning efforts in the late 1990s for the various interchanges within Chesterfield Valley.

With nearly 30 years of experience, Julie is one of our most experienced project managers for interchange development projects. Her recent experience includes I-64 at Jefferson/22nd Street for the City of St. Louis, the Future I-64 PEL Study for MoDOT, and the Chesterfield Village AJR for RGA, amongst others. These projects have all been successfully reviewed and approved by the FHWA in recent years.

She is also very familiar with the City of Chesterfield, having completed numerous traffic studies and analyses in the immediate area over the last few decades, including traffic studies for Chesterfield Premium Outlets (Blue Valley), Maryville University Hockey Center, Chesterfield Commons, the District and Downtown Chesterfield. As a result, she has garnered the respect of FHWA, MoDOT, St. Louis County and within the Chesterfield community itself.



### KELLEY DAVIS, PE PHASE 2 PM

Kelley is Lochmueller's Roadway Department

Manager, with 24 years of experience.

As our Roadway Department Manager, Kelley has managed many multi-phased projects that required roadway and bridge design, grant applications, land acquisition, and complex permitting coordination. Her strengths lie in effective and creative roadway design, maintaining critical schedule milestones, and working closely with various subconsultants. She is the perfect candidate to lead Phase 2.



### ERIC CHAMBERLAIN, PE, CM

#### PHASE 3 PM (HRG)

Eric has 17 years of experience providing oversight and

management of heavy civil construction projects throughout the Midwest.

His expertise includes project management for infrastructure-related projects involving interstate pavement improvements, bridge rehabilitation, utility relocation, mass excavation, and airfield pavement reconstruction for MoDOT and other governmental agencies. He will be the PM for Phase 3 - Construction Management.

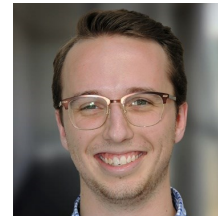


### FASIL SAGIR, PE TRAFFIC OPERATIONS LEAD

Fasil has 7 years of experience in traffic

engineering and has two masters degrees in civil engineering and another in business management.

Fasil is a highly competent licensed engineer with a reputation for problem-solving and excellent communication skills. He has provided transportation modeling and interchange studies for I-70 in St. Charles as well as traffic and mobility impacts to the Market Street AJR in St. Louis.



### NICK SOKOLIS, PE, RSP1 TRAFFIC SAFETY LEAD

Nick is a licensed engineer and Road

Safety Professional with 5 years of experience.

As a traffic safety leader in our firm, Nick is a critical member of our traffic department. His relevant experience includes the I-57/US 45/52 AJR interchange modifications and the I-270 and I-170 interchange signal optimization project. He was specifically added to this team for his safety expertise with interchange modifications.





**BRYAN CROSS,  
CPESC  
ENVIRONMENTAL  
LEAD**

**Bryan is an  
Environmental**

**Manager with over 25 years of  
experience.**

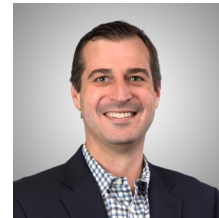
Bryan's experience includes serving as the environmental lead for the I-57 interchange with US45/52 AJR, the I-64 at Jefferson/22nd Street, and the Rieder Road/Exit 21 interchange in St. Clair County, Illinois AJR. His extensive experience navigating FHWA and NEPA requirements will be critical to this project's success.



**MIKE BROWN, PE  
TRANSPORTATION  
DESIGN LEAD  
(TREKK)**

**Mike brings more  
than 26 years of  
experience in roadway engineering.**

Mike is a licensed professional engineer who has designed and managed many interstate and interchange projects. These include new access interchanges for MoDOT and the relevant project I-44 / Route 141 Interchange where he acted as Design Manager for the consultant team, working closely with Lochmueller.

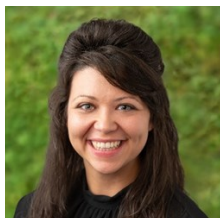


**KEVIN BREHM, PE, SE  
STRUCTURAL  
DESIGN LEAD (HRG)**

**Kevin is a Structural  
Project Manager at  
HRG with over 20**

**years of experience.**

He has recently managed numerous bridge replacement projects for MoDOT in various Districts. His experience includes both standalone structures and work in conjunction with interchange replacement projects. He has also completed a variety of structural assignments for the City of Chesterfield, including leading the design of a stand-alone pedestrian bridge along Chesterfield Parkway East over I-64.

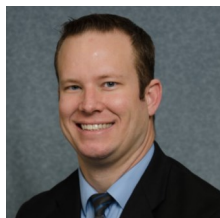


**ERICA RIDGWAY, PE  
WATER  
RESOURCES LEAD  
(TREKK)**

**Erica brings over 12  
years of water**

**resources experience.**

Erica is TREKK's Civil Market Lead in the St. Louis region, specializing in water resources, traffic, and transportation design. She routinely manages hydrologic/hydraulic modeling and stormwater design for transportation projects. Her relevant experience includes the Olive and Lindbergh interchange reconstruction project and the Highway DD roadway widening project in O'Fallon, MO.

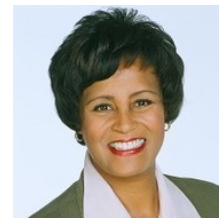


**TIM BARRETT, PE,  
CFM  
GEOTECHNICAL  
LEAD (SCI)**

**Tim has over 17  
years of experience**

**as a licensed engineer.**

Tim's expertise includes geotechnical reports and subsurface explorations for foundation recommendations for transportation projects. His relevant experience includes the Route 364/ Route 94 Muegge Road interchange ramp additions and Route A signal Improvements in Wentzville, MO.

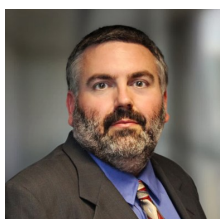


**LAURNA GODWIN  
PUBLIC  
ENGAGEMENT  
LEAD (VECTOR)**

**Laurna is a former TV  
news reporter,**

**anchor, and talk show host, with three  
Emmys and a host of other awards.**

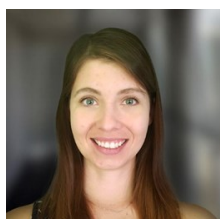
In 1998, Laurna co-founded Vector Communications, an award-winning public engagement and communications consulting firm. She has managed hundreds of communication and public engagement projects in Missouri and has the respect and trust of key stakeholders, elected officials, and influencers in the St. Louis region.



**LORNE JACKSON, PE  
OVERALL  
PROJECT QA/QC**

**As Lochmueller's  
Chief Engineer,  
Lorne has over 29  
years of experience.**

He is one of our most experienced engineers. He is a veteran of large-scale, multi-phased transportation developments, including interchange improvements. As our in-house design expert, Lorne will provide QA/QC for each phase of this project. His attention to detail and comprehensive understanding of the scope will ensure our services to the City reflect the highest standards of excellence.



**KENDRA ROGERS, PE  
TRANSPORTATION  
DESIGN**

**Kendra is a licensed  
civil engineer with 12  
years of experience.**

Throughout her career, she has specialized in traffic and transportation design. She has a proven ability to provide unique solutions to transportation design problems and is known for her strong communication skills. Her relevant experience includes I-70/US 63 Design-build Interchange Enhancements for MoDOT and SR66/1st Avenue Interchange Alternatives for INDOT.



**JEFF GARDNER, PE  
STRUCTURAL  
DESIGN (TREKK)**

**Jeff brings more than  
22 years of  
experience leading**

**teams in the design, manufacture, and  
construction of structures.**

He has a passion for finding pragmatic solutions that transform a client's need into a constructible plan delivered on time and budget. Jeff's previous work includes bridge design for the I-49 and Route 7 Interchange Improvements in Harrisonville, MO and MoDOT's Improve I-70 KC project, which included 10 interchanges and 25 bridges.



### I-64 CHESTERFIELD VILLAGE AJR

**RELEVANCE:** AJR approval, I-64 experience, FHWA familiarity, MoDOT familiarity

Lochmueller completed an AJR seeking interstate access modifications along I-64 in the vicinity of “Chesterfield Village”, a Planned Development community in the City of Chesterfield, Missouri. The corridor is centered upon the existing interchange of I-64 with Missouri Route 340 (Clarkson Road / Olive Boulevard) and the adjoining segments of Chesterfield Parkway. The AJR explored modifications being advocated by the City of Chesterfield and the SLCDOT as part of the continued development of the outer road system along I-64.

In 2018, Lochmueller updated the approved AJR in order to allow for the “west end” improvements to move forward independently of the “east end”. The required crash and traffic data was updated to 2018 statistics and submitted for MoDOT and FHWA review. Ultimately, the project was put on hold due to the uncertainty of funding.

#### CLIENT REFERENCE

**RGA Reinsurance Company**  
 Angela Warner  
 636.736.5519  
 rlong@rgare.com

### I-64/I-70/US-61 INTERCHANGE IMPROVEMENTS STUDY

**RELEVANCE:** AJR approval, I-64 experience, FHWA familiarity, MoDOT familiarity

Serving as Owner Representative for MoDOT in a subconsultant role, Lochmueller provided traffic and safety analysis and preliminary environmental assessment services for a conceptual study for interchange improvements to the I-64/I-70/US 61 interchange in St. Charles County, MO. The Conceptual Study Report included the preferred alternative, conceptual design, traffic and safety analysis, and a preliminary environmental assessment for these important improvements along a major cross-state/cross-country corridor. Due to early and ongoing engagement of FHWA Headquarters, the AJR was completed on-time and on-budget with only minor comments to address. MoDOT and FHWA approved the AJR in December of 2023. The NEPA evaluation has been submitted and final clearance is currently pending but anticipated in early 2024.



#### CLIENT REFERENCE

**MoDOT | SL District**  
 Alvin Nieves-Rosario, PE,  
 Transportation PM, 314.453.1839,  
 alvin.nieves-rosario@modot.mo.gov



### I-64/JEFFERSON INTERCHANGE AJR

**RELEVANCE:** AJR approval, I-64 experience, FHWA familiarity, MoDOT familiarity

Lochmueller prepared an area-wide traffic study and detailed analysis of access needs along the I-64/US 40 corridor through Downtown and Downtown West. This resulted in the development of an AJR for improvements to the I-64/US 40 corridor. As part of the AJR, preliminary design plans were prepared for the preferred alternative that involved a reconfiguration of the I-64/Jefferson Interchange to add a new bridge over I-64 at 22nd Street, one-way outer roads between 22nd St. and Jefferson Ave., extension of 22nd Street south to Scott Ave. and north to Olive St., extension of Clark Ave. to 21st St., and improvements to several existing streets. The AJR and preliminary design have been completed and received final approval from FHWA. The preliminary design was utilized to complete successful STP and CMAQ grant applications that are providing funding for the I-64 at Jefferson City Streets Project.

#### CLIENT REFERENCE

**St. Louis City**  
 Rob Orr, Deputy Executive Director  
 314.657.3738  
 orr@stlouis-mo.gov

### I-44/ROUTE 141 DESIGN BUILD INTERCHANGE IMPROVEMENTS

**RELEVANCE:** AJR approval, civil, traffic, and structural engineering for interchange improvements, FHWA familiarity, MoDOT familiarity

As a subconsultant, Lochmueller’s role included roadway design for four intersections north of the flood-prone Meramec River, including two new J-Turns, collector-distributor bridge and retaining wall design, traffic signal and Intelligent Transportation System design, implementation of coordinated signal timing plans, and completion of an AJR for the modified interchange. **TREKK** provided additional drainage design, with Mike Brown (then at AECOM) acting as the Design Manager. **HRG** acted as the owner’s representative through right-of-way plans and evaluated hydraulic/drainage issues during construction.

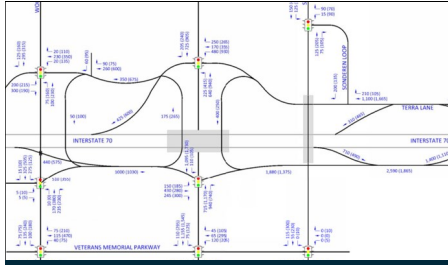
Lochmueller designed a 156’-long, single-span bridge to carry a two-lane unidirectional Collector Distributor Road over Route 141. The superstructure consisted of a cast in place deck with stay in place forms on NU 70 Girders with 10 ksi concrete.



#### CLIENT REFERENCE

**MoDOT**  
 David Simmons,  
 Statewide Design-Build Coordinator  
 314.275.1500,  
 David.J.Simmons@modot.mo.gov





**I-70 OUTER ROADS AJR**

**RELEVANCE:** AJR approval, FHWA familiarity, MoDOT Familiarity

Lochmueller prepared an AJR for the I-70 corridor including the interchanges at TR Hughes Blvd. and at Route K/M, six nearby interchanges, and the north and south outer roadways. The study evaluated the need for modified Interstate access based upon the ability to relieve congestion on the existing road system within the study area and enhance access to adjacent land uses. A VISSIM model encompassing the entire study area was developed as the primary tool in evaluating the operational impacts of the proposed access modifications. Modeling scenarios were created for Existing, 2040 No Build, and 2040 Build with the proposed access modifications. The AJR resulted in the selection of a preferred alternative incorporating one-way outer roads. FHWA approval of the AJR was obtained in June 2016 and later updated to incorporate further improvements west of Rte. K. The FHWA approval was granted in February 2018 and allowed the project to move forward to bidding and construction.

**CLIENT REFERENCE**

**City of O’Fallon, MO**  
 Jeff Schuepfer, Assistant City Engineer, 636.379.5491  
 jschuepfer@ofallon.mo.us

**I-57 AT US 45/52 INTERCHANGE RECONSTRUCTION**

**RELEVANCE:** AJR approval, civil, traffic, and structural engineering for interchange improvements, FHWA familiarity, Multiple bridge structures

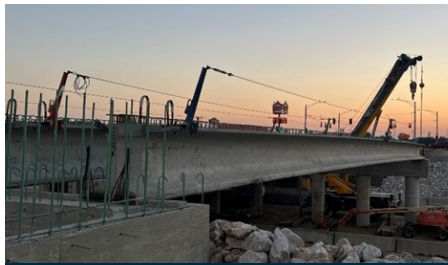
Lochmueller is providing Phase I engineering at the I-57 at US 45/52 interchange in Kankakee, which will be completed in early 2024. Lochmueller will also provide final design documents. The proposed development will help improve roadway design elements and improve traffic flow and safety. We also prepared an ITS and an AJR, which was approved by the FHWA.

The existing interchange configuration is a folded diamond, and the proposed configuration is a compressed diamond on relocated US 45/52. I-57 is also proposed to be widened from four to six lanes. The project includes two structures: the US 45/52 bridge over I-57 and a retaining wall along the southbound off-ramp.



**CLIENT REFERENCE**

**IDOT**  
 Jacob Oyier, Studies & Plan Engineer  
 815.434.8575  
 jacob.oyier@illinois.gov



**ROUTE 7 AND I-49 INTERCHANGE IMPROVEMENTS (TREKK)**

**RELEVANCE:** Civil and structural engineering for interchange improvements, FHWA familiarity, MoDOT familiarity

TREKK provided preliminary and final design services to improve the I-49 and Route 7 interchange in Harrisonville, Missouri. TREKK provided an innovative and collaborative approach to replace the bridge with solutions that improve the interchange operations and maximize the benefits for Missouri’s taxpayers, the City of Harrisonville and MoDOT. A comprehensive interchange alternative analysis by TREKK during the conceptual study built off MoDOT’s findings and evaluated other interchange configurations. The final analysis determined that a separated DDI is the preferred configuration. The selected split-DDI interchange allows traffic to be maintained on the existing bridge while two, new, two-span (104’-104’) Prestressed Concrete NU43 bridges with spill slopes are constructed.

**CLIENT REFERENCE**

**MoDOT | KC District**  
 Allan Ludiker, PE, Transportation Project Manager, 816.607.2267  
 allan.ludiker@modot.mo.gov

**MUEGGE ROAD / ROUTE 364 / ROUTE 94 INTERCHANGE (HR GREEN)**

**RELEVANCE:** Civil, traffic, and structural engineering for interchange improvements, FHWA familiarity, MoDOT familiarity

HR Green was selected to be the Project Management Consultant (PMC) for a \$16M interchange improvement in St. Charles County. Providing a value-added, cost-savings roundabout alternative to the free-flow DDI solution initially scoped, HR Green studied and eventually selected a completely different solution than initially programmed - opting for a signalized DDI after working through an alternative evaluation process. The process resulted in additional improvements being added to the project; the widening of Route 94 to three-lanes in each direction, as well as the resurfacing of the remainder of Route 94. The HR Green Team acted as MoDOT’s Project Management Consultant, responsible for all design, construction, and administration activities and decisions that MoDOT internal personnel would normally handle on typical consultant-led projects.



**CLIENT REFERENCE**

**MoDOT | SL District**  
 Thomas Evers, Assistant District Engineer, 314.453.1802  
 thomas.evers@modot.mo.gov

PROJECT APPROACH

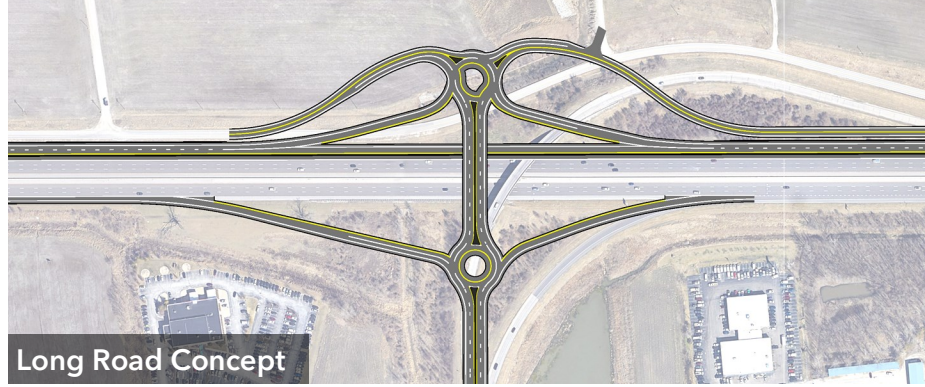
PROJECT DEVELOPMENT PROCESS

Phase I - Access Justification Report (AJR)

The essential first step in pursuing improved access along I-64 at Long Road is the approval of an AJR by the FHWA. To that end, the Lochmueller Team will prepare a comprehensive AJR in accordance with the requirements of the City of Chesterfield, MoDOT, and the FHWA. The AJR process will analyze various interchange configurations for Long Road and ultimately recommend the proposed interchange type, which will be fully vetted using various operational and safety analytical platforms in order to accurately replicate both the existing and forecasted No-Build and Build traffic conditions. Emphasis will be placed on rectifying any existing safety concerns, providing optimal traffic operations along I-64 and Long Road, streamlining the outer road connection into the design, and retaining developable land adjacent to the interchange along both Chesterfield Airport Road and the North Outer Road.

The extension of the outer road system into the Valley already has conceptual approval from FHWA as of 2016. However, a condition of that approval was an update to the AJR to provide current crash and traffic data, as well as completion of the NEPA process and programming on the STIP/TIP. Therefore, this important connection would be integrated into the above referenced AJR document, so that one document addresses FHWA's concerns relative to both improvements.

As part of securing final approval from FHWA for the AJR, all necessary environmental studies for both projects will be completed to satisfy NEPA. To facilitate this, preliminary engineering will also be completed during the AJR process so that critical design issues can be identified, and feasible creative solutions offered. The preliminary design will identify right-of-way needs, utility relocations, and provide construction cost estimates. Furthermore, the public (along with key stakeholders) will be engaged in order to gain insight and feedback on the preferred improvements at both locations, an informative and necessary step towards securing both FHWA final approval and successful funding opportunities.



The initial phase of this long-term project would ultimately deliver MoDOT and FHWA final approval for both projects so that they could move into the design and construction phases; either as one cohesive project or as two independent projects.

DEVELOPING SOLUTIONS

The Lochmueller Team begins the process of developing alternatives with a brainstorming session where participants are encouraged to "think outside the box" and sketch numerous layouts. The options are then vetted and evaluated at a high level. The most viable of these options will proceed to concept design where the sketches will be refined to sufficient detail to complete the alternative analysis that ultimately leads to a preferred alignment within the AJR document. This process would be utilized for both projects along I-64: the Long Road interchange and the North Outer Road extension into the Valley.

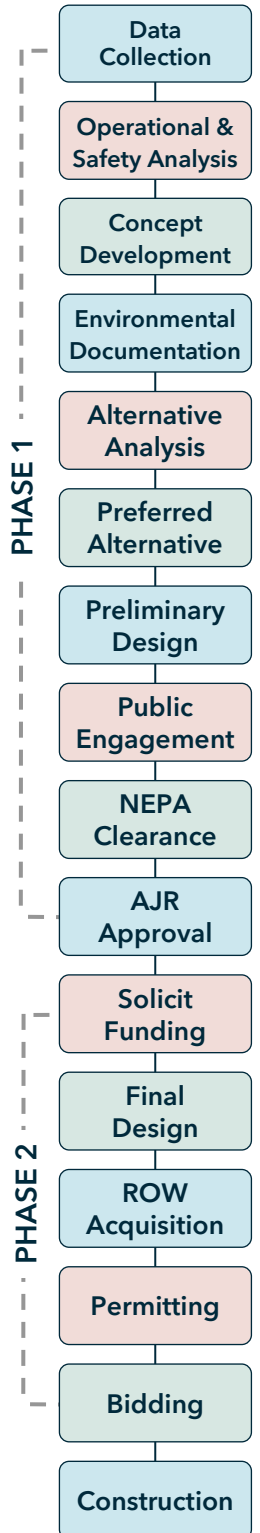
Potential solutions to both projects are shown above and below. Roundabouts could be viable options for both locations; incorporating the outer road into the interchange layout would maintain developable acreage at Long Road while along the outer road a roundabout would serve as a means of transitioning from a one-way system to two-way. These concepts and more would be explored in Phase I of the project to ensure that the preferred solutions provided the safest and most efficient traffic operations while minimizing the need for additional right-of-way.

The Lochmueller Team is intimately familiar with the LPA and Federal grant process. We have assisted clients such as St. Charles County, and the cities of St. Charles, O'Fallon, St. Louis, Frontenac, Florissant, Des Peres, Wildwood, and many others, with MoDOT Cost Share and Federal Grant applications to fund their project. We are the funding experts!

Phase II - Design & Property Acquisition

Lochmueller will lead the effort to identify, write, and submit viable grant applications to assist in funding of the project. During this phase, the chosen designs will be advanced producing full

APPROACH AT-A-GLANCE





## PROJECT APPROACH

construction documents for bid. Whether as one single or two independent projects, the overall approach will be similar. Using the AJR as the impetus, the design team will develop comprehensive transportation, traffic, structural, and water resource designs. Elements including bridges, culverts, retaining walls, and pedestrian facilities will be detailed. The team will focus on providing an overall cohesive design that best meets the goals determined in the AJR and that best addresses both vehicle and pedestrian demands within the corridor. Experienced environmental staff will utilize the completed NEPA documentation from Phase I to obtain required clearances beginning with the initiation of the Request for Environmental Review (RER).

We will minimize impacts to properties along the project corridor to the most practical extent. Our right-of-way staff consisting of experienced MoDOT-certified negotiators and appraisers has extensive experience working for MoDOT and acquiring right-of-way for local agencies. They will work closely with the design team to address any questions or required plan revisions during the negotiation process.

Our team of engineers will draw from their depth of experience in developing plans that safely and effectively manage traffic, as well as erosion and sediment control measures during construction. Construction impacts can result in increased driver frustration, so we will work closely with the City of Chesterfield and MoDOT to ensure that the public is keenly aware of the project and the timetable for construction. While current technology will easily facilitate remote file sharing and virtual meetings, face-to-face meetings will be encouraged whenever practical. Moreover, the depth of this team will facilitate peer reviews and cross-checking of plan elements with a fresh set of eyes, ensuring that every detail is questioned, reviewed, and approved by engineers with the appropriate knowledge and expertise to

deliver the highest quality project documents. Required milestone submittal schedules will be followed whether prescribed by funding obligations or by the City. Each submittal will undergo a thorough review process as a part of Lochmueller's internal QA/QC policy. The final submittal will include full plans, specification, and estimates for bid. Our team will support the City during the bid process, including bid solicitation, bid submission, and bid selection.

### Phase III - Construction

The construction phase will be led by HR Green's Eric Chamberlain, PE, a construction manager with extensive MoDOT experience, and our DBE team members will provide additional, essential, services to meet any diversity goals. Experienced construction inspectors will be utilized to ensure the plans and specifications are being followed in a safe and efficient manner. In addition, the design team will provide engineering support during the construction process including submittal review and answering requests for information (RFIs).

## HOME STRETCH

Once the solution is identified and funding is secured, the Lochmueller Team's extensive experience with the LPA design process will allow a seamless transition into final design, right-of-way acquisition, and construction. Lochmueller's in-house right-of-way experts will provide appraisal and negotiation services following all MoDOT and FHWA guidelines. The design team will complete the construction plans, obtain all applicable permits, and assist the City with the bidding process.

Upon contract award, the construction staff, with support from the design team, will meticulously manage the construction process as your representative so that the project is successfully completed on time and within budget.

## SCHEDULE

TASKS	START DATE	END DATE
Data Collection/Survey (Phases 1 & 2)	2/1/2024	7/31/2025
Traffic/Environmental Analysis	2/1/2024	9/30/2024
Concept Development	5/1/2024	7/15/2024
Agency/Utility Coordination	2/1/2024	11/29/2027
Public Engagement (Phases 1 & 2)	9/1/2024	2/28/2026
AJR Documentation	10/1/2024	12/31/2024
Obtain FHWA Conceptual Approval of AJR	12/31/2024	12/31/2024
Preliminary Engineering & Cost Estimation	1/1/2025	6/30/2025
NEPA Documentation	1/1/2025	6/30/2025
Programming in STIP/TIP	1/1/2025	6/30/2025
Obtain FHWA Final Approval of AJR	7/1/2025	7/1/2025
Secure Funding	1/1/2025	7/31/2025
Design Engineering (60%, 95%, 100%)	7/31/2025	9/23/2027
RER/NEPA Clearance	7/31/2025	1/29/2026
ROW Plan Development & Acquisition	2/28/2026	10/26/2026
Bidding Phase	9/23/2027	11/22/2027
Construction	11/22/2027	11/12/2029

## WORKLOAD & AVAILABILITY

