

# RESOLUTION NO. 04 11 2024C

## A RESOLUTION AUTHORIZING AN AGREEMENT WITH HR GREEN, INC., PROVIDING FOR PROFESSIONAL ENGINEERING SERVICES FOR HOFF ROAD PHASE 2, IN AN AMOUNT NOT TO EXCEED \$299,994.89.

**WHEREAS**, the City of O'Fallon has received external funding to complete the Hoff Road Phase 2 Project with funds allocated for professional engineering design services; and

**WHEREAS**, City staff has selected and negotiated scope and fee with HR Green, Inc., for professional engineering services; and

**WHEREAS**, design funds are included in the approved 2024 budget; and

**WHEREAS**, City Staff recommends approval of this Resolution.

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF O'FALLON, MISSOURI, AS FOLLOWS:**

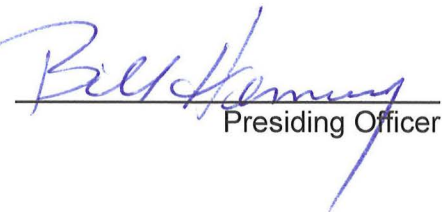
**SECTION 1:** The City Council approves on behalf of the City an agreement with HR Green, Inc. for professional engineering services related to the Hoff Road Phase 2 Project at a cost not to exceed \$299,994.89, in substantial conformity with the terms shown on Exhibit A attached hereto and incorporated herein by this reference as if set out here in full, together with such changes therein as shall be approved by the officers of the City executing same which are consistent with the provisions and intent of this legislation and necessary, desirable, convenient or proper in order to carry out the matters herein authorized. The City Administrator and other appropriate City officials are hereby authorized to execute the Agreement and such additional documents and take any and all actions necessary, desirable, convenient or prudent in order to carry out the intent of this legislation.

**PASSED BY THE CITY COUNCIL FOR THE CITY OF O'FALLON, MISSOURI, THIS 11<sup>TH</sup> DAY OF APRIL 2024.**

Attest:

  
Bess Bacher, City Clerk



  
Presiding Officer

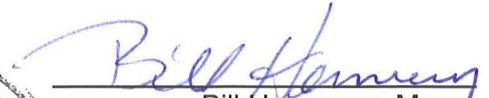
# RESOLUTION NO. 04 11 2024C

APPROVED BY THE MAYOR FOR THE CITY OF O'FALLON, MISSOURI, THIS 11<sup>TH</sup> DAY OF APRIL 2024.

Attest:

  
Bess Bacher, City Clerk



  
Bill Hennessy, Mayor

Approved as to Form:

  
Kevin M. O'Keefe, City Attorney

# Exhibit A

**SPONSOR: CITY OF O'FALLON, MISSOURI**

**LOCATION: Hoff Road, Progress Lane to Misty Meadow Lane**

**PROJECT: Hoff Road, Phase 2, STBG-7302(702)**

*THIS CONTRACT* is between **City of O'Fallon, Missouri**, hereinafter referred to as the "Local Agency", and HR Green 520 Maryville Centre Drive, Suite 100, St. Louis, MO 63141, referred to as the "Engineer".

*INASMUCH* as funds have been made available by the Federal Highway Administration through its Surface Transportation Block Grant Program (STBG), coordinated through the Missouri Department of Transportation, the Local Agency intends to reconstruct Hoff Road including minor horizontal and vertical alignment modifications, installation of storm sewer infrastructure, and pedestrian improvements and requires professional engineering services. The Engineer will provide the Local Agency with professional services hereinafter detailed for the planning, design and construction inspection of the desired improvements and the Local Agency will pay the Engineer as provided in this contract. It is mutually agreed as follows:

## **ARTICLE I – SCOPE OF SERVICES**

See Attachment A.

## **ARTICLE II - DISADVANTAGED BUSINESS ENTERPRISE (DBE) REQUIREMENTS:**

- A. DBE Goal: The following DBE goal has been established for this Agreement. The dollar value of services and related equipment, supplies, and materials used in furtherance thereof which is credited toward this goal will be based on the amount actually paid to DBE firms. The goal for the percentage of services to be awarded to DBE firms is 10% of the total Agreement dollar value.
- B. DBE Participation Obtained by Engineer: The Engineer has obtained DBE participation, and agrees to use DBE firms to complete, 10% of the total services to be performed under this Agreement, by dollar value. The DBE firms which the Engineer shall use, and the type and dollar value of the services each DBE will perform, is as follows:

DBE FIRM NAME, STREET AND COMPLETE MAILING ADDRESS	TYPE OF DBE SERVICE	TOTAL \$ VALUE OF THE DBE SUBCONTRACT	CONTRACT \$ AMOUNT TO APPLY TO TOTAL DBE GOAL	PERCENTAGE OF SUBCONTRACT DOLLAR VALUE APPLICABLE TO TOTAL GOAL
<u>Quigg Engineering, Inc. 720 Olive St., Suite 1610 St. Louis, MO 63101</u>	<u>Topographic survey, Drainage analysis/design, Legal descriptions/exhibits</u>	<u>\$103,009.78</u>	<u>\$103,009.78</u>	<u>100%</u>

**ARTICLE III-ADDITIONAL SERVICES**

The Local Agency reserves the right to request additional work, and changed or unforeseen conditions may require changes and work beyond the scope of this contract. In this event, a supplement to this agreement shall be executed and submitted for the approval of MoDOT prior to performing the additional or changed work or incurring any additional cost thereof. Any change in compensation will be covered in the supplement.

**ARTICLE IV - RESPONSIBILITIES OF LOCAL AGENCY**

The Local Agency will cooperate fully with the Engineer in the development of the project, including the following:

- A. make available all information pertaining to the project which may be in the possession of the Local Agency;
- B. provide the Engineer with the Local Agency's requirements for the project;
- C. make provisions for the Engineer to enter upon property at the project site for the performance of his duties;
- D. examine all studies and layouts developed by the Engineer, obtain reviews by MoDOT, and render decisions thereon in a prompt manner so as not to delay the Engineer;
- E. designate a Local Agency's employee to act as Local Agency's Person in Responsible Charge under this contract, such person shall have authority to transmit instructions, interpret the Local



Agency's policies and render decisions with respect to matters covered by this agreement (see EPG 136.3);

- F. perform appraisals and appraisal review, negotiate with property owners and otherwise provide all services in connection with acquiring all right-of-way needed to construct this project.

#### **ARTICLE V - PERIOD OF SERVICE**

The Engineer will commence work within two weeks after receiving notice to proceed from the Local Agency. The general phases of work will be completed in accordance with the following schedule:

- A. PS&E Approval by MODOT shall be completed on 09/30/2026
- B. Construction Phase shall be completed 60 days after construction final completion schedule.

The Local Agency will grant time extensions for delays due to unforeseeable causes beyond the control of and without fault or negligence of the Engineer. Requests for extensions of time shall be made in writing by the Engineer, before that phase of work is scheduled to be completed, stating fully the events giving rise to the request and justification for the time extension requested.

#### **ARTICLE VI – STANDARDS**

The Engineer shall be responsible for working with the Local Agency in determining the appropriate design parameters and construction specifications for the project using good engineering judgment based on the specific site conditions, Local Agency needs, and guidance provided in the most current version of EPG 136 LPA Policy. If the project is on the state highway system or is a bridge project, then the latest version of MoDOT's Engineering Policy Guide (EPG) and Missouri Standard Specifications for Highway Construction shall be used (see EPG 136.7). The project plans must also be in compliance with the latest ADA (Americans with Disabilities Act) Regulations.

#### **ARTICLE VII - COMPENSATION**

For services provided under this contract, the Local Agency will compensate the Engineer as follows:

- A. For design services, including work through the construction contract award stage, the Local Agency will pay the Engineer the actual costs incurred plus a predetermined fixed fee of \$21,670.28, with a ceiling established for said design services in the amount of \$299,994.89, which amount shall not be exceeded.
- B. Construction inspection services, shall be performed by the Local Agency.
- C. The compensation outlined above has been derived from estimates of cost which are detailed in Attachment B. Any major changes in work, extra work, exceeding of the contract ceiling, or change in the predetermined fixed fee will require a supplement to this contract, as covered in Article III - ADDITIONAL SERVICES.

- D. Actual costs in Sections A and B above are defined as:
1. Actual payroll salaries paid to employees for time that they are productively engaged in work covered by this contract, plus
  2. An amount calculated at 49.34% of actual salaries in Item 1 above for payroll additives, including payroll taxes, holiday and vacation pay, sick leave pay, insurance benefits, retirement and incentive pay, plus
  3. An amount calculated at 131.760% of actual salaries in Item 1 above for general administrative overhead, based on the Engineer's system for allocating indirect costs in accordance with sound accounting principles and business practice, plus
  4. Other costs directly attributable to the project but not included in the above overhead, such as vehicle mileage, meals and lodging, printing, surveying expendables, and computer time, plus
  5. Project costs incurred by others on a subcontract basis, said costs to be passed through the Engineer on the basis of reasonable and actual cost as invoiced by the subcontractors.
- E. The rates shown for additives and overhead in Sections VII. D.2 and VII. D.3 above are the established Engineer's overhead rate accepted at the time of contract execution and shall be utilized throughout the life of this contract for billing purposes.
- F. The payment of costs under this contract will be limited to costs which are allowable under 23 CFR 172 and 48 CFR 31.
- G. **METHOD OF PAYMENT** - Partial payments for work satisfactorily completed will be made to the Engineer upon receipt of itemized invoices by the Local Agency. Invoices will be submitted no more frequently than once every two weeks and must be submitted monthly for invoices greater than \$10,000. A pro-rated portion of the fixed fee will be paid with each invoice. Upon receipt of the invoice and progress report, the Local Agency will, as soon as practical, but not later than 45 days from receipt, pay the Engineer for the services rendered, including the proportion of the fixed fee earned as reflected by the estimate of the portion of the services completed as shown by the progress report, less partial payments previously made. A late payment charge of one and one half percent (1.5%) per month shall be assessed for those invoiced amount not paid, through no fault of the Engineer, within 45 days after the Local Agency's receipt of the Engineer's invoice. The Local Agency will not be liable for the late payment charge on any invoice which requests payment for costs which exceed the proportion of the maximum amount payable earned as reflected by the estimate of the portion of the services completed, as shown by the progress report. The payment, other than the fixed fee, will be subject to final audit of actual expenses during the period of the Agreement.



H. **PROPERTY ACCOUNTABILITY** - If it becomes necessary to acquire any specialized equipment for the performance of this contract, appropriate credit will be given for any residual value of said equipment after completion of usage of the equipment.

**ARTICLE VIII - COVENANT AGAINST CONTINGENT FEES**

The Engineer warrants that he has not employed or retained any company or person, other than a bona fide employee working for the Engineer, to solicit or secure this agreement, and that he has not paid or agreed to pay any company or person, other than a bona fide employee, any fee, commission, percentage, brokerage fee, gifts, or any other consideration, contingent upon or resulting from the award or making of this contract. For breach or violation of this warranty, the Local Agency shall have the right to annul this agreement without liability, or in its discretion to deduct from the contract price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee, plus reasonable attorney's fees.

**ARTICLE IX - SUBLETTING, ASSIGNMENT OR TRANSFER**

No portion of the work covered by this contract, except as provided herein, shall be sublet or transferred without the written consent of the Local Agency. The subletting of the work shall in no way relieve the Engineer of his primary responsibility for the quality and performance of the work. It is the intention of the Engineer to engage subcontractors for the purposes of:

<b>Sub-Consultant Name</b>	<b>Address</b>	<b>Services</b>
<b>Quigg Engineering, Inc.</b>	<b>720 Olive St., Suite 1610 St. Louis, MO 63101</b>	<b>Topographic survey, Drainage analysis/design, Legal descriptions/exhibits</b>
<b>Geotechnology, LLC dba UES</b>	<b>11816 Lackland Road, Suite 150, St. Louis, MO 63146</b>	<b>Geotechnical services</b>

**ARTICLE X - PROFESSIONAL ENDORSEMENT**

All plans, specifications and other documents shall be endorsed by the Engineer and shall reflect the name and seal of the Professional Engineer endorsing the work. By signing and sealing the PS&E submittals the Engineer of Record will be representing to MoDOT that the design is meeting the intent of the federal aid programs.

**ARTICLE XI - RETENTION OF RECORDS**

The Engineer shall maintain all records, survey notes, design documents, cost and accounting records, construction records and other records pertaining to this contract and to the project covered by this contract, for a period of not less than three years following final payment by FHWA. Said records shall be made available for inspection by authorized representatives of the Local Agency, MoDOT or the federal government during regular working hours at the Engineer's place of business.

**ARTICLE XII - OWNERSHIP OF DOCUMENTS**

Plans, tracings, maps and specifications prepared under this contract shall be delivered to and become the property of the Local Agency upon termination or completion of work. Basic survey notes, design computations and other data prepared under this contract shall be made available to the Local Agency upon request. All such information produced under this contract shall be available for use by the Local Agency without restriction or limitation on its use. If the Local Agency incorporates any portion of the work into a project other than that for which it was performed, the Local Agency shall save the Engineer harmless from any claims and liabilities resulting from such use.

### **ARTICLE XIII – SUSPENSION OR TERMINATION OF AGREEMENT**

- A. The Local Agency may, without being in breach hereof, suspend or terminate the Engineer's services under this Agreement, or any part of them, for cause or for the convenience of the Local Agency, upon giving to the Engineer at least fifteen (15) days' prior written notice of the effective date thereof. The Engineer shall not accelerate performance of services during the fifteen (15) day period without the express written request of the Local Agency.
- B. Should the Agreement be suspended or terminated for the convenience of the Local Agency, the Local Agency will pay to the Engineer its costs as set forth in Attachment B including actual hours expended prior to such suspension or termination and direct costs as defined in this Agreement for services performed by the Engineer, a proportional amount of the fixed fee based upon an estimated percentage of Agreement completion, plus reasonable costs incurred by the Engineer in suspending or terminating the services. The payment will make no other allowances for damages or anticipated fees or profits. In the event of a suspension of the services, the Engineer's compensation and schedule for performance of services hereunder shall be equitably adjusted upon resumption of performance of the services.
- C. The Engineer shall remain liable to the Local Agency for any claims or damages occasioned by any failure, default, or negligent errors and/or omission in carrying out the provisions of this Agreement during its life, including those giving rise to a termination for non-performance or breach by Engineer. This liability shall survive and shall not be waived, or estopped by final payment under this Agreement.
- D. The Engineer shall not be liable for any errors or omissions contained in deliverables which are incomplete as a result of a suspension or termination where the Engineer is deprived of the opportunity to complete the Engineer's services.
- E. Upon the occurrence of any of the following events, the Engineer may suspend performance hereunder by giving the Local Agency 30 days advance written notice and may continue such suspension until the condition is satisfactorily remedied by the Local Agency. In the event the condition is not remedied within 120 days of the Engineer's original notice, the Engineer may terminate this agreement.
  - 1. Receipt of written notice from the Local Agency that funds are no longer available to continue performance.



2. The Local Agency's persistent failure to make payment to the Engineer in a timely manner.
3. Any material contract breach by the Local Agency.

#### **ARTICLE XIV - DECISIONS UNDER THIS CONTRACT**

The Local Agency will determine the acceptability of work performed under this contract, and will decide all questions which may arise concerning the project. The Local Agency's decision shall be final and conclusive.

#### **ARTICLE XV - SUCCESSORS AND ASSIGNS**

The Local Agency and the Engineer agree that this contract and all contracts entered into under the provisions of this contract shall be binding upon the parties hereto and their successors and assigns.

#### **ARTICLE XVI - COMPLIANCE WITH LAWS**

The Engineer shall comply with all federal, state, and local laws, ordinances, and regulations applicable to the work, including but not limited to Title VI and Title VII of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d, 2000e), as well as with any applicable titles of the Americans with Disabilities Act (42 U.S.C. 12101, et seq.) and non-discrimination clauses incorporated herein, and shall procure all licenses and permits necessary for the fulfillment of obligations under this contract.

#### **ARTICLE XVII - RESPONSIBILITY FOR CLAIMS AND LIABILITY**

The Engineer agrees to save harmless the Local Agency, MoDOT and FHWA from all claims and liability due to his negligent acts or the negligent acts of his employees, agents or subcontractors.

#### **ARTICLE XVIII - NONDISCRIMINATION**

The Engineer, with regard to the work performed by it after award and prior to completion of the contract work, will not discriminate on the ground of race, color or national origin in the selection and retention of subcontractors. The Engineer will comply with state and federal related to nondiscrimination, including but not limited to Title VI and Title VII of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d, 2000e), as well as with any applicable titles of the Americans with Disabilities Act (42 U.S.C. 12101, et seq.). More specifically, the Engineer will comply with the regulations of the Department of Transportation relative to nondiscrimination in federally assisted programs of the Department of Transportation, as contained in 49 CFR 21 through Appendix H and 23 CFR 710.405 which are herein incorporated by reference and made a part of this contract. In all solicitations either by competitive bidding or negotiation made by the Engineer for work to be performed under a subcontract, including procurements of materials or equipment, each potential subcontractor or supplier shall be notified by the Engineer's obligations under this contract and the regulations relative to non-discrimination on the ground of color, race or national origin.

**ARTICLE XIX – LOBBY CERTIFICATION**

CERTIFICATION ON LOBBYING: Since federal funds are being used for this agreement, the Engineer's signature on this agreement constitutes the execution of all certifications on lobbying which are required by 49 C.F.R. Part 20 including Appendix A and B to Part 20. Engineer agrees to abide by all certification or disclosure requirements in 49 C.F.R. Part 20 which are incorporated herein by reference.

**ARTICLE XX – INSURANCE**

- A. The Engineer shall maintain commercial general liability, automobile liability, and worker's compensation and employer's liability insurance in full force and effect to protect the Engineer from claims under Worker's Compensation Acts, claims for damages for personal injury or death, and for damages to property arising from the negligent acts, errors, or omissions of the Engineer and its employees, agents, and Subconsultants in the performance of the services covered by this Agreement, including, without limitation, risks insured against in commercial general liability policies.
  
- B. The Engineer shall also maintain professional liability insurance to protect the Engineer against the negligent acts, errors, or omissions of the Engineer and those for whom it is legally responsible, arising out of the performance of professional services under this Agreement.
  
- C. The Engineer's insurance coverage shall be for not less than the following limits of liability:
  - 1. Commercial General Liability: \$500,000 per person up to \$3,000,000 per occurrence;
  - 2. Automobile Liability: \$500,000 per person up to \$3,000,000 per occurrence;
  - 3. Worker's Compensation in accordance with the statutory limits; and Employer's Liability: \$1,000,000; and
  - 4. Professional ("Errors and Omissions") Liability: \$1,000,000, each claim and in the annual aggregate.
  - 5. Umbrella Excess Liability: The Engineer should provide an umbrella excess liability policy that will provide a minimum of \$2,000,000 per occurrence/\$2,000,000 aggregate over the employers' liability, commercial general liability and automobile liability coverages. This policy should "follow-form" of the underlying policies and comply with all insurance requirements of those policies. If the General Aggregate of the Commercial General Liability policy does not apply per project, the limits should be \$3,000,000 per occurrence/\$3,000,000 aggregate.

- D. The Engineer shall, upon request at any time, provide the Local Agency with certificates of insurance evidencing the Engineer's commercial general or professional liability ("Errors and Omissions") policies and evidencing that they and all other required insurance are in effect as to the services under this Agreement.
- E. Any insurance policy required as specified in (ARTICLE XX) shall be written by a company which is incorporated in the United States of America or is based in the United States of America. Each insurance policy must be issued by a company authorized to issue such insurance in the State of Missouri.
- F. Subconsultants: The Engineer shall cause each Subcontractor to purchase and maintain insurance of the types and amounts specified herein. Limits of such coverage may be reduced only upon written agreement of Owner. Consultant shall provide to Owner Copies of certificates evidencing coverage for each Subcontractor. Subcontractor's commercial general liability and business automobile liability insurance shall name Owner and Consultant as additional insured's and have the Waiver of Subrogation endorsement added.

**ARTICLE XXI - ATTACHMENTS**

The following exhibits are attached hereto and are hereby made part of this contract:

Attachment A – Scope of Service

Attachment B - Estimate of Cost

Attachment C - Certification Regarding Debarment, Suspension, and Other  
Responsibility Matters - Primary Covered Transactions.

Attachment D - Certification Regarding Debarment, Suspension, and Ineligibility and  
Voluntary Exclusion - Lower Tier Covered Transactions.

Attachment E – DBE Contract Provisions

Attachment F – Fig. 136.4.15 Conflict of Interest Disclosure Form



Executed by the Engineer this 29th day of March, 2024.

Executed by the County/City this 11 day of April, 2024

**FOR: O'FALLON; CITY, MISSOURI**

BY: [Signature]  
Michael Snowden, City Administrator



ATTEST: [Signature]  
Bess Bacher, City Clerk

**FOR: HR GREEN, INC.**

BY: [Signature]  
Jason Dohrmann - Vice President

ATTEST: \_\_\_\_\_

I hereby certify under Section 50.660 RSMo there is either: (1) a balance of funds, otherwise unencumbered, to the credit of the appropriation to which the obligation contained herein is chargeable, and a cash balance otherwise unencumbered, in the Treasury, to the credit of the fund from which payment is to be made, each sufficient to meet the obligation contained herein; or (2) bonds or taxes have been authorized by vote of the people and there is a sufficient unencumbered amount of the bonds yet to be sold or of the taxes levied and yet to be collected to meet the obligation in case there is not a sufficient unencumbered cash balance in the treasury.

[Signature]  
CITY FINANCE DIRECTOR



ATTEST: [Signature]  
CITY CLERK



**ATTACHMENT A**

**Scope of Services**

## **ATTACHMENT A SCOPE OF SERVICES**

**SPONSOR:** City of O'Fallon, Missouri

**LOCATION:** Hoff Road, Progress West Lane to Misty Meadow Lane

**PROJECT:** Hoff Road, Phase 2 Improvements, STBG-7302 (702)

**PROJECT DESCRIPTION:** The City of O'Fallon (CITY) has been granted federal STBG funds for the reconstruction of Hoff Road between Progress West Lane and Misty Meadow Lane. The work will consist of minor horizontal and vertical alignment modifications, a three-lane roadway section with curb and gutter, new multi-use path, and enclosed storm drainage. The project will consist of the following design features: 1). Conceptual geometric layout in the form of a strip map to approve prior to preliminary design phase work, including design criteria; 2). Pavement reconstruction to provide a three-lane roadway section; 3). Improved horizontal and vertical alignment along Hoff Road near Kenmar Lane (30mph design speed); 4). Hydraulic calculations to provide open ditch drainage system with provisions for detention; 5). Assist the CITY with utility coordination; 6). Coordinate Request for Environmental Review (RER) with MoDOT staff; and a Public Involvement Meeting.

**GENERAL:** HR Green, Inc. (ENGINEER) will develop detailed plans, job special provisions, and an opinion of estimated construction cost for the improvements. This scope of services includes the completion of four (4) tasks as detailed below. Plans will be developed in accordance with the procedures required by the Missouri Department of Transportation CITY Manual, Section 136. The ENGINEER will develop deliverables for the following four submittals (items 1 through 4), and submit to the CITY, MoDOT, and County Road Board for review and approval:

1. Conceptual Layout and Technical Traffic Memorandum
2. Preliminary Plan Phase
3. Right-of-Way Plan Phase
4. Final Design Plan Phase

**PROJECT ASSUMPTIONS:** The following assumptions were made in developing this scope of services:

1. Existing Conditions Data Collection: The CITY will provide the ENGINEER with approved development plans, including drainage calculations, if available.
2. Conceptual Design Study: A conceptual design strip map and design criteria will be developed and submitted to the City for approval. This will be the basis for preliminary, right-of-way, and final design plan preparation.
3. Right-of-Way: For the purposes of this scope of service, it is assumed that the project may require permanent right-of-way from five (5) parcels, and temporary construction easement documents up to twenty-two (22) properties in order to construct improvements. The acquisition of new easements for this project will be completed by the CITY. At this time, costs to develop Right-of-Way plans assuming five (5) parcels with permanent right-of-way needs, and temporary easements from up to twenty-two (22) parcels are included in Task G. The ENGINEER will obtain available recorded plats

and deeds through the project limits. Title work for up to five (5) parcels will be the responsibility of the ENGINEER, and provided to the CITY. The ENGINEER will prepare exhibits for all parcels requiring Temporary Construction Easements (TCE); however, property descriptions will not be required. If it is subsequently determined if more parcels will require new temporary or permanent easements, the ENGINEER will complete this work through a Supplemental Agreement.

4. Surveying: A full topographic and right-of-way survey will be completed by a Subconsultant.
5. Drainage Design: Review of the existing storm sewer system and hydraulic calculations will be completed throughout the project limits to provide a “before” construction condition, proposed drainage calculations will provide an “after” construction condition accounting for pavement widening and enclosed drainage system. This work will be completed by a Subconsultant. It is the CITY’S intention to replace the existing storm drainage system along the project with mostly open ditch drainage.
6. Geotechnical Exploration: Geotechnical exploration will be completed for this project by a Subconsultant, and will include borings every 650 feet, with an auger depth to approximately 15 feet or refusal, as well as pavement structure recommendations.
7. Existing Signs: The ENGINEER will not be responsible for Retroreflectivity evaluation of any existing signs to be used in place.
8. Utility Coordination: The CITY will be responsible for utility coordination with local owners adjacent to the project site. The ENGINEER will develop plan sets to be submitted to the CITY and each known individual utility owner. The ENGINEER will assist the CITY with a utility coordination meeting by being present and answering design related questions. All utility agency coordination will be documented by the CITY and submitted to the ENGINEER and MoDOT for their files.
9. ~~Cultural Resources Survey: The scope will include provisions for a Cultural Resources Survey; however, it is understood that this may not be a requirement from MoDOT’s RER review. This will be completed by a Subconsultant.~~
10. Technical Specifications: The ENGINEER will prepare JSP’s for any technical construction specifications not covered by the most current version of the Missouri Department of Transportation Construction Specifications for Highway Construction. The City will be responsible for all other aspects of the Contract Manual.
11. Bidding Documents: The ENGINEER will provide one PDF copy of all bid documents to the CITY, who will be responsible for reproduction of the bidding documents.
12. Right-of-Way: All survey work under this phase will be completed under the direction and control of a Missouri Licensed Professional Land Surveyor. All exhibits and legal descriptions for permanent easement of right of way acquisition will be completed by a subconsultant, and sealed by a Professional Land Surveyor licensed in the State of Missouri
13. As-Built Plans: For the purposes of the fee estimate, the assumption was made that the contractor would develop and provide construction as-built plans to the ENGINEER and CITY.

**EXCLUSIONS:** Exclusions to the scope of services include the following:

1. Presentation at City Council, Road Board, or other public meetings.
2. MSE Retaining wall design will be completed by wall manufacturer
3. Roadway lighting photometric calculations



4. Provisions for dedicated bike lanes
5. Design of utility adjustments or preparation and negotiation of utility agreements
6. Acquisition of new right of way or easements
7. Safety analysis
8. Traffic Safety and Operations (TS&O) Report
9. Any work required for condemnation of property, once the Right-of-Way Plans have been submitted and approved
10. Preparation of any Certified Land Corner documents.
11. Physical monumentation of any proposed right of way or property corners, or the re-establishment of existing corners which may have been damaged, removed, or not found for this project.
12. NEPA or environmental permitting or documentation beyond the RER process, Cultural Resources Survey, and completion of the Section 106, will not be included. Scope will not include floodplain development permit.
13. Permitting other than that described herein will be the responsibility of the CITY
14. Permitting requirements during construction phase will be the responsibilities of others
15. Coordination of utilities and utility relocation work
16. Cultural Resources Survey

## **DETAILED DESIGN ENGINEERING**

**In order to achieve the above project goals and objective, the ENGINEER will provide:**

### **I. PROJECT MANAGEMENT**

- A. Periodic Client Progress Meetings will be anticipated for the approximate duration of the project (total of 2 meetings anticipated). It is anticipated that all meetings will be held at the CITY offices. Meeting notes will be prepared by ENGINEER and submitted to CITY.
- B. Invoices and progress reports will be prepared monthly for the duration of the project (assume 30 months). The invoices will be prepared by the ENGINEER in accordance with the standard LPA Consultant Invoice form. Subconsultants will prepare individual invoices for their work and submit the invoices to the ENGINEER, who will summarize all the invoices into one comprehensive invoice.
- C. Subconsultant Services: For this project, topographic and Right of Way surveys, geotechnical exploration, and Cultural Resources Survey will be subconsulted. The subconsultant scope of service is provided along with a breakdown of fees, but for ease of understanding, the corresponding Subconsultant line items in the fee estimate are entered only as a single direct cost. ENGINEER has hours shown in the fee estimate to coordinate with the Subconsultant with respect to scope, schedule and budget, as well as to process invoices.

### **II. CONCEPTUAL LAYOUT PHASE**

Based on project kick-off and scoping meeting discussions with the CITY, the ENGINEER will complete the following:

- A. Topographic Survey will be completed by a subconsultant. See Attachment A for scope of services



- B. Geotechnical Services will be completed by a subconsultant. See Attachment A for scope of services.
- C. Field Checks – The ENGINEER will independently conduct a field check of the Topographic Survey or its component parts, as ENGINEER deems necessary, to accurately depict all necessary aspects of the project shown on the plans.
- D. A conceptual strip map will be prepared on aerial background showing a proposed conceptual layout depicting the new roadway alignment and multi-use path. Concepts will be shown in 2D layouts, and ORD modeling will not be required for this phase. The concept will be submitted to the CITY in electronic format (PDF) for review. The approved concept will be the basis for the Preliminary Design Phase.
- E. Prepare business owner questionnaire with PDF form-fill capability. This document will be submitted to the local business owners by the CITY to gain information regarding deliveries, truck access, hours of operation, etc. to assist with traffic handling during construction sequencing.

### III. PRELIMINARY DESIGN PHASE

Based on Conceptual Layout approval by the CITY, the ENGINEER will provide Preliminary Plans that are approximately 30% complete. These plans will show the general nature of the proposed improvements and will include the following:

- A. Preliminary Roadway Design Plans: The Preliminary Design plan submittal will show the general nature of the proposed improvements for the project and will include, but not necessarily be limited to:
  - 1. Title Sheet – The ENGINEER will complete a preliminary title sheet for the project. (1 sheet assumed)
  - 2. Typical Section Sheets – The ENGINEER will prepare preliminary typical section sheets (2 sheets assumed)
  - 3. Reference Tie / Project Control Sheet – The ENGINEER will prepare a preliminary tie and control sheet using information provided by the surveyor. (2 sheets assumed)
  - 4. Develop Plan/Profile Sheets – The ENGINEER will prepare preliminary plan/profile sheets based on a 20 scale horizontal plan and a 10 scale vertical. The plan/profile sheets will cover the pavement reconstruction area. Plan/profile sheets will include roadway geometry, drainage ditches, existing and proposed right-of-way and easements, and retaining walls, as necessary. (10 sheets assumed)
  - 5. Preliminary Storm Sewer Profiles – The ENGINEER will prepare preliminary storm sewer profiles at a scale of 1"=10' horizontally and vertically for up to five (5) cross road drainage culverts. (3 sheets assumed)
  - 6. Preliminary Retaining Wall Layout – The ENGINEER will prepare preliminary layout of one (1) MSE retaining wall. Preliminary retaining wall profile will be shown on 1"=20' horizontal and 1"=5' vertical scale. (1 sheet assumed)
  - 7. Construction Staging - Review staged construction scheme to identify potential temporary easement requirements. (15 sheets assumed)
  - 8. Preliminary Cross Sections - Cross sections for the project will be shown at fifty-foot intervals along the proposed centerline of the alignments, drawn at a scale of 1" equals 5' both horizontally and vertically. *Effort required to prepare cross sections also includes the effort to*

*create a 3D model of the project.* For the preliminary cross sections, only existing features and proposed pavement will be shown to generate construction limits (no labeling). Three cross sections per sheet are anticipated. (35 sheets assumed)

9. Approximate right-of-way and easement requirements will be shown on the plan sheets.

- ~~B. Client Meetings~~—The ENGINEER may attend two (2) stakeholder meetings directly related to the preliminary design phase.
- C. Hydraulic Calculations - The ENGINEER will delineate drainage areas and prepare hydraulic calculations for an open ditch storm drainage system to handle runoff within public Right-of-Way. It is anticipated the existing public drainage ditches and culverts will be sufficient for the roadway improvements. The hydraulic calculations will include the proposed ditch/culvert system.
1. Determine drainage areas.
  2. Determine runoff coefficients for storm water flows to proposed inlets.
  3. Prepare preliminary hydraulic calculations for ditches.
  4. Existing culvert capacity.
- ~~D. AutoTurn Analysis~~—The ENGINEER will complete AutoTurn Analysis at driveways/intersections to estimate proposed pavement and temporary pavement during construction needs. Turning radius will be based on standard AASHTO vehicles which closely depict reasonable design vehicles. Exhibits will be prepared and submitted to the CITY for presentation to the business owners, as necessary.
- E. Prepare Engineer's Estimate of Probable Cost – The ENGINEER will, based on the preliminary plans, complete a preliminary engineer's estimate of probable cost utilizing historical unit bid prices for construction.
- F. Public Meeting – The CITY will secure the location for a public meeting place and will set the date in coordination with the ENGINEER. The CITY will notify stakeholders of the public meeting, and prepare sign-in sheet, and project information and comment sheets. The open house format public meetings will occur during the hours of 4:00 PM until 6:00 PM.
1. The ENGINEER will prepare up to four (4) mounted display boards which will include improvements overlaid on an aerial background, comment sheet, sign-in, sheet, and project information sheet.
  2. The ENGINEER is expected to have up to one (1) staff member present at the public meeting.
  3. Property owner comments and feedback will be summarized by the CITY and presented to the ENGINEER.
- G. Submit Preliminary Plans – The ENGINEER will submit an electronic copy of the Preliminary Plans to the CITY for review and approval. The Preliminary Plan submittal will include: Title Sheet, Typical Sections, Reference Tie Sheet, Plan Sheets, Storm Sewer Profiles, Retaining Wall Layout, and Cross Sections. Upon approval at the CITY level, the ENGINEER will send the Preliminary Plan submittal to MoDOT for review and concurrence. Any comments that MoDOT makes required for approval will be revised and resubmitted during the Right of Way Phase. It is expected that Preliminary Plan comments will be addressed as part of the Right-of-Way Plan submittal (Task IV).
- H. Request for Environmental Review – The ENGINEER will complete an LPA Request for Environmental Review (RER) through the new Environmental Services webpage linked in the



MoDOT EPG. Additional Forms and information that may be required to be submitted include the following:

1. Complete the required Section 106 Project Information Form to the State Historic Preservation Office.
  2. Obtain the necessary USFWS IPac Official Species List, MDC Heritage Review Report, and related Threatened and Endangered Species documentation.
  - ~~3. Cultural Resources Survey, if required~~
- I. Utility Coordination – The CITY will coordinate with the utility companies for the project. At the CITY's discretion, it may host one (1) Utility Coordination Meeting after the preliminary design submittal has occurred to discuss existing facilities, their avoidance by the ENGINEER during on-going design, and possible relocation corridors for impacted facilities. The understanding is that the CITY will facilitate and run this meeting.
- 1) For this Utility Coordination Meeting, the ENGINEER will provide a preliminary plan submittal to the CITY for submittal to utility providers, including an electronic (PDF) set of plans with the following sheets, if applicable: cover sheet, typical section sheets, plan sheets, and cross section sheets. Upon request, ORD design files of the plans will be converted to AutoCad by the ENGINEER and can be made available to the utilities for their use.

#### **IV. RIGHT-OF-WAY DESIGN PHASE**

The Right-of-Way Phase shall include development of detailed Right-of-Way Plans for the proposed improvements upon approval of Preliminary Plans by the CITY. The development of Right-of-Way Plans is based on the assumption five (5) parcels will require new right-of-way, and no more than twenty-two (22) parcels will require temporary construction easements. If it is determined that more temporary and permanent easements are required, the ENGINEER will complete this additional work by way of supplemental agreement.

The ENGINEER shall provide the CITY with documentation to enable the CITY to request an A-Date in accordance with the most current version of the Missouri Department of Transportation (MoDOT) Engineering Policy Guide.

For this project, all property takings and easement acquisition will be completed by the CITY, using the Right of Way Plans prepared by the ENGINEER as follows:

- A. Right of Way Plans – The ENGINEER will prepare Right of Way Plans, which may be separate drawings from those used for design and construction details. The Right of Way Plans will show alignment, geometric design, removal of improvements, drainage facilities, property lines and ownership, other land survey information, street lines and existing right of way and existing easements. The ENGINEER will also include plan details, which will require additional right of way or easements during the construction phase of the project such as temporary pavement, temporary erosion control, etc. Right of Way Plans include title sheet, typical sections, and plan and profile sheets. Areas of new right of way, permanent easements and/or temporary easements required from each individual property owner will be shown in tabular form on the respective sheets.

Preliminary Right-of-Way Plans will be submitted to the CITY for review and approval. The Right-of-Way Plans will be at the same scale as the construction plans. The Right-of-Way Plans will include design details that will control the width of right of way and necessary easements.

1. New easements shall be dimensioned by station and offset.
  2. The following minimum design features shall be included on the Right-of-Way Plans:
    - i. Title sheet with the appropriate project limits, access note and traffic data completed.
    - ii. Typical sections
    - iii. Plan sheets containing the following: drainage facilities; entrances and their reference location, width and type; property owners, with existing and proposed areas of new easements and remaining property; traffic signal equipment; centerline bearing, existing known utility locations, easements, and horizontal curvature information.
    - iv. Township, Range, Section and/or U.S. Survey.
    - v. Reference Tie/Project Control Sheet
- B. ENGINEER'S Estimate of Probable Cost – The ENGINEER will revise the Engineer's Estimate of Probable Cost based on updated plan changes occurring between the Preliminary Plans and submittal of the Right-of-Way Plans.
- C. Submit Right-of-Way Plans – The ENGINEER will submit an electronic copy in PDF format of the Right-of-Way Plans to the CITY and MoDOT for review and approval. The Right-of-Way Plan submittal will include: Title Sheet, Typical Sections, Reference Tie/Project Control Sheet, and Plan and Profile Sheets, and Cross Sections.
- D. Revise Right-of-Way Plans and Resubmit – The ENGINEER will revise the Right-of-Way Plans based on the review comments received and resubmit the revised plans to the CITY and MoDOT for approval.
- E. The ENGINEER will be responsible for making reasonable revisions to the Right-of-Way and Construction Plans due to negotiations with the property owners in an effort to acquire the right-of-way or easements. Reasonable is defined as revisions limited to one (1) individual property revisions

In addition to the specific Right-of-Way Plan requirements, the following items and assumptions are also included in this phase of work:

- F. The ENGINEER will provide individual Property Descriptions and Exhibits for each parcel requiring permanent right-of-way; and Exhibits for each parcel requiring a temporary taking, (individual property descriptions by parcel will not be required for temporary takings). It is assumed that the project may require permanent right-of-way from five (5) parcels, and temporary construction easement documents up to twenty-two (22) properties in order to construct improvements. The acquisition of new easements for this project will be completed by the CITY. At this time, costs to develop Right-of-Way plans assuming five (5) parcels with permanent right-of-way needs, and temporary easements from up to twenty-two (22) parcels are included in Task F. The ENGINEER will obtain available recorded plats and deeds through the project limits. Title work for up to five (5) parcels will be the responsibility of the ENGINEER, and provided to the



CITY. The ENGINEER will prepare exhibits for all parcels requiring TCE; however, property descriptions will not be required.

- G. The ENGINEER will update the RER with any pertinent information necessary for environmental clearance.

## V. FINAL PSE DEVELOPMENT

The Final Plans, Specifications, and Estimate (PS&E) submittal in accordance with the following information:

### A. Final Design Plan Preparation

1. Title Sheet – The ENGINEER will make final revisions to the title sheet. (1 sheet assumed)
2. Tabulation of Quantities - The ENGINEER will tabulate all quantities to be used for bidding purposes. The tabulation will be created in Excel spreadsheets. Overall quantity sheets will be summarized and will break down how each quantity was tabulated by sheet and station range. (5 sheets assumed)
3. Typical Section Sheets – The ENGINEER will refine preliminary typical section sheets. Typical Section sheets will include pavement structure and compacted subgrade requirements. (2 sheets assumed)
4. Reference Tie/Project Control Sheets - Reference ties sheet depicting adopted and set control for the project. Each reference point shall be three-point tied to existing features located outside proposed construction limits. Reference points should be located approximately five hundred feet (500') apart. (2 sheets assumed)
5. Plan over Profile Sheets - The ENGINEER will finalize the plan/profile sheets by providing details and notes as necessary for the final design plans. Plan and profiles shall be drawn on 22"x34" sheets with a horizontal scale of 1"=20'. These sheets will be formatted to allow converting to ½ size scalable plans on 11"x17" paper. (10 sheets assumed)
6. Intersection Detail Sheets – Intersection geometry will be prepared on 1" equals 10' scale depicting location of curb and gutter and individual curb ramp design details. Intersection details will be based on approved conceptual and preliminary layout. Curb ramp details will include items such as landing locations, ramp locations, truncated dome locations, elevations necessary to provide ADA compliance, and design information (Sta./Off. and ELEV) at key locations to provide the contractor necessary assurance that compliance is achievable. (4 sheets assumed)
7. Storm Sewer Profiles – The ENGINEER will prepare cross road culvert pipe profile details on 10' horizontal/vertical scale. (3 sheets assumed)
8. Retaining Wall Details – The ENGINEER will prepare final retaining wall details for up to one retaining wall. Sheet will include retaining wall layout and profile, including construction notes as appropriate. (2 sheets assumed)
9. Striping and Signage Plans - The ENGINEER will complete plans for new pavement markings (and signing where applicable). These plans will indicate the proposed sign locations where

necessary due to roadway improvements. Signing cross sections or quantity sheets will not be provided. (4 sheets assumed)

10. Erosion Control Plans - The ENGINEER will include typical detail sheets for temporary erosion control installation around areas of new construction. The typical details and temporary erosion control will be shown on 20 scale plan/plan sheets. (10 sheets assumed)
  11. Street Lighting Plans – The ENGINEER will include lighting plan layout at 1"=20 scale sheets. Lighting intent will focus on intersections of Progress West Lane, Hoff Industrial Drive, Liberty Industrial Drive, and the curve near Kenmar Court. Continuous lighting is not expected. Lighting photometric calculations will not be required to meet Illuminating Engineering Society (IES) standards. Up to two detail sheets will be included. (6 sheets assumed)
  12. Temporary Traffic Control will be shown in plan view at 1" equal to 20' scale sheets. Traffic Control Detail sheets may be used to show standard details, as applicable. Temporary Traffic Control Plans will show required lane shifts, required detour signage, etc. as necessary to meet the requirements of both MoDOT and the Manual on Uniform Traffic Control Devices (MUTCD). (20 plan sheets and 1 detail sheet assumed)
  13. Cross Sections - The ENGINEER will refine preliminary cross sections to develop final cross sections through the project construction limits based on a 5 horizontal/vertical scale. Final cross sections will show existing and proposed improvements, existing and proposed right-of-way and easements, cut/fill volume, existing utilities (if provided available information), and proposed utilities. (35 sheets assumed)
- B. Prepare EOPC – ENGINEER will, based on the Final Design Plans, will complete an EOPC (including right of way and utility costs within the estimate).
- C. The ENGINEER shall prepare all necessary Project technical Job Special Provisions (JSP's) documents for review and approval by the CITY. The ENGINEER will use standard CITY front-end Contractual documents and the ENGINEER shall advise the CITY of any needed changes to these documents to correlate with JSPs.
- D. Submit Draft PS&E to CITY for review (pdf format).
- E. Final Draft PS&E Documents based on draft submittal comments submitted to CITY and MoDOT.
- F. Address Final Draft comments from MoDOT and resubmit Final, Sealed PS&E construction documents.

In addition to the specific PS&E requirements, the following items and assumptions are also included in this phase of work:

- G. Utility Coordination – The CITY will coordinate utility company activities for any adjustments required to be included in the final design plans. The ENGINEER will submit a Final PS&E (PDF) submittal the CITY for distribution to each utility company with facilities within the project corridor. Upon request, revised Microstation drawings of the plans will be made available to the utilities for their use, or can be converted to AutoCad, if required.
- 1) The CITY will be responsible for the preparation, negotiation and execution of all utility agreements as may be required to adjust existing utilities as a result of this project.
  - 2) The ENGINEER will attend one (1) Utility Coordination Meeting in conjunction with the Final Design Plans.

## **VI. BIDDING SERVICES / CONSTRUCTION SERVICES**

Bidding Services for this project will include:

- a. Issuing written clarifications in response to RFI's (in the form of addenda to the advertisement for bids)
- b. Shop drawing review for various items as required in the contract.

## **VII. DELIVERABLES PROVIDED BY ENGINEER**

The CONSULTANT shall furnish the following completed drawings and documents:

1. Conceptual Layout Strip map – The ENGINEER will submit an electronic copy (PDF format) of the Conceptual Design Layout to CITY for review and approval. The layout will be in strip map format, suitable for presentation at a public meeting.
2. Submit Preliminary Plans – The ENGINEER will submit an electronic copy (PDF format) of the Preliminary Plans and Estimate to the CITY and MoDOT for review and approval. The Preliminary Plan submittal will include Title Sheet, Typical Sections, Reference Tie Sheet, Plan Sheets, Storm Sewer Profiles, Retaining Wall Layout, and Cross Sections.
3. Submit Right-of-Way Plans – The ENGINEER will submit an electronic copy in PDF format of the Right-of-Way Plans to the CITY and MoDOT for review and approval. The Right-of-Way Plan submittal will include Title Sheet, Typical Sections, Reference Tie/Project Control Sheet, and Plan and Profile Sheets, and Cross Sections.
4. Submit 95% Draft Package/Plan Set for Review – The ENGINEER will submit a Draft PS&E package to the CITY and MoDOT. This submittal will include Plan Sheets, JSP's, and ENGINEER'S Estimate of Probable Cost in electronic PDF format.
5. Submit Revised PS&E – After revising the Draft PS&E, the ENGINEER will resubmit final copies of the PS&E (same deliverables as Task 4 above) to the CITY and MoDOT.



ATTACHMENT A  
SCOPE OF WORKPROJECT UNDERSTANDING

Hoff Road Reconstruction Phase 2 will generally consist of new pavement, realignment, multi-use path, flush shoulders and open ditches for storm drainage, along Hoff Road generally between Progress West Lane and Misty Meadow Lane in O'Fallon, Missouri.

Approximate Project Length: 4,800 feet

Estimated ROW Width: 70+ feet

Existing Pavement Width: 2 Lanes at 11' = 22'

Estimated Proposed Pavement Width: 3 lanes at 12' = 36' plus 10' multi-use path

Total area of project =  $4800 \times 70 / 43560 = 7.71$  acres

Number of existing cross culverts = 5 culverts

Number of outfalls = 5

The SUBCONSULTANT shall provide the following services as described:

SURVEYING

General – Survey will follow City of O'Fallon and St. Charles County requirements in addition to the specifications listed below.

- 1.0 Task Management
  - 1.1 Coordinate work with the staff and Prime
  - 1.2 Review existing information provided
  - 1.3 Perform Quality Control on the deliverables.
- 2.0 Control and Accuracy
  - 2.1 Horizontal Control - SUBCONSULTANT shall reference the survey to the Missouri State Plane Coordinate System, NAD83(adjustment). A minimum of four (4) horizontal control points will be established within the survey limits, in locations that will be preserved for future surveys or construction, and identified/described.
  - 2.2 Vertical Control – SUBCONSULTANT shall reference the survey to NAVD88/NGVD29/local benchmarks and provide a minimum of three (3) benchmarks within the survey limits, in locations that will be preserved for future surveys or construction, and identified/described including benchmark description, elevation, and datum.
  - 2.3 Survey of visible improvements shall be accurate horizontally to +/- 0.1 foot, and vertically to +/- 0.03 foot. Contours shown in delivered CAD files (ORD 2023), based on surveyed ground shots, shall be accurate to +/- 0.5 foot.
- 3.0 Boundary / Right of Way / Land Acquisition Survey
  - 3.1 Right of Way Survey – SUBCONSULTANT shall perform a land boundary survey of the existing right of way within the project limits and/or shown on the attached exhibit.
    - 3.1.1 Survey will show existing right of way and easement lines and areas where right of way has not been recorded, dedicated or conveyed a note shall be added.

- 3.1.2 Where documented right of way does not exist, survey shall include visible occupation or use as roadway.
  - 3.2 Land Acquisition Survey – SUBCONSULTANT shall prepare plats and legal descriptions for proposed, permanent right of way and/or easements; and shall prepare plats for any temporary construction easements according to the CLIENT's standards and specifications. Assume 5 (five) parcels with permanent right-of-way/easements and temporary construction easements. Assume twenty-two (22) parcels with temporary construction easements.
  - 3.3 Title Work – SUBCONSULTANT will be responsible for obtaining Title Reports for all parcels requiring permanent right-of-way and/or easements. Assume five (5) title reports.
- 4.0 Topographic Survey
- 4.1 Surface features and visible improvements within the survey limits shall be shown and identified on the kmz map. The general topographic survey limits shall be from south/east of Progress West Lane to north of Misty Meadow Lane, approximately 4,900 linear feet. The survey width shall generally be 120 feet, or about 60' left and right of the existing roadway centerline. Topographic survey should extend to pick up the parking lot curb line parallel to Hoff Road, as appropriate.
    - 4.1.1 Ground elevations at an approximate 50 foot grid for sites and 50 foot cross sections for roadways, with intermediate elevations surveyed as necessary to show grade breaks or changes in terrain, including top and toe of berms, ditches, creeks, swales, etc. Spot elevations at low and high points and intermediate points to create an accurate TIN.
    - 4.1.2 Survey will extend as shown on the attached exhibit. SUBCONSULTANT shall confirm the distance the survey should extend beyond the parcel boundary with the local municipality, but not less than stated above.
    - 4.1.3 Survey to include ditches, swales, streams, ponds, lakes, etc. Show top of water elevation to the closest 0.1 foot. Determine, during contract phase, if stream, pond, or lake bottom survey is required.
    - 4.1.4 Survey shall include centerline, edge of pavement, back of curb, gutter, concrete, medians, sidewalks, pathways, signs of access to the survey limits, driveways(material and cross section), fences, fence type, landscape edges, retaining walls(survey taken at low ground in front of and high ground in back of retaining wall), medians, wells, irrigation systems, or other surface features/visible improvements within the survey limits.
    - 4.1.5 Tree Survey – Survey shall include outline of thickly wooded areas and trees six (6) inches in diameter and greater, as measured at approximately four (4) feet above the ground. Tree type (coniferous or deciduous) should be noted.
      - 4.1.5.1 Outline of thickly wooded area only if approved by COMPANY prior to the survey.
      - 4.1.5.2 Determine if tree survey by licensed arborist is required. Tagging of trees with paint, nails or wire should be discouraged as it is perceived as damaging the tree.
    - 4.1.6 Photos of general site and specific areas to assist with evaluation of existing site conditions.
- 5.0 Utility Survey
- 5.1 Existing utilities located within the survey limits, based upon utility maps/atlasses gathered at municipalities or agencies.



- 5.1.1.1 Request One Call, to acquire utility maps to supplement field survey of visible markings.
- 5.2 Survey of existing visible utilities, and markers.
  - 5.2.1 Sanitary Sewer
    - 5.2.1.1 Survey visible manhole and structure rim elevation.
    - 5.2.1.2 Show manhole diameter, manhole depth, pipe depth, pipe diameter, pipe material and pipe direction as observed at manholes.
    - 5.2.1.3 Survey nearest upstream and downstream structures outside the survey limits
    - 5.2.1.4 Survey evidence of septic tanks or other sanitary sewer systems.
    - 5.2.1.5 Survey visible cleanouts.
    - 5.2.1.6 Take photo of open manhole showing pipes with additional light if needed. Photo should be taken facing north for each structure.
  - 5.2.2 Storm Sewer
    - 5.2.2.1 Survey visible manholes, catch basins, inlets, outlets, flared end sections, drywells, culvert elevations.
    - 5.2.2.2 Show manhole diameter, pipe depth, pipe diameter, pipe material and pipe direction as observed at manholes and outlets
    - 5.2.2.3 Survey nearest upstream and downstream structures outside the survey limits
  - 5.2.3 Watermain
    - 5.2.3.1 Survey visible manholes, valve vaults, valve boxes, buffalo boxes, services, fire hydrants. In urban areas, if a fire hydrant is not within the survey limits, note the distance and direction to the closest fire hydrant.
    - 5.2.3.2 Show pipe depth, diameter, material and direction as observed at manholes and outlets
  - 5.2.4 Natural Gas, Power, Telephone, Cable, Fiber Optic
    - 5.2.4.1 Survey visible evidence from signs, markers, flags, manholes, utility poles (note if street light or other appurtenances exist, such as cameras), transformers, guy wires/anchors, etc.
- 6.0 CAD Standards
  - 6.1 Roadway surveys will be performed according to MoDOT CAD standards using Bentley Open Roads Designer (ORD)
    - 6.1.1 Survey will be performed using MoDOT pcodes and linking codes.
  - 6.2 Note describing date field work was completed.
  - 6.3 Note describing horizontal and vertical datum and source control stations/benchmarks.
- 7.0 Deliverables
  - 7.1 A 2D planimetric drawing with external references included and relative pathed.
    - 7.1.1 Bentley ORD
  - 7.2 A 3D contour filed (at 1 foot intervals)
  - 7.3 A 3D triangular irregular network (TIN) of the topographic survey.
  - 7.4 Most current aerial photo available, geospatial reference to topographic survey. Discuss additional cost if any.
  - 7.5 Include a legend showing symbols used in the drawing.
  - 7.6 Drawing will include text describing detail for each subsurface utility structure, including invert elevations, flow directions, pipe sizes, etc. as defined in 5.0 above.



- 7.7 Show spot elevations (elevation shown as text) when necessary to depict high and low points and other areas of where the terrain is flat.
- 7.8 PDF copies of field book pages
- 7.9 Photos as requested.
- 7.10 PDF copies of utility notes including manhole/pipe invert sketches.
- 7.11 ASCII files of surveyed points in P, N, E, Z, D (comma delimited) format.
- 7.12 PDF copy of plats prepared per requests in 3.0 and 4.0 above.
  - 7.12.1 Paper copies of plats if required by the CLIENT.
- 7.13 PDF copies of all title work and recorded deeds.

## DRAINAGE

Drainage Criteria – Drainage design will be in accordance with City of O’Fallon Development Standards Section 405.230, and the Metropolitan St. Louis Sewer District (MSD) Rules and Regulations and Engineering Design Requirements for Sanitary Sewer and Stormwater Drainage Facilities, latest revision as of the date of contract.

See attached Drainage Limits map.

Drainage improvements shall generally consist of installation of open ditches to accommodate storm water conveyance and detention. Existing Cross Road culverts will be evaluated for replacement. Scope of work is expected to include:

- 1.0 Preliminary Drainage Evaluation
  - 1.1 Existing Conditions Study.
    - 1.1.1 Mapping of existing (Pre) Condition drainage features. Delineate drainage basins, land use, and slopes.
    - 1.1.2 Identification of existing drainage problems. Phone calls and/or emails with local agencies.
    - 1.1.3 Evaluation of existing (Pre) drainage conditions and outfall flows. Calculate outfall flows & velocities.
  - 1.2 Proposed Conditions Study
    - 1.2.1 Outlet Evaluation of Proposed (Post) Condition. Delineate Post condition drainage basins. Calculate outlet flows and velocities.
    - 1.2.2 Determination of Detention requirements.
    - 1.2.3 Preliminary sizing of proposed ditches.
- 2.0 Drainage Design
  - 2.1 Review terrain model of proposed ditches for conveyance and detention requirements. Terrain model prepared by others.
  - 2.2 Recommend adjustments to terrain model as required. This work includes two review iterations of the terrain model.
  - 2.3 Cross Road Culvert Analysis – 5 locations. Design replacement cross-road culverts.

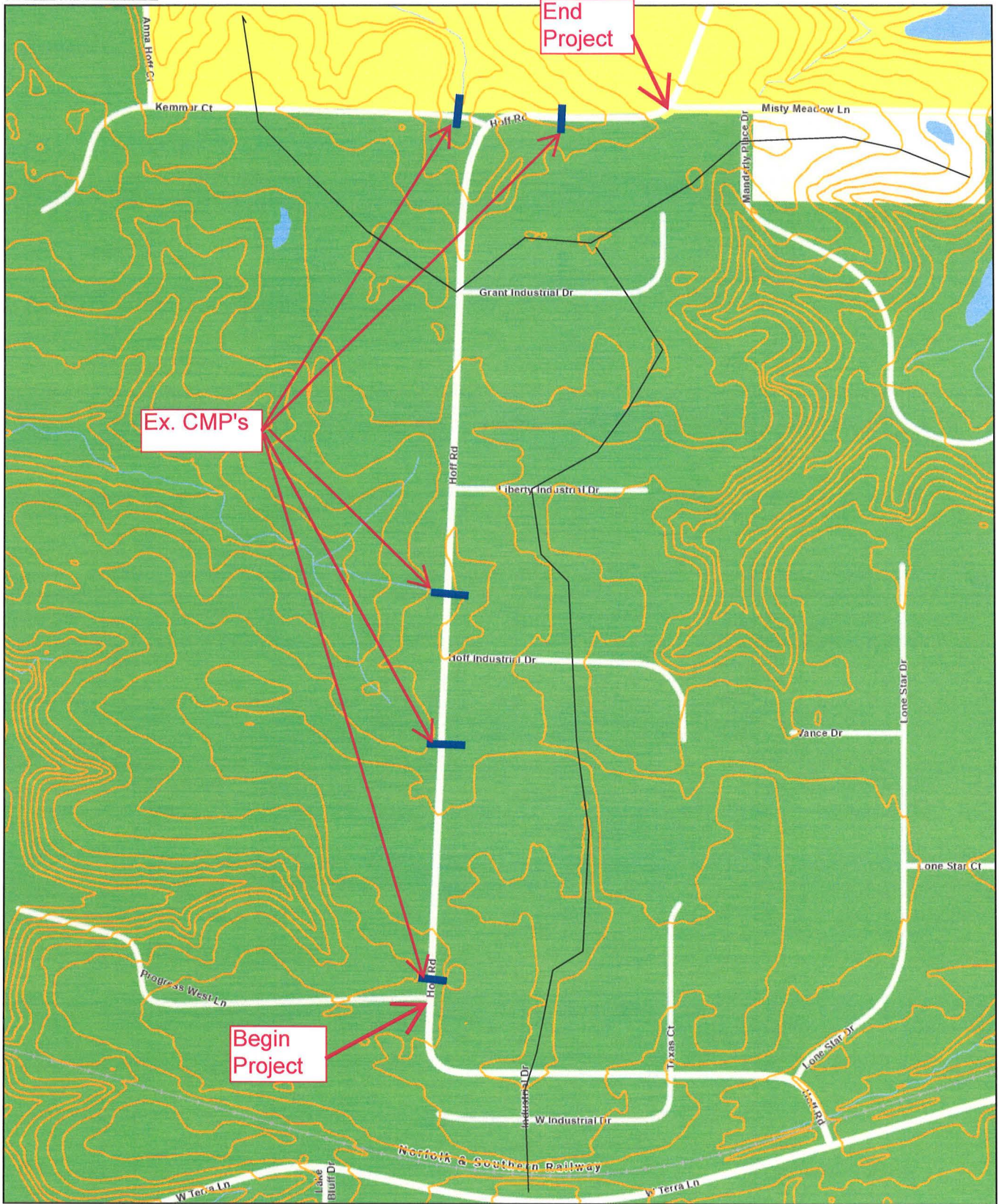
## 3.0 Deliverables

- 3.1 Preliminary Ditch sizing
  - 3.2 Ditch modification recommendations. Two iterations.
  - 3.3 Summary of Drainage Quantities
- 4.0 Assumptions
- 4.1 Detention will be accommodated in roadside ditches with control structures.
  - 4.2 Standard drainage materials will be used and no drainage special provisions will be required.

End of Attachment A



# St. Charles County Public Web Map

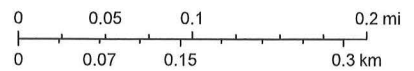


1/31/2024, 2:02:10 PM

— 10 ft elevation contours (scale 1:9600)

**PRELIM. DRAINAGE MAP**  
**HOFF RD. O'FALLON, MO**

1:4,514



St. Charles County Government GIS Services, St. Charles County Government GIS Services





**Via email: [dshane@hrgreen.com](mailto:dshane@hrgreen.com)**

February 1, 2024

Mr. Dan Shane, P.E., PTOE  
HR Green, Incorporated  
520 Maryville Centre Drive, Suite 100  
St. Louis, Missouri 63141

Re: Proposal for Geotechnical Exploration  
Hoff Road Phase 2  
O'Fallon, Missouri  
UES Proposal No. P045223.01

Dear Mr. Shane:

In response to your request, Geotechnology, LLC, dba UES, is pleased to submit this proposal to perform a geotechnical exploration for the referenced project. We have prepared this proposal based on our review of the emailed geotechnical scope of work dated January 29, 2024, a review of our archival geotechnical data, and our experience.

### **1.0 PROJECT INFORMATION**

The project consists of the design and construction of improvements to Hoff Road in O'Fallon, Missouri. The project extends from Misty Meadow Lane, west and south along Hoff Road for approximately 4,600 feet to the intersection with Progress West Lane. The proposed improvements consist of mill and overlay resurfacing along sections that will remain at the existing grades generally between Progress West Lane and Kemmar Court. Alignment changes could be required at the curve near Kemmar Court. Cuts and fills are understood to be on the order of 5 feet or less. Retaining walls are not planned for these improvements. The current Hoff Road alignment is a two-lane asphaltic concrete road with drainage swales on both sides of the roadway for most of the design alignment.

### **2.0 SCOPE OF SERVICES**

The purpose of our services is to explore the subsurface conditions and provide geotechnical recommendations for the design and construction of the project. UES proposes the following scope of services for the geotechnical exploration:

- Eight borings will be drilled within the project limits identified in the emailed scope of work. Five borings will be drilled to an approximate depth of 10 feet or terminated at auger refusal, whichever is shallower. Three borings near the curve section will be terminated at an approximate depth of 15 feet. A maximum of 95 lineal feet of auger drilling is included.



- Soil samples will be collected at 2.5-foot centers in the upper 10 feet and 5-foot centers thereafter. Soil samples will be collected using standard penetration test (SPT) and Shelby tube sampling methods.
- Upon completion of the drilling activities, the borings will be backfilled with cuttings. In the existing pavement areas, the surface will be cold patched. Drill rig access to boring locations in unpaved areas could leave wheel marks in the grass or soil. Our scope does not include restoration of wheel ruts or other disturbance caused by the drill rig.
- TraMar Contracting will perform temporary traffic control by closing one lane of Hoff Road and flagging around our drill crew as a subcontractor to UES.
- Public utilities will be notified via the Missouri One-Call system. We request private utilities be marked by others. UES will not be liable to damage to private utilities not marked or improperly marked by others.
- The borings will be located in the field by referencing site features.
- An engineer or geologist from UES will accompany the drill rig and provide direction during the exploration, prepare logs of the material encountered, and transport samples to our laboratory for testing.
- Laboratory tests will be performed on selected soil samples to assess engineering and index properties. Laboratory tests are expected to include natural moisture content, Atterberg limits, dry unit weights, standard proctor, California bearing ratio (CBR), and unconsolidated-undrained triaxial compression tests.
- UES will perform pavement analysis services for providing pavement section thicknesses. Analysis will be based on anticipated traffic loading information from the client, laboratory test results, and AASHTO 1993 pavement design using WinPAS computer software.
- UES will summarize the results of the subsurface exploration in a report. The report will include the following:
  - A description of the subsurface conditions at the boring locations
  - Considerations for site excavation and placement of fill, including an evaluation of the suitability for reuse of the on-site soils
  - Pavement subgrade considerations and pavement thicknesses

Our scope of services does not include any environmental assessment, investigation, or study for the presence or absence of wetlands or hazardous or toxic materials in the soil, bedrock, surface water, groundwater, or air, on or below or around the site.

UES owns and operates drilling equipment, which reduces the client's risk by eliminating subcontract work. Our drilling staff are trained and focused on obtaining quality samples in a safe manner. Please consider this, and our use of an on-site geologist or engineer mentioned above, when comparing our proposal to firms that rely on subcontracted drilling services.

A copy of "Important Information about This Geotechnical Engineering Proposal" that is published by the Geoprofessional Business Association (GBA) is enclosed for your review.



### **3.0 SCHEDULE AND FEE**

Coordination of boring locations and utility notification as required by law will take two days to complete. Drilling will take an additional two days, weather permitting, and laboratory testing will be completed approximately two to three weeks after completion of field work. Our report will be submitted within three to four weeks following completion of the fieldwork. Our findings and recommendations can be provided throughout the course of the project as test results and analyses are completed.

The fee for our geotechnical exploration services will be on a cost-plus fixed fee basis in accordance with the attached estimate. The estimate includes 2 days of drill rig and crew, up to 95 feet of drilling and sampling, temporary traffic control, professional logging, laboratory testing, preparing boring logs, engineering analyses, and preparing a report.

This proposal and fee estimate have been prepared using UES's standard fee schedule and with the assumption that UES's Terms will be used as the contract mechanism. UES reserves the right to revise this proposal and increase our fee estimate, at any time, if our Terms are not used or if any flow down and/or contract provisions are required by Client or Owner to conform with any local, state or federal wage act requirements, including but not limited to the Davis-Bacon Act, as Amended, the McNamara-O'Hara Service Contract Act, etc., the required use of union labor, or for any required safety, security, vehicle, drug and alcohol testing, or any third party payment fees, or other requirements not specified in the Client's request for proposal or not defined in UES's scope of services.



**ATTACHMENT B**  
**ESTIMATE OF COST**

**ATTACHMENT B  
ESTIMATE OF COSTS**

SPONSOR: City of O'Fallon, Missouri  
 LOCATION: Hoff Road, Progress Lane to Misty Meadow Lane  
 PROJECT: Hoff Road, Phase 2, STBG-7302(702)

<u>Project Management</u>	<u>Rate</u>	<u>Hours</u>	<u>Cost</u>
Principal	\$80.00	0	\$0.00
Senior Professional (PM)	\$76.00	22	\$1,672.00
Professional	\$51.00	10	\$510.00
Junior Professional	\$37.00	0	\$0.00
Junior Professional	\$30.00	0	\$0.00
Technician	\$35.00	0	\$0.00
Administrative Assistant	\$27.00	10	\$270.00
 <u>Conceptual Layout Phase</u>			
Associate	\$80.00	0	\$0.00
Senior Professional (PM)	\$76.00	6	\$456.00
Professional	\$51.00	32	\$1,632.00
Junior Professional	\$37.00	12	\$444.00
Junior Professional	\$30.00	0	\$0.00
Technician	\$35.00	0	\$0.00
Administrative Assistant	\$27.00	1	\$27.00
 <u>Preliminary Design Phase</u>			
Associate	\$80.00	0	\$0.00
Senior Professional (PM)	\$76.00	34	\$2,584.00
Professional	\$51.00	172	\$8,772.00
Junior Professional	\$37.00	326	\$12,062.00
Junior Professional	\$30.00	32	\$960.00
Technician	\$35.00	40	\$1,400.00
Administrative Assistant	\$27.00	0	\$0.00
 <u>Right-of-Way Design Phase</u>			
Associate	\$80.00	0	\$0.00
Senior Professional (PM)	\$76.00	10	\$760.00
Professional	\$51.00	31	\$1,581.00
Junior Professional	\$37.00	73	\$2,701.00
Junior Professional	\$30.00	0	\$0.00
Technician	\$35.00	0	\$0.00
Administrative Assistant	\$27.00	0	\$0.00
 <u>Final PSE Development</u>			
Associate	\$80.00	0	\$0.00
Senior Professional (PM)	\$76.00	20	\$1,520.00
Professional	\$51.00	108	\$5,508.00
Junior Professional	\$37.00	306	\$11,322.00
Junior Professional	\$30.00	0	\$0.00
Technician	\$35.00	18	\$630.00
Administrative Assistant	\$27.00	0	\$0.00
 <u>Bidding Period Services</u>			
Associate	\$80.00	0	\$0.00
Senior Professional (PM)	\$76.00	2	\$152.00
Professional	\$51.00	2	\$102.00
Junior Professional	\$37.00	0	\$0.00
Junior Professional	\$30.00	0	\$0.00
Technician	\$35.00	0	\$0.00
Administrative Assistant	\$27.00	0	\$0.00
<b>HR Green LABOR SUBTOTAL</b>			<b>1267 hrs \$55,065.00</b>
<i>Payroll Overhead</i>	49.340%		\$27,169.07
<i>General &amp; Administrative Overhead</i>	131.760%		\$72,553.64
			\$154,787.72
<i>HR Green Fixed Fee</i>	(14.0% x Total Labor & Overhead)		\$21,670.28
<b>HR Green TOTAL LABOR, OVERHEAD, &amp; FIXED FEE</b>			<b>\$176,458.00</b>
 <b>Other Direct Cos</b>			
Subcontractor:	Topographic Survey (Quigg Engineering - DBE)	\$	55,152.95
	Drainage Analysis/Design (Quigg Engineering - DBE)	\$	26,061.74
	Geotechnical Services (Geotechnology)	\$	19,245.86
	ROW/TCE Property Descriptions/Exhibits (Quigg Engineering - DBE)	\$	21,795.09
	Mileage (at \$0.625/mile) 450 miles	\$	281.25
	Printing, Postage, and Copies 1,000.00	\$	1,000.00
<b>DIRECT COST AND SUBCONSULTANT SUBTOTAL</b>			<b>\$ 123,536.89</b>
<b>TOTAL</b>			<b>\$299,994.89</b>

**Attachment B - Cost Summary for City of O'Fallon - HR Green - Hoff Road Widening**

Task	Principal	Engineer 6	Engineer 5	Engineer 3	Survey 5	Survey 4	Survey 3	Survey 2	Survey 1	Accounting	Total
LABOR RATE:											
	\$86.00	\$84.70	\$72.34	\$46.99	\$65.00	\$48.92	\$44.00	\$33.10	\$22.33	\$35.00	
<b>SURVEY</b>											
<b>Task 1 - Task Management</b>					2	2	32	4			40
Coordination (Office)							14				14
Review Existing Documents (Office)							8	4			12
QAQC					2	2	10				14
<b>Task 2 - Control</b>							8	32	28		68
Horizontal Control (Field)							2	10	10		22
Vertical Control (Field)							2	12	12		26
Travel (2 hour round trip)							2	6	6		14
Control Report (Office)							2	4			6
<b>Task 3 - Boundary &amp; Right of Way</b>					6	2	86	224	60		378
Right of Way Survey (Field)							2	14	14		30
Boundary Survey (Field)							2	14	14		30
Courthouse Research (Field)							2	4	4		10
Travel (2 hour round trip)							2	8	8		18
Title Reports & Courthouse Document Review (Office)					2		14				16
Right of Way & Boundary Calculations/Analysis (Office)					2	2	36				40
Prepare Parcel Plat & Legal Desc. for ROW Takes-Assumed 5 (Office)							12	52			64
Prepare Esmt. Plats for Easements-Assumed 22 (Office)					2		16	132	20		170
<b>Task 4 - Topo</b>							31	98	62		191
Topo (Field)							4	48	48		100
Topo Field Check (Field)							8				8
Travel (2 hour round trip)							3	10	10		23
Field Notes & Photo Log (Office)								8	4		12
Topo (Office)							16	32			48
<b>Task 5 - Utility Survey</b>							16	63	45		124
Utility Requests to "One Call" (Office)							4	2			6
"One Call" Utility Locate Request - Field Coordination (Field)								1	1		2
Utility Survey (Field)								32	32		64
Travel (2 hour round trip)								8	8		16
Drainage/Structure Notes (Office)							12	12			24
Drainage/Structure Sheets (Office)								8	4		12
<b>Labor Hours Subtotal</b>	0	0	0	0	8	4	173	421	195	0	801
<b>Labor Cost Summary</b>	\$0.00	\$0.00	\$0.00	\$0.00	\$520.00	\$195.68	\$7,612.00	\$13,935.10	\$4,354.35	\$0.00	\$26,617.13
<b>Direct Costs</b>											\$3,505.50



**Attachment B - Cost Summary for City of O'Fallon - HR Green - Hoff Road Widening**

Task	Principal	Engineer 6	Engineer 5	Engineer 3	Survey 5	Survey 4	Survey 3	Survey 2	Survey 1	Accounting	Total
<b>DRAINAGE</b>											
<b>Task 1 - Task Management</b>			12								12
Coordination (Office)			6								6
QAQC			6								6
<b>Task 2 - Preliminary Drainage Evaluation</b>			17	53							78
Pre and Post Drainage Maps with Basins			2	6							16
Identification of existing drainage problems			4								4
Evaluation of existing outfalls (5 culverts)			2	18							20
Runoff based on Proposed Condition			1	9							10
Prelim Ditch Sizing to accomodate Detention			4	16							20
Site Visit			4	4							8
<b>Task 3 - Drainage Design</b>			11	41							52
Two Reviews of Terrain Model for conveyance and detention			4	16							20
Cross Road Culvert Analysis and Outlet Design (5 culverts)			3	17							20
Assemble Calculation Package			4	8							12
<b>Labor Hours Subtotal</b>	0	0	40	94	0	0	0	0	0	0	142
<b>Labor Cost Summary</b>	\$0.00	\$0.00	\$2,893.60	\$4,417.06	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$7,671.70
<b>Direct Costs</b>											\$100.50
<b>PROJECT MANAGEMENT</b>											
<b>Task 1 - Project Management</b>	2	16								6	
Project set up & Project Managemnt Plan Development		4									4
External & Internal coordination and project review	2	6									8
Invoice preparation and review		6								6	12
<b>Labor Hours Subtotal</b>	2	16	0	0	0	0	0	0	0	6	24
<b>Labor Cost Summary</b>	\$172.00	\$1,355.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$210.00	\$1,737.20
<b>Direct Costs</b>											\$0.00
<b>Total Labor Hours</b>	2	16	40	94	8	4	173	421	195	6	967
<b>Total Raw Labor Costs</b>	\$172.00	\$1,355.20	\$2,893.60	\$4,417.06	\$520.00	\$195.68	\$7,612.00	\$13,935.10	\$4,354.35	\$210.00	\$36,026.03

Overhead	1.4098	\$ 50,789.50
Subtotal 1		\$ 86,815.53
Profit	14.5%	\$ 12,588.25
Subtotal 2		\$ 99,403.78
Direct Costs		\$ 3,606.00
<b>Total</b>		<b>\$ 103,009.78</b>

**Attachment B - Cost Summary for City of O'Fallon - HR Green - Hoff Road Widening**

**SURVEY**

Direct Costs	Number	Rate	Total
Title Reports	5	\$ 450.00	\$ 2,250.00
Vehicle Mileage	1650	\$ 0.670	\$ 1,105.50
Courthouse Fees	1	\$ 150.00	\$ 150.00

Total: \$ 3,505.50

**DRAINAGE**

Direct Costs	Number	Rate	Total
Vehicle Mileage	150	\$ 0.670	\$ 100.50

Total: \$ 100.50

**Per diems**

Field Crew Number	No. Trips	Total Per Diems
N/A	N/A	N/A

**Mileage**

Est. Miles per Trip	No. Trips	Total Miles
75	22	1,650

Assumptions: 1 vehicle x 22 days

**Per diems**

Field Crew Number	No. Trips	Total Per Diems
N/A	N/A	N/A

**Mileage**

Est. Miles per Trip	No. Trips	Total Miles
75	2	150

Assumptions: 1 vehicle x 2 trips



**GEOTECHNICAL EXPLORATION SUMMARY  
HOFF ROAD IMPROVEMENTS - PHASE 2  
O'FALLON, MISSOURI**

DRILLING				LABORATORY TESTING													
Distance Between Borings	Boring No.	Boring Depth (feet)	Soil Drilling (feet)	MC	AL	UU	CU	UC	Consol	Sieve	Std Proctor	CBR	Corr	Boring Log (per page)	Pave Photo	Rock Qu	Rock Photo (per box)
600 ft.	1	10	10	4										1			
600 ft.	2	15	15	5	1			1						1			
600 ft.	3	15	15	5										1			
600 ft.	4	15	15	5	1			1						1			
600 ft.	5	10	10	4							1	1		1			
600 ft.	6	10	10	4	1			1						1			
600 ft.	7	10	10	4										1			
600 ft.	8	10	10	4	1			1						1			
TOTALS			95	35	4	0	0	4	0	0	1	1	0	8	0	0	0





February 1, 2024  
P040728.02

**GEOTECHNICAL EXPLORATION FEE ESTIMATE  
HOFF ROAD IMPROVEMENTS - PHASE 2  
O'FALLON, MISSOURI**

<u>FEE:</u>	<u>ITEM</u>	<u>UNIT</u>	<u>QUANTITY</u>	<u>COST</u>	<u>EXTENSION</u>	<u>TOTAL</u>
<b><u>I. Drilling Services</u></b>						
	Premobilization Site Visit Mileage	Miles	120	\$0.66	\$78.60	
	Mobilization	Each	1	\$1,000.00	\$1,000.00	
	Drill Rig and 2-Man Crew	Day	2	\$2,500.00	\$5,000.00	
	Support Vehicles - Water	Day	2	\$105.00	\$210.00	
	Support Vehicles - Field Engineer/Logger	Day	2	\$85.00	\$170.00	
	Daily Drill Rig Fuel Surcharge	Day	2	\$55.00	\$110.00	
	Borehole Patch Pavement	Each	8	\$40.40	\$323.20	
	Shelby Tubes	Each	4	\$71.00	\$284.00	
					<b>Subtotal:</b>	<b>\$7,175.80</b>
<b><u>II. Direct Costs - Traffic Control</u></b>						
	<b>TraMar Contracting, Inc.</b>					
	Traffic Control	Allowance	1	\$4,300.00	\$4,300.00	
					<b>Subtotal:</b>	<b>\$4,300.00</b>
<b><u>III. Laboratory Testing</u></b>						
	Water Content (Soil)	Each	35	\$7.00	\$245.00	
	Standard Proctor	Each	1	\$280.00	\$280.00	
	Atterberg Limit	Each	4	\$66.00	\$264.00	
	Extrusion of Shelby Tube	Each	0	\$20.00	\$0.00	
	CBR	Each	1	\$225.00	\$225.00	
	Unconfined Compression (soil)	Each	4	\$88.00	\$352.00	
	Boring Log (40 feet per sheet)	Sheet	8	\$35.00	\$280.00	
	Pavement Core Photos	Each	0	\$25.00	\$0.00	
					<b>Subtotal:</b>	<b>\$1,646.00</b>
<b>Labor:</b>						
<b><u>I. Premobilization/Drilling Activities</u></b>						
	Permit Application, Site Recon, Utility Notifications, Coordination & Access	Hour	8	\$35.00	\$280.00	
<b><u>II. Engineering, Analyses &amp; Report</u></b>						
	Principal	Hour	1	\$65.00	\$65.00	
	Drilling Manager	Hour	2	\$55.00	\$110.00	
	Project Manager	Hour	4	\$55.00	\$220.00	
	Project Engineer	Hour	14	\$45.00	\$630.00	
	Engineer/Staff Geologist (log)	Hour	16	\$35.00	\$560.00	
	CADD Specialist	Hour	4	\$30.00	\$120.00	
	Wordprocessor	Hour	2	\$25.00	\$50.00	
					<b>Subtotal</b>	<b>\$2,035.00</b>
					<b>Company Labor (161.91%)</b>	<b>\$3,294.87</b>
					<b>Facilities Capital Costs (0.23%)</b>	<b>\$4.68</b>
					<b>Labor Cost</b>	<b>\$5,334.55</b>
					<b>Fixed Fee (14.8%)</b>	<b>\$789.51</b>
					<b>Total labor</b>	<b>\$6,124.06</b>
					<b>TOTAL SUM</b>	<b>\$19,245.86</b>

## ATTACHMENT C

### CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS - PRIMARY COVERED TRANSACTIONS

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#### INSTRUCTIONS FOR CERTIFICATION

1. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.
2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such person from participation in this transaction.
3. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.
4. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if at any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," "proposal" and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of those regulations.
6. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.
7. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-- Lower Tier Covered Transaction" provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
8. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the

method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to check the Nonprocurement List at the Excluded Parties List System.  
<https://www.epls.gov/epls/search.do?page=A&status=current&agency=69#A>.

9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
10. Except for transactions authorized under paragraph 6 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

**Certification Regarding Debarment, Suspension, and Other Responsibility Matters -Primary Covered Transactions**

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
  - a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
  - b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
  - c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
  - d. Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.



## ATTACHMENT D

### CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION--LOWER TIER COVERED TRANSACTIONS

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#### INSTRUCTIONS FOR CERTIFICATION

1. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.
2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.
3. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
4. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.
5. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
6. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List at the Excluded Parties List System.  
<https://www.epls.gov/eplsearch.do?page=A&status=current&agency=69#A>.
8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which normally possessed by a prudent person in the ordinary course of business dealings.
9. Except for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended,

debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions**

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

**Attachment E**  
**Disadvantage Business Enterprise Contract Provisions**

1. Policy: It is the policy of the U.S. Department of Transportation and the Local Agency that businesses owned by socially and economically disadvantaged individuals (DBE's) as defined in 49 C.F.R. Part 26 have the maximum opportunity to participate in the performance of contracts financed in whole or in part with federal funds. Thus, the requirements of 49 C.F.R. Part 26 and Section 1101(b) of the Transportation Equity Act for the 21st Century (TEA-21) apply to this Agreement.

2. Obligation of the Engineer to DBE's: The Engineer agrees to assure that DBEs have the maximum opportunity to participate in the performance of this Agreement and any subconsultant agreement financed in whole or in part with federal funds. In this regard the Engineer shall take all necessary and reasonable steps to assure that DBEs have the maximum opportunity to compete for and perform services. The Engineer shall not discriminate on the basis of race, color, religion, creed, disability, sex, age, or national origin in the performance of this Agreement or in the award of any subsequent subconsultant agreement.

3. Geographic Area for Solicitation of DBEs: The Engineer shall seek DBEs in the same geographic area in which the solicitation for other subconsultants is made. If the Engineer cannot meet the DBE goal using DBEs from that geographic area, the Engineer shall, as a part of the effort to meet the goal, expand the search to a reasonably wider geographic area.

4. Determination of Participation Toward Meeting the DBE Goal: DBE participation shall be counted toward meeting the goal as follows:

A. Once a firm is determined to be a certified DBE, the total dollar value of the subconsultant agreement awarded to that DBE is counted toward the DBE goal set forth above.

B. The Engineer may count toward the DBE goal a portion of the total dollar value of a subconsultant agreement with a joint venture eligible under the DBE standards, equal to the percentage of the ownership and control of the DBE partner in the joint venture.

C. The Engineer may count toward the DBE goal expenditures to DBEs who perform a commercially useful function in the completion of services required in this Agreement. A DBE is considered to perform a commercially useful function when the DBE is responsible for the execution of a distinct element of the services specified in the Agreement and the carrying out of those responsibilities by actually performing, managing and supervising the services involved and providing the desired product.

D. A Engineer may count toward the DBE goal its expenditures to DBE firms consisting of fees or commissions charged for providing a bona fide service, such as professional, technical, consultant, or managerial services and assistance in the procurement of essential personnel, facilities, equipment, materials or supplies required for the performance of this Agreement, provided that the fee or commission is determined by MoDOT's External Civil Rights Division to be reasonable and not excessive as compared with fees customarily allowed for similar services.

E. The Engineer is encouraged to use the services of banks owned and controlled by socially and economically disadvantaged individuals.

5. Replacement of DBE Subconsultants: The Engineer shall make good faith efforts to replace a DBE Subconsultant, who is unable to perform satisfactorily, with another DBE Subconsultant. Replacement firms must be approved by MoDOT's External Civil Rights Division.



6. Verification of DBE Participation: Prior to final payment by the Local Agency, the Engineer shall file a list with the Local Agency showing the DBEs used and the services performed. The list shall show the actual dollar amount paid to each DBE that is applicable to the percentage participation established in this Agreement. Failure on the part of the Engineer to achieve the DBE participation specified in this Agreement may result in sanctions being imposed on the Commission for noncompliance with 49 C.F.R. Part 26 and/or Section 1101(b) of TEA-21. If the total DBE participation is less than the goal amount stated by the MoDOT's External Civil Rights Division, liquidated damages may be assessed to the Engineer.

Therefore, in order to liquidate such damages, the monetary difference between the amount of the DBE goal dollar amount and the amount actually paid to the DBEs for performing a commercially useful function will be deducted from the Engineer's payments as liquidated damages. If this Agreement is awarded with less than the goal amount stated above by MoDOT's External Civil Rights Division, that lesser amount shall become the goal amount and shall be used to determine liquidated damages. No such deduction will be made when, for reasons beyond the control of the Engineer, the DBE goal amount is not met.

7. Documentation of Good Faith Efforts to Meet the DBE Goal: The Agreement goal is established by MoDOT's External Civil Rights Division. The Engineer must document the good faith efforts it made to achieve that DBE goal, if the agreed percentage specified is less than the percentage stated. The Good Faith Efforts documentation shall illustrate reasonable efforts to obtain DBE Participation. Good faith efforts to meet this DBE goal amount may include such items as, but are not limited to, the following:

- A. Attended a meeting scheduled by the Department to inform DBEs of contracting or consulting opportunities.
- B. Advertised in general circulation trade association and socially and economically disadvantaged business directed media concerning DBE subcontracting opportunities.
- C. Provided written notices to a reasonable number of specific DBEs that their interest in a subconsultant agreement is solicited in sufficient time to allow the DBEs to participate effectively.
- D. Followed up on initial solicitations of interest by contacting DBEs to determine with certainty whether the DBEs were interested in subconsulting work for this Agreement.
- E. Selected portions of the services to be performed by DBEs in order to increase the likelihood of meeting the DBE goal (including, where appropriate, breaking down subconsultant agreements into economically feasible units to facilitate DBE participation).
- F. Provided interested DBEs with adequate information about plans, specifications and requirements of this Agreement.
- G. Negotiated in good faith with interested DBEs, and not rejecting DBEs as unqualified without sound reasons, based on a thorough investigation of their capabilities.
- H. Made efforts to assist interested DBEs in obtaining any bonding, lines of credit or insurance required by the Commission or by the Engineer.
- I. Made effective use of the services of available disadvantaged business organizations, minority contractors' groups, disadvantaged business assistance offices, and other organizations that provide assistance in the recruitment and placement of DBE firms.

8. Good Faith Efforts to Obtain DBE Participation: If the Engineer's agreed DBE goal amount as specified is less than the established DBE goal given, then the Engineer certifies that good faith efforts were taken by Engineer in an attempt to obtain the level of DBE participation set by MoDOT's External Civil Rights.

**Attachment F – Fig. 136.4.15**  
**Conflict of Interest Disclosure Form for LPA/Consultants**  
Local Federal-aid Transportation Projects

**Firm Name (Consultant):** HR Green, Inc.

**Project Owner (LPA):** City of O'Fallon

**Project Name:** Hoff Road Phase 2

**Project Number:** STBG-7302 (702)

As the LPA and/or consultant for the above local federal-aid transportation project, I have:

1. Reviewed the conflict of interest information found in Missouri's Local Public Agency Manual (EPG 136.4)
2. Reviewed the Conflict of Interest laws, including 23 CFR § 1.33, 49 CFR 18.36.

And, to the best of my knowledge, determined that, for myself, any owner, partner or employee, with my firm or any of my sub-consulting firms providing services for this project, including family members and personal interests of the above persons, there are:

No real or potential conflicts of interest  
If no conflicts have been identified, complete and sign this form and submit to LPA

Real conflicts of interest or the potential for conflicts of interest  
If a real or potential conflict has been identified, describe on an attached sheet the nature of the conflict, and provide a detailed description of Consultant's proposed mitigation measures (if possible). Complete and sign this form and send it, along with all attachments, to the appropriate MoDOT District Representative, along with the executed engineering services contract.

LPA

Consultant

Printed Name: Matthew Weiss - Project Manager

Printed Name: Jason Dohrmann - Vice President

Signature: 

Signature: 

Date: March 29, 2024

Date: March 29, 2024