



**LEGAL NOTICE**

**REQUEST FOR QUALIFICATIONS  
SEALED PROPOSAL 14-083**

For

**ENGINEERING SERVICES**

For

**HOPEWELL ROAD  
BRIDGE REPLACEMENT PROJECT**

For

**ST. CHARLES COUNTY HIGHWAY DEPARTMENT  
ST. CHARLES, MISSOURI**

St. Charles County is seeking Statement of Qualifications for **Engineering Services for the Hopewell Road Bridge Replacement Project**. The County reserves the right to terminate the contract for reasons of violations by the successful proposer of any term or condition of the contract by giving thirty (30) days written notice stating the reasons therefore and giving the party ample time to remedy the deficiencies.

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## 1. PURPOSE

St. Charles County Government is seeking qualified CONSULTANTS interested in working for the St. Charles County Highway Department by providing engineering, design, and coordination services for the construction of the **Hopewell Road Bridge Replacement** project.

The purpose of this solicitation is to describe the scope of work and the responsibilities of the CONSULTANT and St. Charles County Highway Department (COUNTY) in connection with the design and preparation of a complete set of construction plans and other documents for this project. All Proposers are strongly encouraged to review each section of this solicitation to ensure a precise understanding of the items of work and the expectations of the COUNTY. The overall objective is for the CONSULTANT to prepare an accurate and well designed set of plans to be used by a road contractor to build the project with a minimal amount of change orders or delays.

Said plans shall also be used by utility companies to complete their facility relocations and by the COUNTY to ensure the project is built as designed and to specifications.

## 2. STATEMENT OF WORK

The CONSULTANT will serve as the professional representative of the COUNTY in the design of the project and shall provide consultation and recommendations to the COUNTY during the performance of these services. The CONSULTANT will be required to submit all project deliverables delineated in the [Project Scope of Services](#) of this solicitation in a complete and timely manner. The CONSULTANT will also be required to prepare documents for distribution to the project stakeholders in lieu of open house public meetings. The COUNTY will provide contract administration, management services, and technical reviews of all work associated with the development and preparation of the construction plans. The CONSULTANT shall demonstrate good project management practices while working on this project. These practices include effective communication with the COUNTY and others as necessary, management of time and resources, and documentation. While this project is not currently federally funded, the CONSULTANT must be knowledgeable of the Missouri Department of Transportation's "Local Public Agency" manual and incorporate the requirements of the various funding categories therein into the planned scope of work.

The CONSULTANT will provide proper information directly to the appropriate agencies regarding any jurisdictional determination or environmental impact information, and be responsible to secure, and update as necessary, any permits or approvals determined to be necessary. All necessary permits and clearances shall be acquired by the CONSULTANT at the appropriate phase of the project and prior to the conclusion of the final design phase.

Throughout the design of the project, the CONSULTANT may also be asked to coordinate with all relevant utility companies. However, the majority of the [Utility Coordination](#), and specifically all project plan submittals to the utility companies and the majority of the workflow steps required by the St. Charles County Road Utility Relocation Act (SCCRURA) shall remain the responsibility of the COUNTY.

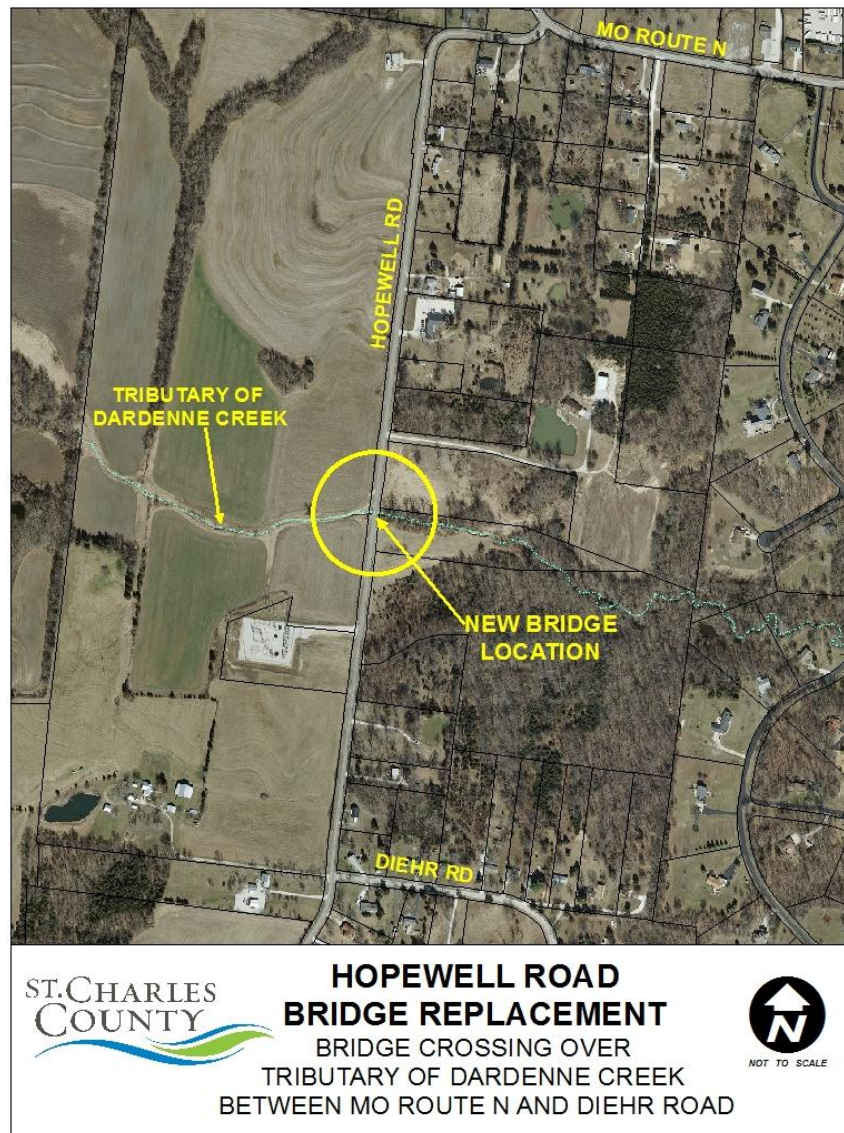
The CONSULTANT is encouraged to ask questions and seek guidance at any particular point during the project; however, the CONSULTANT must also bear in mind their obligation to provide research, consultation and recommendations to the COUNTY during performance of the design services.

### 3. PROJECT DESCRIPTION

The County of St. Charles requests proposals for the engineering design services for the widening and reconstruction of structurally deficient and functionally obsolete bridge on **Hopewell Road** in unincorporated St. Charles County. The purpose of this project is to increase the safety of the traveling public and to continue improvements aligned with the County's Transportation Thoroughfare Plan. The COUNTY envisions the **Hopewell Road Bridge Replacement** project will likely consist of reconstructing the existing bridge with a minimal amount of roadway reconstruction considered.

The tentative schedule for this project is to complete design and right-of-way acquisition by 2014 and to begin construction in 2015.

#### 3.1 PROJECT LOCATION MAP



## 4. PROPOSAL INSTRUCTIONS

Three hard copies and one compact disk of the proposal documents in PDF file format must be received in a sealed envelope plainly marked "Sealed Proposal 14-083: Proposal for Engineering Services for Hopewell Road Bridge – Highway Department" with the due date and time in the lower left corner of the envelope. An authorized representative of the company/person submitting the proposal must sign in blue ink.

**Proposals are due on Thursday, March 27, 2014 at 2:00 p.m.** Proposals must be submitted to the St. Charles County Finance Department, Purchasing Division, 201 North Second Street, Room 541, St. Charles, MO 63301 prior to the deadline.

Proposers are encouraged to propose only on those projects for which they believe they can best provide the highest quality services with the most suitable design team. Proposers are encouraged to concisely, yet fully, address all of the proposal requirements. Proposal volume will not be a factor in the selection.

COUNTY staff will review each proposal received based on the [Proposal Evaluation Criteria](#) noted in this solicitation. After the proposal review period, a limited number of firms may be invited in for an interview. The purpose of the interview is to allow the Proposer the opportunity to familiarize the COUNTY staff with the proposed project team and for the Proposer to demonstrate their understanding of the project. The interview also is an opportunity for the COUNTY to ask the Proposer questions pertaining to the contemplated work, the project team, and the services to be provided.

St. Charles County reserves the right to accept and/or reject any and all proposals.

### 4.1 SCHEDULE OF EVENTS

*The schedule of events pertaining to this Request for Proposals is as follows:*

Event	Date
Request for Proposals Issue Date	March 3, 2014
Deadline for Receipt of Written Questions	March 12, 2014
<b>RFP Response Due Date</b>	<b>March 27, 2014</b>
Notification of Consultant Interviews	April 2014
Intended Date for Contract Award	May 12, 2014

### 4.2 PROPOSAL INQUIRIES

Phone calls are not strictly prohibited; however, CONSULTANTS are encouraged to submit all initial inquiries by e-mail. CONSULTANT requests for individual meetings with COUNTY staff prior to the submittal deadline shall not be honored.

***Inquiries about this proposal request should be made to:***

Chris Bostic, Engineering Design Manager  
St. Charles County Highway Department  
201 North Second Street  
Suite 429  
St. Charles, Missouri 63301  
Phone: (636) 949-7305  
Email: [cbostic@sccmo.org](mailto:cbostic@sccmo.org)

### **4.3 GENERAL PROPOSAL TERMS AND CONDITIONS**

- A. These terms and conditions are superseded by the specific contents of the proposal.
- B. St. Charles County reserves the right to reject any and all proposals or parts of a proposal and waive technicalities.
- C. All proposals will be considered final. No additions, deletions, corrections or adjustments will be accepted after the time of opening, unless specified in the proposal.
- D. City, County and State of Missouri Sales Tax and Federal Taxes are not applicable to sales made to St. Charles County and must be excluded.
- E. The electronic version of this proposal/RFQ is available upon request. The document was entered into WORD for Microsoft Windows. St. Charles County does not guarantee the completeness and accuracy of any information provided on the electronic version. Therefore, respondents are cautioned that the hard copy of this proposal/RFQ on file governs in the event of a discrepancy between the information contained in or on the electronic version and that which is on the hard copy.
- F. An authorized officer of the company submitting the proposal must sign all proposals.
- G. Proposers shall submit three hard copies of their proposal and one compact disk (CD) of the proposal in PDF file format.
- H. All notations must be in ink or typewritten. Mistakes must be crossed out, corrections typed adjacent and must be initialed in ink by person signing the proposal.
- I. Prices for services **should not** be included in submitted responses.
- J. St. Charles County will not award any contract to an individual or business having any outstanding amounts due from a prior Contract or business relationship with the COUNTY or who owes any amount(s) for delinquent taxes, fees or licenses.
- K. Sealed proposals received after the designated time of the receipt of the sealed proposals will be considered as "Void" and will not be opened.
- L. The successful Proposer is specifically denied the right of using in any form or medium the

names of St. Charles County or any other public entity within the St. Charles County for public advertising unless express written permission is granted.

- M. All Proposers must maintain the necessary and appropriate business and/or professional licenses in their field to carry out all terms of the contract.
- N. The Proposer agrees to fully cooperate with any audit from federal, state, or local auditor or investigation by federal, state, or local law enforcement agencies.

#### **4.4 EMPLOYMENT OF UNAUTHORIZED ALIENS PROHIBITED**

***(Missouri Revised Statutes Section 285.530)***

As a condition for the award of any contract or grant in excess of **five thousand dollars** by the COUNTY to a business entity, the business entity shall, by sworn affidavit and provision of documentation, affirm its enrollment and participation in a federal work authorization program (E-Verify) with respect to the employees working in connection with the contracted services.

An employer may enroll and participate in a federal work authorization program (**E-Verify**) and shall verify the employment eligibility of every employee in the employer's hire whose employment commences after the employer enrolls in a federal work authorization program. The employer shall retain a copy of the dated verification report received from the federal government. Any business entity that participates in such program shall have an affirmative defense that such business entity has not violated subsection 1 of this section. [RSMO 285.530 (4)]

Any entity contracting with St. Charles County shall only be required to provide the referenced affidavit on an annual basis. A copy of the **affidavit of work authorization** form is included in this proposal request as [Appendix C](#). Vendors may choose to send the required documentation using one of the following options:

- Send the notarized affidavit and E-Verify MOU signature page to: St. Charles County, Attn: Purchasing Manager, 201 N Second Street, Room 541, St. Charles, MO 63301 prior to responding to any solicitations; **OR**
- Send the notarized affidavit and E-Verify MOU signature page along with a proposal solicitation response.

These documents will be kept on file. The notarized affidavit and E-Verify MOU signature page will remain current for **one year** from the date of the notarized affidavit.

**\*\* PLEASE NOTE:**

***Acceptable enrollment and participation documentation consists of a valid copy of the signature page of the E-Verify Memorandum of Understanding, completed and signed by the Contractor, and the Department of Homeland Security - Verification Division***

***The online address to enroll in the E-verify program is:***

<https://e-verify.uscis.gov/enroll/StartPage.aspx?JS=YES>

**4.5 OPEN RECORDS**

Any and all information contained within or submitted with the proposal becomes a public record subject to the Missouri Sunshine Law when a contract is executed or all proposals are rejected. If Proposer believes that any information included within or submitted with the proposal is protected by the Missouri Sunshine Law, Proposer shall clearly identify what information it believes is so protected and shall clearly identify the legal basis therefore.

**5. PROJECT SCOPE OF SERVICES**

This section of the solicitation is intended to better define the four phases of the **Hopewell Road Bridge Replacement** project and show the proposed general progression of the project. Each subsection provides an outline of the expected deliverables for each project phase. The CONSULTANT should be aware that the scopes of services delineated in this solicitation are considered the baseline objectives for this project. Further refinement of the project particulars shall be provided to the CONSULTANT prior to the initial Notice to Proceed.

**5.1 PHASE 1: CONCEPTUAL DESIGN**

The first phase of this project is the Conceptual Design Phase. The purpose of this phase is for the CONSULTANT to topographically survey the project limits and present alternatives for the replacement of the bridge. By the end of this phase, both the CONSULTANT and the COUNTY should have a better understanding of the vertical and horizontal location of the new bridge, any major geotechnical or environmental considerations, and the feasible replacement alternatives.

There are four major deliverables that the CONSULTANT will be required to complete and have approved by the COUNTY before this phase will be considered completed. These deliverables shall include: **Topographic Survey and Property Base Map, Conceptual Design Plans, Preliminary Hydraulic Report** with alternatives, and the **Conceptual Cost Estimates**. The general specifications and requirements for these deliverables are presented in the subsequent sections.

*The CONSULTANT will be required to submit the findings from the Preliminary Hydraulic Report concurrent with the submission of the Conceptual Design Plans. Moreover, the Topographic Survey should be submitted before or concurrent with the Plans and Report.*

Refer to [Section 6.6](#) for a description of the submittal procedures

**5.1.1 DELIVERABLE 1: TOPOGRAPHIC SURVEY & PROPERTY BASE MAP**

For this deliverable, the CONSULTANT’S services shall include completing, or contracting with a professional sub-Consultant to complete, data collection in the form of a topographic field survey and property base map for the project limits. The utmost care shall be taken in the collecting and processing of the survey data as this information creates the foundation for the construction plans. Moreover, the CONSULTANT shall ensure that **all existing utility facilities** within the project limits are marked in the field prior to the survey and accurately depicted on the plans. In addition, the CONSULTANT shall field check the topographic survey to be certain all visible fea-



tures have been properly mapped on the plans.

**Topographic Survey Requirements:**

The COUNTY does not have a specified preference regarding the use of photogrammetry, LiDAR, or conventional field surveys. However, if a CONSULTANT chooses to use photogrammetry or LiDAR, the data shall be supplemented with conventional field surveys.

Regardless of the methods employed, at a minimum, the topographic survey work shall include:

- A. Establishing a **survey centerline** that is tied to all property corners
- B. Establishing horizontal and vertical **control monuments** that can be used for construction of the project. (minimum of two with at least one monument on each side of the creek)
- C. Tying vertical control to both **USGS** and **Flood Insurance Study** Benchmarks
- D. Determining existing pavement profiles and cross sectioning the existing pavement a minimum of every **twenty-five (25) feet**. A cross section width of **150 feet** on each side of proposed centerline will be needed, depending on the existing topography.
- E. Defining drainage areas of all **watersheds** within project limits
- F. Surveying all **drainage ditches, creeks, and channels** upstream and downstream of the road, as required for hydraulic analysis
- G. Locating all visible **utility appurtenances** and painted or flagged **utility lines**, including potholed utilities (See [Section 6.9.1](#))
- H. Locating all **improvements** that may potentially fall within the project limits, (e.g. houses, decks, sheds, swimming pools, bushes and shrubs, mailboxes, landscaped areas, swing sets, retaining walls, fences, etc...)
- I. All **trees** and **shrubbery** of any size in manicured yards must be located. In brushy areas and forested tree masses, all trees 8" in diameter and larger shall be specifically located.
- J. Locating all driveway **entrances** and denoting type and surface material

The CONSULTANT will be responsible for acquiring rights of entry from the property owners for any and all survey work. The COUNTY will provide an introductory project notification letter that the CONSULTANT shall distribute along with the survey notifications to the property owners. The CONSULTANT shall provide documentation that access has been granted by the property owner(s), to the extent required by law. The COUNTY shall be notified prior to the commencement of the survey work.

Prior to the completion of the Conceptual Design Phase, written documentation shall be provided stating that the survey field check has been performed and all of the required existing topographic features have been captured. If, at any time during the course of the project, additional

topographic features are determined to have been overlooked or otherwise not shown on the plans, the CONSULTANT shall immediately resurvey and map the omitted features at the sole expense of the CONSULTANT.

### **5.1.2 DELIVERABLE 2: CONCEPTUAL DESIGN PLANS**

For this deliverable, the CONSULTANT shall develop the Conceptual Design Plans based on each of the feasible options determined by the Preliminary Hydraulic Report. The Conceptual Design Plans shall define the vertical and horizontal characteristics of the new road and develop a preliminary layout for each of the drainage options. In addition, this deliverable will require the CONSULTANT to establish the initial Title Page and page layouts for the future construction plans.

*The Conceptual Plans shall include all the requirements listed below.*

#### **Conceptual Plans: Design Phase Developments**

A. **Title Sheet**

B. **Typical Section Sheet(s)**

- Pavement, Shoulders and Right-of-Way width
- Tangent and Superelevated Sections
- Sidestreet Typical Sections
- Driveway Typical Sections
- Station ranges for width transitions, tapers, etc...

C. **Plan & Profile Sheet(s)**

- Half-size sheet scale: 1" = 40' (11" x 17") horizontal, 1" = 10' vertical
- New TCE, PUE, PDE, or PWE
- Label the station, width at the ROW, and materials of all driveways
- Plan view of possible storm sewer pipes and crossroad structures
- Plan view of potential retaining walls
- Existing location of all utilities (if applicable)

D. **Cross Sections are not required unless specific conditions warrant**

### **5.1.3 DELIVERABLE 3: PRELIMINARY HYDRAULIC REPORT**

The third deliverable for this phase is the Preliminary Hydraulic Report. For this deliverable, the CONSULTANT shall explore the drainage requirements for the project. The CONSULTANT'S services shall include preparing a preliminary drainage area map for the proposed bridge structure and cross road culverts. This map shall indicate the various hydraulic considerations used (e.g. drainage area, PI, bypass, Q, etc...).

The CONSULTANT services shall also include preparing a drainage area map for the existing drainage facilities, including all existing storm sewer pipes, crossroad pipes, box culverts, bridges, and other structures. The CONSULTANT shall evaluate the existing drainage structures for sufficiency. The CONSULTANT shall make a preliminary recommendation regarding a replacement structure.

In a brief written report or memorandum, the CONSULTANT shall indicate critical design features for each structure evaluated such as the drainage area, design storm event, floodplain/floodway requirements, flow rate, allowable headwater, calculated headwater, and capacity. Proposed storm sewers and other drainage facility layouts are required to be shown in the

plan view of the Conceptual Design Plans.

#### **Drainage Area Map Requirements**

- A. Existing and proposed topographic features
- B. Existing 5' major and 1' minor contours, as appropriate
- C. Label drainage areas, PI Factors, Q's, inlet intercepts and bypasses

#### **5.1.4 DELIVERABLE 4: CONCEPTUAL CONSTRUCTION COST ESTIMATE**

For this deliverable, the CONSULTANT shall submit a conceptual construction cost estimate. This estimate shall be submitted in an Excel spreadsheet format and contain a breakdown of grouped pay items per the major categories of work (e.g. earthwork, pavement, drainage, bridge, traffic control, etc...).

Each of the options proposed in the Preliminary Hydraulic Report shall be separately estimated for probable construction cost.

### **5.2 PHASE 2: PRELIMINARY DESIGN**

The second phase of this project will be the Preliminary Design Phase. ***The majority of the detailed design and drafting work for this project will occur during this phase.*** The purpose of this phase is to move forward with one selected bridge alternative. The CONSULTANT will further evaluate the layout of any proposed drainage facilities and/or retaining walls, and establish how erosion control will be handled. In addition, during this phase the CONSULTANT shall prepare drawings for distribution to affected property owners, establish Traffic Control Plans, and complete intersection warping details, if necessary. By the end of this design phase, the construction plans should be nearly **eighty percent** complete, all required hydraulic analyses for this project shall be essentially incorporated into the design, the COUNTY shall have a preliminary knowledge of the construction costs associated with the project, and finally, the COUNTY'S public involvement requirements shall be met.

If alignment revisions have been brought forth from the first coordination with the public or COUNTY review, no additional compensation will be paid as a result of the selection to move forward with any particular alignment, or modification thereof, except for cases where it is agreed that substantial additional work is involved.

There are four major deliverables that the CONSULTANT will be required to complete and have approved by the COUNTY before this phase will be considered completed. These deliverables shall include: **Geotechnical Report, Final Hydraulic Report, Preliminary Design Plans**, and the **Preliminary Construction Cost Estimate**. The general specifications and requirements for these deliverables are presented in the subsequent sections.

*The CONSULTANT will be required to submit the Final Hydraulic Report and the Preliminary Construction Cost Estimate concurrent with the submission of the Preliminary Design Plans. Moreover, the public coordination documents should ideally be prepared and submitted prior to the COUNTY approval of the Preliminary Design Plans. The Geotechnical Report should be submitted as soon as it has been completed, prior to the submittal of the Preliminary Design Plans.*

Refer to [Section 6.6](#) for a description of the submittal procedures

### **5.2.1 DELIVERABLE 1: GEOTECHNICAL REPORT**

The CONSULTANT shall be required to use the services of a professional geotechnical engineer to supervise the attainment of soil borings. In addition, the CONSULTANT must provide a sealed, bound report with the findings and recommendations.

Soil borings shall be taken with a twofold purpose. First, the classification of the soil types and slope stability shall be determined from the borings. Also, the borings shall be sufficiently deep to determine the presence of rock in the project limits, particularly in the areas of likely earthwork cuts or bridge bents.

It is **strongly recommended** that the CONSULTANT review the location of the soil borings with the COUNTY prior to conducting the investigations. If it is determined that an insufficient amount of investigations were conducted or that the level of investigation fails to validate the recommendations provided in the report, the CONSULTANT shall immediately perform any supplemental geotechnical investigations deemed necessary by the COUNTY at the sole expense of the CONSULTANT.

The CONSULTANT will be responsible for acquiring rights of entry from the property owner(s) for any geotechnical work. The COUNTY shall be notified prior to the commencement of the geotechnical investigation along with documentation that access has been granted by the property owner(s).

### **5.2.2 DELIVERABLE 2: FINAL HYDRAULIC REPORT**

For this deliverable, the CONSULTANT shall further develop and refine the earlier Preliminary Hydraulic Report for this project. The HEC-RAS or WYSPRO calculations for the proposed bridge structure shall be completed. The drainage area maps produced in Phase 1 should be updated to reflect any changes or inaccuracies and then incorporated into the project plans as the last page(s) of the plan set.

Also, the CONSULTANT shall finalize the preliminary recommendations regarding crossroad structures and roadside ditches. Updated calculations shall be submitted noting the drainage area, design storm event, flow rate, inlet/outlet control, allowable headwater, and calculated headwater for the proposed structures. The calculations for crossroad pipes may include hand-written nomographs or summary sheet printouts from standard commercially available software packages, such as HY-8, Hydraflow, or CulvertMaster.

### **5.2.3 DELIVERABLE 3: PRELIMINARY DESIGN PLANS**

For this deliverable, the CONSULTANT shall build upon the Conceptual Plans approved in Phase 1 to produce Preliminary Design Plans.

The CONSULTANT shall use the information from the Final Hydraulic Report to further refine the type, size, and location of the bridge and cross road drainage structures. The CONSULTANT shall complete the design of roadside special ditching, as necessary. In addition, culvert profile sheets shall be part of this deliverable.

Proposed retaining wall locations shall be further refined, with new walls introduced, other walls potentially removed, and the lengths and heights varying, as well. The types of walls, such as small block or cast-in-place, shall be further considered. In addition, this deliverable includes retaining wall profile sheets, which shall be added to the plans, as necessary.

Traffic handling during construction shall be explored in detail, and the CONSULTANT shall prepare a Traffic Control Plan (TCP). As every project has unique characteristics and concerns, the CONSULTANT is required to seek input from the COUNTY before submitting the TCP. The CONSULTANT is required to provide recommendation(s) for handling traffic, and the COUNTY will make the final pronouncements regarding road closures, detour routes, temporary widening, half-at-a-time construction, etc.... Intersection Warping Details and Erosion Control Plan shall also be prepared as part of this deliverable.

*The Preliminary Plans shall include all the developments listed for the Conceptual Plans.*

### **Preliminary Plans: Design Phase Developments**

#### **A. Typical Section Sheet(s)**

- Asphalt Pavement Section (from Geotechnical report)
- Retaining wall typical sections with station ranges
- Finalized typical pavement, shoulder, ROW and bridge width, as necessary

#### **B. Plan/Profile Sheet(s)**

- City and County jurisdictions
- Location of any floodway and floodway fringe areas within the project limits
- Label all existing features as UIP, TBR, TBR&R, TBR&REL, etc...
- Revised crossroad drainage structures
- Revised location of new storm sewer system and crossroad structures
- Revised location of new retaining walls
- Revised location of all utilities (if applicable)
- Private utility easements with Book/Page number

#### **C. Cross Section Sheets**

- Proposed grade and existing grade labels for ditches
- Proposed pavement cross slopes
- Label Existing and New ROW and easements on every section
- Existing and proposed sidestreet and driveway grades
  - The sight distance shall be carefully analyzed for all side streets and driveways, with special attention given to the proposed location of fences and retaining walls at side streets and driveways.
- Earthwork end areas and volumes (cut and fill in SY and CY)
- Areas of proposed temporary pavement and temporary slope
- Elevation of any critical utility facilities

#### **D. Bridge and Culvert Profile Sheet(s) and Drainage Area Maps**

- Preliminary Bridge Plans with completed MoDOT checklist
- Culvert profiles with station & offset, size & length (center to center), skew angle, slope, flowline, hydraulic grade line (HGL), granular backfill, and Q's of proposed storm sewers, inlets, manholes, and culverts
  - Provide design calculations in spreadsheet/tabular form separately
- Structural analysis of culverts/bridges to remain in place
- Label and dimension any proposed rock blankets

- Updated drainage area maps shall be included as the last sheet(s) of the plan set
- E. **Retaining Wall Profile Sheet(s)***(If necessary)*
- Profiles of all proposed retaining walls with unique identifier, station ranges, and elevations every twenty-five feet
  - Approximate area of wall in square feet
  - Label wall types, such as small block modular block wall or larger MSE walls
  - Label gutter types, such as Type B gutter
  - Label fence heights and types
- F. **Traffic Control Plan Sheets**
- Proposed detour plan and/or stage construction scheme for all phases
    - With construction signage, striping, temporary traffic barriers, and barricades
  - Denote other road construction areas near project location that may impact traffic handling, if applicable
  - Note any proposed closure sections with appropriate detour signage
- G. **Warping Details**
- Intersection geometric details and warping diagrams
  - The intersection Warping Details shall denote the proposed gutterline elevations at the face of curb in ten-foot long increments around the radius.
- H. **Erosion Control Sheet(s)**
- Sediment and erosion control plans (SWPPP) for all land disturbance
  - With Legend of devices, location of devices, etc...

#### **5.2.4 DELIVERABLE 4: PRELIMINARY CONSTRUCTION COST ESTIMATE**

For this deliverable, the CONSULTANT shall submit a preliminary construction cost estimate. This estimate shall be submitted in an Excel spreadsheet format and contain a breakdown of grouped pay items per the St. Charles County Standard Specifications for Arterial Highway Construction.

### **5.3 PHASE 3: RIGHT-OF-WAY DESIGN**

The third phase of this project is the Right-of-Way Design Phase. The purpose of this phase is for the CONSULTANT to develop and incorporate the Right-of-Way Plans into the construction plans. Also during this phase, the CONSULTANT shall submit exhibits and property descriptions for each parcel requiring acquisition so the COUNTY can begin right-of-way negotiations with affected property owners. In addition, the CONSULTANT shall submit an Acquisition Summary table. By the conclusion of this phase, there should be no detail left unexplored which would hinder the ability of the COUNTY to be relatively certain that the proper amount of Right-of-Way or Easement will be acquired.

*The CONSULTANT will be required to submit the exhibits & property descriptions and Acquisition Summary table either prior to or concurrent with the submission of the Right-of-Way Design Plans. Moreover, there may arise a time prior to or during the Right-of-Way Design Phase when the acquisition of a tract, or tracts, of land would be advantageous for the COUNTY. Upon the request of the COUNTY, the CONSULTANT may be required to expedite the preparation and submit property descriptions and exhibits for specific parcels prior to the start or of the Right-of-Way Design Phase.*

Refer to [Section 6.6](#) for a description of the submittal procedures

### **5.3.1 DELIVERABLE 1: RIGHT OF WAY DESIGN PLANS**

For this deliverable, the CONSULTANT shall develop and submit Right-of-Way Design Plans. To provide the proper clarity to define the necessary property acquisitions, the CONSULTANT shall develop Right-of-Way Plan sheets separate from the Plan & Profile Sheets. **These sheets will remain as part of the final construction plans.** These Right-of-Way Plan sheets should show the existing topographic features and the proposed improvements; however, many of those features may be faded to a certain extent for clarity. The CONSULTANT shall clearly dimension the right-of-way and easement acquisitions on these sheets using **metes and bounds**.

*The Right-of-Way Plans shall include all developments listed for the Preliminary Plans.*

#### **Right-of-Way Plans: Design Phase Developments**

##### **A. Right-of-Way Plan Sheets**

- Existing topography, faded for clarity
- Proposed alignment and proposed improvements
- Assigned parcel number
- Parcel locator identification numbers
- Deed Book and Page for each parcel
- Each parcel shall contain:
  - Area of existing parcel, area of new right-of-way, areas in permanent easement, area in temporary easement, and total remaining parcel area (Existing Area less New ROW)
- Metes and Bounds dimensions of proposed acquisitions on plan sheets
- Land survey and section lines
  - Including quarter section and quarter-quarter section lines
- Existing property corners
- Remainder of land holdings on each side of road
- All improvements or structures to be acquired or damaged by the project

##### **B. Acquisition Summary Sheet**

- A summary sheet by parcel listing owners name, area of existing parcel, area of new right-of-way, areas in permanent easement, area in temporary easement, and total remaining parcel area.

### **5.3.2 DELIVERABLE 2: RIGHT OF WAY ACQUISITION DOCUMENTS**

The second deliverable of this phase is the project acquisition documents in the form of property descriptions and exhibits. In addition, the CONSULTANT shall include a summary spreadsheet in Microsoft Excel spreadsheet format that includes details for all of the parcels.

#### **Property Description Requirements:**

A separate, detailed property description for any ROW, TCE, PDE, PWE and/or PUE shall be required for each affected parcel. Metes and bounds property descriptions are required; **Station and Offset style property descriptions are not acceptable.** A copy of each property descrip-

tion shall be provided in electronic format, in Microsoft Word, on CD or by e-mail, along with the hard copy. This allows the property description to be transferred to a COUNTY-prepared deed without the chance of errors while retyping.

For every property description, the CONSULTANT shall furnish an error of closure calculation. The error of closure report will preferably be transmitted in the form of an Excel spreadsheet for each parcel. To allow for a spreadsheet closure check, property descriptions with curves shall describes those curves with **chord bearings** and **chord distances**. AutoCAD or Geopak generated parcel reports, specifically denoting the error of closure, may be allowed to substitute for Excel reports, at the discretion of the COUNTY.

**Exhibit Requirements:**

Each exhibit shall be an individual plat, dimensioning the entire parcel, showing any existing easements, and indicating the required Right-of-Way and/or easements. Individual plats must be provided on 8 1/2" x 11" paper and formatted in accordance with Missouri Statutes for proper recording of deeds at the St. Charles County Recorder's Office. All exhibits must be drawn to scale, and lines that are not relevant to a given parcel should not be shown.

The COUNTY prefers to show the ROW, TCE, PDE, PWE and/or PUE for each affected parcel all on one plat. The COUNTY will accept additional sheets if the single plat becomes too cluttered. The COUNTY will also accept additional sheets for a single parcel if the parcel is too large to reasonably and legibly annotate the takings on one page. Along with the hard copy, the CONSULTANT shall provide an electronic copy of the exhibits in AutoCAD and PDF file formats.

**Takings noted on each exhibit shall be summarized accordingly:**

Parcel Number	
Property Owner Name	
Book/Page of latest purchase/transfer	
Complete property address	
Description of lot including Plat Book/Page, if relevant	
Assessor's Parcel ID	
Existing Property	xx,xxx SF
Existing Roadway Easement included in property	x,xxx SF
New ROW	xxx SF
Remaining Property	x,xxx SF
Temporary Construction Easement	x,xxx SF
Permanent Wall Easement	xxx SF
Permanent Drainage Easement	xxx SF
Permanent Utility Easement	xxx SF

The CONSULTANT shall continually provide revised Word, AutoCAD, and PDF files with re-submittals until the exhibits and property descriptions have been approved. The date **the exhibit or property description was prepared and/or revised must be shown on each document.**

**Summary Spreadsheet and Inventory List Requirements:**

In addition to the Summary Table required for the plans, the CONSULTANT shall prepare and



submit an 8-1/2" x 14" summary spreadsheet with a list of the owner's names and addresses of every parcel. The list will also include columns for each parcel's Parcel Number, Book and Page, Legal Descriptions, Assessor's Office Parcel ID Numbers, and a summary of all of the property takings (e.g. ROW, PDE, TCE, etc...). This summary list shall be provided in Microsoft Excel spreadsheet format.

## **5.4 PHASE 4: FINAL DESIGN**

The purpose of the Final Design Phase is to finalize the construction plans and produce the estimates, bid documents and specifications required for the project to be approved and advertised for bids for construction. By the conclusion of this phase, the COUNTY shall have a complete and accurate set of construction plans, project specifications and bid documents. In addition, ***all required permitting and clearances shall be attained.*** Finally, the CONSULTANT shall have completed all the contractual design services for this project with the exception of any agreed upon construction services.

Any special agreements made with property owners during right-of-way negotiations must be shown on the Final Design Plans and listed in the Project Specifications Book. The CONSULTANT should recognize that these minor changes resulting from right-of-way negotiations will be required and will not merit additional compensation.

There are three major deliverables that the CONSULTANT will be required to complete and have approved by the COUNTY before this phase will be considered completed. These deliverables shall include: **Final Design Plans, Project Specification Book**, and the **Final Engineer's Estimate**. The general specifications and requirements for these deliverables are presented in the subsequent sections.

*The CONSULTANT should recognize that the Notice to Proceed with the Final Plans might be delayed until the ROW acquisition phase has progressed. When the project schedule allows for a delay, the COUNTY will commonly postpone the start of the Final Design until the Right-of-Way acquisitions have made some advancement and parcels have begun to settle with the COUNTY.*

***The COUNTY typically provides final review comments, which will need to be addressed before the plotting of bid sets and the printing of specifications books.***

Refer to [Section 6.6](#) for a description of the submittal procedures

### **5.4.1 DELIVERABLE 1: FINAL DESIGN PLANS**

For this deliverable, the CONSULTANT shall conclude the development of the project construction plans with the submission of the Final Design Plans. The remaining components to be integrated into the construction plans are the bid quantity sheets, coordinate control sheets, Permanent Signing and Striping sheets, and other miscellaneous plan sheets.

The CONSULTANT shall calculate unit bid quantities and provide those quantities in spreadsheet-style tabular formatting on "2B" Sheets. The CONSULTANT shall also summarize those tabulated quantities on a "2A" Sheet. After the summarization of quantities, the CONSULTANT shall update and submit a Final Engineer's Estimate of Probable Construction Cost.

*The Final Plans shall include all developments listed for the Right-of-Way Plans*

**.Final Plans: Design Phase Developments**

**A. Quantity Sheets**

- "2A" sheet – Summary of Quantities
- "2B" sheet(s) – Tabulation of Quantities, per plan/profile sheet

**B. Coordinate Control Sheet(s)**

- Coordinate control with bench marks, survey control points, and alignment control points

**C. Bridge Plans**

- Bridge drawings and detail sheets

**D. Permanent Signing and Striping Sheet(s)**

- Proposed signing and disposition of existing signs
- Proposed pavement markings, including lane lines, crosswalks, stop bars, etc...

**E. Additional Sheets**

- Standard drawing detail sheets referencing MoDOT drawings and St. Charles County drawings shall be included in the plans or noted in the project specifications
- Utility relocation design plans and profiles for any City or County owned utilities, which must be relocated as a result of the project (if approved by the County)
- Final bridge drawings (if applicable)
  - i. A signed and sealed SI&A form will be required for the new bridge structures

**F. Standard Plans Index (optional)**

**5.4.2 DELIVERABLE 2: PROJECT SPECIFICATIONS BOOK**

For this deliverable, the CONSULTANT shall be supplied a Word document with the majority of the "front end" specifications by the COUNTY. It will be the CONSULTANT'S responsibility to generate and incorporate a Bid Form and any job-specific specifications into this comprehensive project specification book. The CONSULTANT shall also provide any and all forms, documents, wage rates, etc... as detailed in MoDOT's LPA manual, as necessary. The *St. Charles County Standard Specifications for Arterial Highway Construction, 2006* shall be the effective standard construction specifications utilized, and copies of the Standard Specifications book are available for purchase at the office of the Highway Department.

**5.4.3 DELIVERABLE 3: FINAL ENGINEER'S ESTIMATE**

For this deliverable, the CONSULTANT shall submit the final construction cost estimate. This estimate shall be submitted in an Excel spreadsheet format and contain a breakdown of grouped pay items per the St. Charles County Standard Specifications for Arterial Highway Construction.

**5.5 CONSTRUCTION SERVICES**

The CONSULTANT will furnish a separate price for each of the following components as part of the overall Engineering Design Services Contract. The potential construction services, which will be authorized on an as needed basis, are as follows:

- A. Construction staking, which entails the resetting or refreshing of all of the previously established control points to allow the road contractor's surveyor to stake the project. This work is typically only authorized when the contractor's surveyor is unable to locate a sufficient number of the control points noted on the Coordinate Control Sheet in the plans.

- B. Centerline staking at fifty foot intervals for the entire length of the project. New centerline points in hard surface areas shall be marked with PK nails, and wooden hubs and lathes will be required for points falling outside the paved areas. At each point, the proposed cuts or fills shall be either marked on a lathe or painted on the existing pavement. A cut sheet, in Microsoft Excel file format, shall be provided to COUNTY upon conclusion of the staking, which shall include the existing and proposed elevations and the proposed cuts or fills. Staking a number of the individual storm sewer structures may also be required, as needed for utility relocations. This work, if authorized, will typically take place during the Final Design Phase at some point prior to the printing of bid sets.
- C. Review and approval of shop drawings and/or contractor requested plan changes. Shop drawing reviews, if requested, are most commonly limited to bridge particulars, box culverts, retaining walls, and storm sewer structures.

## **6. WORKING WITH ST. CHARLES COUNTY HIGHWAY**

*The St. Charles County Highway Department is dedicated to providing timely and cost-effective maintenance and responsible improvement of St. Charles County's roadway network to facilitate safe and efficient travel Countywide.*

When managing all road improvement projects in St. Charles County, the Highway Department places an emphasis on quality engineering design, seeks to utilize funds in a manner that will produce the maximum benefit for the traveling public, and remains committed to completing projects in a timely manner. In an effort to adhere to these values, the Highway Department has established a set of processes and procedures that will be applied during all road improvement projects. All CONSULTANTS whom collaborate with the Highway Department on the design of a road improvement project shall be familiar with these steps and requirements.

### **6.1 PROJECT STATUS REPORTS**

The CONSULTANT shall provide written monthly updates on the design status of the project, including during periods of non-activity. The Project Status Report is intended as a tool to track the progress of the project, and not as the primary means of direct communication. During periods of project activity, the Project Status Report should be submitted along with a billing invoice and serve to assist in documenting the work performed over the billing period. More importantly, the CONSULTANT shall take care to keep the Project Status Report current even if the billing cycle lags behind by several days or weeks.

At a minimum, the monthly Project Status Report should cover four areas: what phases or tasks have been completed in the past month, what information or responses the CONSULTANT needs or will need from the COUNTY, any relevant milestone date revisions and the status of any report, plan or permit currently under review.

The Project Status Report may be sent by fax, e-mail, or delivered to St. Charles County High-

way Department office no later than the **25<sup>th</sup> day** of each month. The CONSULTANT shall not wait until the monthly Project Status Report submittal to ask questions or seek information.

## **6.2 PROJECT SCHEDULE CONTROL**

As part of the Engineering Design Services Contract, the CONSULTANT and COUNTY will have agreed upon a Timetable of Submittals that is in a similar format to the Proposed Timetable of Submittals ([Appendix B](#)), which the CONSULTANT will submit with their proposal. The CONSULTANT shall be expected to perform all of the required design work within the constraints of this pre-established contract schedule. Should the CONSULTANT fall behind a Phase completion deadline, in no event shall any submittal be made to the COUNTY without following the appropriate QA/QC steps ([See Section 6.3](#)), regardless of the project schedule ramifications.

For the purpose of establishing the Timetable of Submittals schedule, the CONSULTANT shall allow for a COUNTY *two (2)* week review time for the task review or re-review of any plan or document submittals, as appropriate. Phase Completion is defined as the CONSULTANT having fully completed all required tasks and receiving written approval from COUNTY of all of the required document(s) or activities. Multiple resubmittals may be required before Phase Completion is granted. By establishing the project phasing schedule, the CONSULTANT shall be accountable for completing the necessary requirements and receiving COUNTY approval of said deliverables **within the number of calendar days** determined by the CONSULTANT for each project phase.

Pursuant to selecting a CONSULTANT to enter into a contract for the Engineering Design of **Hopewell Road Bridge Replacement** project, in addition to the phase schedule, the COUNTY shall require that the CONSULTANT prepare and provide a detailed project activity/event schedule. This schedule shall present, in summary or tabular form, the entirety of the COUNTY and CONSULTANT scheduled activities required to meet the COUNTY'S baseline completion date. These scheduling discussions will follow the interview process and/or occur during the manhour and fee contract negotiations process.

Throughout the life of the project, the schedule shall be reviewed and, with the approval of the COUNTY, adjusted as necessary to incorporate any changes in the work concept and progress to date. This schedule update shall be submitted with the monthly Project Status Reports.

## **6.3 QUALITY CONTROL & ASSURANCE**

Providing a quality design product that meets the needs of St. Charles County Government, the adjacent County residents and landowners, and the traveling public is of the highest priority to the St. Charles County Highway Department. The CONSULTANT shall be fully responsible for the professional quality, technical accuracy and coordination of all surveys, designs, drawings, specifications and other services furnished by the CONSULTANT under the design contract, whether those services are performed by the CONSULTANT directly or by a sub-Consultant. The CONSULTANT shall, without additional compensation, correct all errors or deficiencies in the designs, maps, drawings, specifications and/or other services.

In an effort to clarify the requirements and expectations for each project phase, the County has

developed a series of **Project Quality Certification Checklists** for each of the major project deliverables. The COUNTY will provide the phase-appropriate checklist to the CONSULTANT with the Notice to Proceed of each project phase. Each item listed on the checklist must be initialed and dated by the appropriate CONSULTANT Project Manager or designee. The CONSULTANT will be required to return the completed checklist to the COUNTY with any and all relevant submittals. Failure to submit the required checklist will result in an immediate rejection of the entire submittal.

The CONSULTANT will also be required to attend a minimum of one **Project Evaluation Meeting** with the COUNTY. This meeting will likely occur during or right after the Preliminary Design phase. This meeting will serve as an opportunity for the COUNTY and CONSULTANT staff to review the status of the project design work, schedule, and billing. In addition, the COUNTY will provide the CONSULTANT with feedback on their project management performance and provide clarification on any lingering procedural issues.

At a point following completion of the design work and approval of the Final Design phase documents, the CONSULTANT may be invited to meet again with COUNTY staff for a final project review. This final project meeting shall recap some of the main events during the course of the design and serve as an evaluation of past activities and performance such as the final schedule, budget, coordination and communication issues, overall quality, and other distinct aspects of the project.

### **6.3.1 FIELD CHECKS**

The St. Charles County Highway Department understands that a set of engineering design plans must accurately represent the real world situation they are meant to depict in order avoid costly delays during the construction phase. At no fewer than two separate times during the course of the design phases, the CONSULTANT shall conduct full and complete field checks of the project limits. Upon completion of the field check, written documentation shall be provided to the COUNTY stating that a complete field check has been performed. The documentation shall list the findings of the field check, including all features found to be new, previously overlooked, and/or removed. Finally, the CONSULTANT shall describe all corresponding actions taken or necessary to make the appropriate revisions, additions, or subtractions to the data.

In accordance with [Section 5.1](#), the first field check shall be held prior to the submission of the Conceptual Plan to verify that all visible features have been properly mapped on the plans. The CONSULTANT is encouraged to visually survey the existing drainage patterns and character of the surrounding topography so the road design will account for many of these potentially unique features. The second full field check must take place prior to the first submittal of the Final Plans. This field check shall serve as a concluding reality and constructability check of the Final Design. This field check shall also serve to verify no significant changes have occurred in the existing conditions since the initial field check

The CONSULTANT is encouraged to visit the project limits often to look into various drainage related items such as: verifying outlet points, identifying side yard swales and ditching, evaluating ongoing or potential erosion problems, and verifying drainage area maps. In addition to drainage concerns, the CONSULTANT is further encouraged to field check other various items such as driveway slopes, potential retaining wall locations, suitability of proposed slopes, existing traffic patterns, street signage, etc.... If desired, as specific design issues arise at any point during the design, COUNTY representation may be available to accompany the CONSULTANT

to field check any specific locations. Documentation that additional field checks have occurred should be provided in the monthly updates should COUNTY representation not be present.

#### **6.4 PROJECT APPROVAL PROCESS**

Submittals from the CONSULTANT shall be made on, or preferably before, the contractually required dates in the project timetable. The COUNTY will attempt to review every submittal within two weeks of receipt of the document(s); however, there are certain circumstances where this is not always achievable. The COUNTY accepts no responsibility for review delays outside their own control. Based on the level of plan completeness and overall quality, it is not uncommon for the COUNTY to review and reject multiple submittals within a single phase until the level of development has fulfilled the contractual scope obligations for the phase, met the QA/QC requirements, and the proposed design has met with COUNTY approval. **Due to the almost certainty that plans or other document resubmittal(s) will be necessary within a Phase, the CONSULTANT is highly encouraged to plan for a comment and resubmittal period within practically every Phase.** The CONSULTANT shall also make predictions and build in review time by other regulatory agencies, as necessary.

The CONSULTANT'S plan or other document resubmittals shall be made in no more than **14 calendar days** unless additional time is allowed in writing by the COUNTY.

On occasion, in order to keep the project moving forward, the CONSULTANT may be given a conditional approval of a deliverable/phase and Notice to Proceed with the next design phase. In this situation, the CONSULTANT shall make certain that all conditions for approval, such as a list of review comments, are fully addressed in the subsequent submittal. However, incomplete submittals may be subject to rejection without review.

The COUNTY approval of a plan submittal will not necessarily be accompanied by a Notice to Proceed with the subsequent Phase. There are several phases where the Notice to Proceed may follow at a later date. For instance, the approval of Preliminary Plans will likely not be followed by a Notice to Proceed to the next Phase until the public coordination has been completed. Further, as previously noted, the Final Design may be delayed until the ROW acquisition phase has progressed.

The CONSULTANT shall proactively seek plan approvals from regulatory agencies. In the event there are any significant coordination issues that impede the ability of the CONSULTANT to acquire the necessary approvals in a timely manner, the COUNTY shall be notified immediately.

#### **6.5 COMPENSATION**

The CONSULTANT will be compensated in accordance with the following fee stipulations:

- A. The COUNTY will pay invoices of the CONSULTANT on a monthly basis. Payment will be made within 45 days of the invoice date, if invoices are submitted in accordance with these requirements, and most particularly, **Paragraph C** below. The CONSULTANT must submit as the invoice, or as attachment to their standard company invoice, a St.

Charles County approved standard billing format relative to the fee schedule in the Engineering Design Services Contract.

- B. The COUNTY will retain 5% of each invoice amount until completion and acceptance of the Final Design.
- C. The COUNTY will pay for work on each phase and task based on the estimated percentage of work completed at the time of the invoice. The COUNTY will not pay more than 75% of a phase or task until the document has been submitted for review and approval. The COUNTY will not pay more than 90% of a phase until the phase has been approved. No payment on subsequent phases or tasks will be processed until the preceding phases have been approved.
- D. In the event that the approval of the Right-of-Way Design Phase (or the Final Design Phase) is not granted within the contractually required dates in the project timetable, the Consultant's payment for that submittal shall be reduced by one hundred (\$100.00) dollars for each calendar day that said approval is beyond the number of days described in contractual timetable. Plan or other document resubmittals shall be made within 14 calendar days unless additional time is allowed in writing by the COUNTY. CONSULTANT'S payment shall be reduced by one hundred (\$100.00) dollars for each calendar day that said resubmittal is beyond the 14 day period. CONSULTANT and COUNTY agree that these amounts are reasonable estimates of damages in the event of a breach of the requirements referred to in this paragraph.
- E. The CONSULTANT shall not be in default under this Contract for delays in performance caused by circumstances beyond its reasonable control. For purposes of this Contract, such circumstances include, but are not limited to, abnormal weather conditions; floods; earthquakes; fire; lockouts, work slowdowns, and other labor disturbances; civil disturbances; riots; sabotage; judicial restraint; and, inability to procure permits, licenses or authorizations from governmental agencies for any of the supplies, materials, access or services required to be provided under the Engineering Design Services Contract. Should such circumstances occur, the CONSULTANT shall give COUNTY written notice of such event immediately thereafter and the parties shall mutually agree on a reasonable modification to the project schedule and potential adjustments to CONSULTANT'S compensation.

## **6.6 SUBMITTALS TO THE COUNTY ENGINEER**

During the planning and design of the project, the CONSULTANT will be expected to submit monthly Project Status Reports, engineering plans and other data to the County Engineer and/or other regulatory agencies, as required, for approval.

Unless specified elsewhere, all engineering plan submittals to the COUNTY for review and approval will require **three (3) copies** provided as one-half size drawings (11" x 17") in a standard measurable scale along with a CD of project electronics. The CD of project electronics shall contain both AutoCAD and PDF file formats of the project plans. Upon request, up to three full size plan sets (22" x 34") should be available at no additional cost to COUNTY.

The anticipated project submittals are as follows:

**A. Conceptual Design Submittal**

- Topographic Survey Submittal:
  - Three hard copies of the plotted topo and contours
  - The CONSULTANT shall submit a copy of the survey field book notes and an ASCII text file of the survey points collected.
- Conceptual Plans Submittal:
  - The CONSULTANT shall submit copies of the Conceptual Plans and CD of project electronics in AutoCAD and PDF file formats to the COUNTY.
  - Upon approval, the CONSULTANT shall submit copies of the Conceptual Plans and CD of project electronics in AutoCAD and PDF file formats to the COUNTY so that they can be distributed to all affected utility companies.
- Preliminary Hydraulic Report Submittal:
  - Three hard copies of the Preliminary Hydraulic Report documents shall be submitted to the COUNTY.
- Conceptual Construction Cost Estimate:
  - The Conceptual Construction Cost Estimate shall be created in a Microsoft Excel spreadsheet and provided to the COUNTY in three hard copies and in an Excel format

**B. Preliminary Design Submittal**

- Geotechnical Report Submittal:
  - The CONSULTANT shall submit three bound and sealed copies of the Geotechnical Report.
- Final Hydraulic Report:
  - Three hard copies of the Final Hydraulic Report shall be submitted to the COUNTY.
- Preliminary Design Plans:
  - The CONSULTANT shall submit three copies of the Preliminary Plans and CD of project electronics in AutoCAD and PDF file formats to the COUNTY.
  - Upon approval, the CONSULTANT shall submit copies of the Preliminary Plans and CD of project electronics in AutoCAD and PDF file formats to the COUNTY so that they can be distributed to all affected utility companies.
- Preliminary Construction Cost Estimate:
  - The Preliminary Construction Cost Estimate shall be created in a Microsoft Excel spreadsheet and provided to the COUNTY in three hard copies and in an Excel format.

**C. Right-of-Way Design Submittal**

- Right-of-Way Design Plans:
  - The CONSULTANT shall submit three copies of the Right-of-Way Plans and CD of project electronics in AutoCAD and PDF file formats to the



- COUNTY for review.
  - Once the **ROW plans are approved** by the COUNTY, the CONSULTANT will submit the following:
    1. Two (2) sets - Full size ROW plans
    2. Seven (7) sets - Half size ROW plans
  - Upon approval, the CONSULTANT shall submit copies of the Right-of-Way Plans and CD of project electronics in AutoCAD and PDF file formats to the COUNTY so that they can be distributed to all affected utility companies.
- Acquisition Documents:
  - Consultants are required to submit one (1) hard copy of each property description and exhibit and a CD containing the electronics. The CD of electronics shall contain both PDF and AutoCAD file formats of the property descriptions and exhibits.
    1. *As previously noted, upon the request of the COUNTY, the CONSULTANT may be required to submit property descriptions and plats for certain parcels prior to the start or approval of the Right-of-Way Design Phase.*
  - CONSULTANTS are required to submit a copy of all of the current deeds for every parcel abutting the project.
  - CONSULTANT shall also include an 8-1/2" x 14" summary sheet in Microsoft Excel describing the project Right-of-Way and easement takings.

#### **D. Final Plan, Specification, and Estimate Submittal**

- Final Design Plans:
  - The CONSULTANT shall submit three copies of the Final Plans and CD of project electronics in AutoCAD and PDF file formats to the COUNTY for review.
  - Upon Approval, the CONSULTANT shall submit copies of the Final Plans and CD of project electronics in AutoCAD and PDF file formats to the COUNTY so that they can be distributed to all affected utility companies.
- After the Final PS&E have been reviewed and approved by the COUNTY, the CONSULTANT shall submit:
  1. Twenty-five (25) full size sets of plans for bidding purposes plus a price for additional copies, if needed
  2. Thirty (30) specifications for bidding purposes and an electronic copy in Microsoft Word format
  3. Final construction cost estimate in hard copy and Microsoft Excel format
  4. Complete set of reproducible specifications and bid documents (typically a single unbound set)
  5. Ten (10) sets of half size plans (11" x 17")
  6. One full size and one half size complete set to be transmitted to the COUNTY to send to each utility, which has services in or near the project
  7. Electronic copy of all project plans on CD in AutoCAD and PDF formats

### **6.7 FEDERAL, STATE, AND LOCAL PERMITS**

The CONSULTANT shall be responsible for corresponding directly with those agencies responsible for issuing any permits, approvals, or clearances, whether environmental or otherwise, that might be required for this project. Since this project is not currently federally funded, some of the full NEPA clearance requirements may not be necessary.

The CONSULTANT shall seek the clearances and approvals at the most appropriate time to keep the project progressing forward without unnecessary delay. The CONSULTANT shall include the COUNTY on all correspondences with the respective agencies and provide copies of all submitted documents. Once permits or clearances are received, the CONSULTANT shall send an official copy to the COUNTY for their records. These agencies may include, but are not limited to, the Missouri Department of Transportation, the U.S. Army Corps of Engineers, the Missouri Department of Natural Resources, the U.S. Fish & Wildlife Service, U. S. NRCS office, and the St. Charles County Community Development Department.

Requirements for the initial permits can be found in Section Four of MoDOT's Local Public Agency (LPA) Manual. A copy of the manual is available on MoDOT's website (<http://www.modot.mo.gov>).

**At a minimum, the following permits and clearances must be investigated:**

- A. **No Rise Certificate**
  - To be signed and sealed by a Professional Engineer employed by the CONSULTANT
- B. **St. Charles County Floodplain Development Permit**
  - The CONSULTANT will need to prepare the hydraulic calculations and plan sheets necessary for the permit; however, the eventual road contractor will acquire the permit
- C. **Categorical Exclusion**
  - A CE-2 clearance will not be required.
- D. **Section 4(f)**
  - A Section 4(f) clearance is not anticipated.
- E. **Endangered Species**
  - An endangered species clearance may be required.
- F. **Farmland Protection**
  - A farmland impact rating will not be required.
- G. **Section 106**
  - A Section 106 clearance may be required.
- H. **Nationwide or Regional General Permit under 404 permit process and Section 401**
  - The Consultant shall consult with the U. S. Army Corps of Engineers early in the preliminary phase of the project to obtain a Jurisdictional Determination. It is expected that a 404 permit application is required.
- I. **MoDOT Structural Inventory and Assessment (SI&A) form**
  - This form shall be required for any new bridges, including box culverts, over 20 feet in length.

The initial clearances and processing required to obtain any and all permits noted above shall be considered part of the base design contract. Should the project require wetland delineation or mitigation, or an in-depth environmental or archaeological study, those services may be added to

the Contract by addendum.

The CONSULTANT shall proactively seek these approvals. In the event there are any significant coordination issues that impede the ability of the CONSULTANT to acquire the necessary permits or clearances in a timely manner, the COUNTY shall be notified immediately. In specific circumstances, the COUNTY has found it beneficial to meet with representatives of the regulatory agencies on the project site and the CONSULTANT is encouraged to consider this method of coordination. **The CONSULTANT is required to attain all necessary permits and clearances prior to the completion of the Final Design Phase.**

## **6.8 PUBLIC MEETINGS**

An open house public meeting is not anticipated on this project. Instead, the CONSULTANT will provide drawings of the conceptual improvements that will be mailed to the affected property owners by the COUNTY.

With the direct mailing, the public will be allotted **seven to ten calendar days** to submit their written comments about the project by mail, fax, or e-mail. At the end of this period, the CONSULTANT shall prepare a summary listing of all written comments received and respond to the COUNTY with recommendations regarding incorporating those written comments. A copy of each of the written comments received shall also be submitted to the COUNTY at this time.

## **6.9 UTILITY COORDINATION**

St. Charles County recognizes that effective coordination with utility company stakeholders during projects is essential to project success. To assist with these coordination efforts, St. Charles County enacted the *St. Charles County Road Utility Relocation Act (SCCRURA)* [Ordinance No.: 07-019]. This ordinance defines a set of workflow steps, procedures and requirements that are to be followed by all utility companies and St. Charles County during road improvement projects.

As noted previously, the COUNTY will be the primary lead for utility coordination on this project. However, CONSULTANTS are encouraged to familiarize themselves with the SCCRURA as it may help to clarify the phasing of this project and the various deliverables for each phase.

At no less than four stages throughout the project design, the CONSULTANT will submit to the COUNTY updated copies of the half size and/or full size complete plan sets for the COUNTY to transmit to the utility companies along with CD's of project electronics in AutoCAD and PDF file formats. The CONSULTANT shall also provide a written summary with a detailed list of plan changes since the prior sets of plans were transmitted to utilities. After the distribution of plans, a utility coordination meeting with representatives of the various utility companies with facilities located in the project limits will typically be scheduled. The CONSULTANT is not required to attend each meeting unless notified otherwise by the COUNTY. The COUNTY will schedule and administer the meeting. The COUNTY shall also formulate and distribute the meeting minutes.

During the course of the meetings, or following supplemental field investigations such as potholing, the COUNTY or utility companies may request revisions to the project plans to minimize or eliminate potential conflicts. Any adjustment to the roadway plans, which does not degrade the final product and does not appreciable increase the construction cost and that simplifies or eliminates utility adjustments, should be considered. The COUNTY will make the final determination

as to which changes should be incorporated into the final construction plans. The CONSULTANT shall, if within reason and approved by the COUNTY, incorporate changes requested by the utility companies at no additional cost to the COUNTY.

On some occasions, the COUNTY shall include the design of private and/or public utility companies in the construction plans. The CONSULTANT shall receive no additional compensation for this design work, except for cases where it is agreed that substantial additional work is involved.

In order to more accurately depict the utility companies' line locations both horizontally and vertically, many utilities have agreed to pothole locate their services at the request of the COUNTY when conflicts are likely. Utility facility potholing may occur at any phase throughout the project, and the CONSULTANT shall make a survey crew readily available, at no additional expense, to perform the fieldwork, map the results, and adjust the design accordingly, if necessary.

The COUNTY may exercise the line item in the Engineering Design Services Contract for the CONSULTANT to centerline stake and provide a cut sheet for utilities in advance of the bid advertisement. As part of the centerline staking for utilities, the CONSULTANT may also be required to center stake and grade stake several storm sewer structures at no additional expense to the COUNTY. To further encourage early utility relocations, the COUNTY may bid a clearing contract in advance of the bid as well. The CONSULTANT is not anticipated to provide any additional documents for a clearing contract except for ten (10) half-size sets of the latest plans and a CD of project electronics in AutoCAD and PDF file formats. The COUNTY will prepare the bid specifications for the clearing contract.

#### **6.9.1 LOCATING EXISTING UTILITIES**

Prior to the commencement of the project, the COUNTY will have already attempted to contact all of the utility companies purportedly having utility facilities in the project area. The COUNTY will have requested utility facility location maps, and these maps shall be provided to the CONSULTANT as soon as they become available. As part of the Topographic Survey task, the CONSULTANT shall utilize the utility location services of the Missouri One Call system (1-800-DIG RITE) or individual utility locators. The CONSULTANT shall use the utility facility location maps to determine that all of the utility facilities in the project limits have been marked by the locators. The CONSULTANT shall also check the field survey data against the location maps.

The CONSULTANT shall determine whether the utility companies' lines are on private easement or within the existing right-of-way. If on private easement, the CONSULTANT shall determine the Book and Page number on which such easement is recorded in the Recorder of Deeds records and present the information on the project plans.

#### **6.10 DESIGN CRITERIA**

The design criteria selected by the Engineer of Record (employed by CONSULTANT) and approved by COUNTY shall be noted on the title sheet of the plans. If a deviation from applicable design standards is suggested by the CONSULTANT, a design justification for the revised criteria shall be submitted for approval by COUNTY. The selected criteria, with COUNTY-approved justification, shall be kept on file by both the COUNTY and the Engineer.

In general, the CONSULTANT shall use the following design criteria for this project:

- A. General design criteria shall be that as specified by St. Charles COUNTY, FHWA, MoDOT, and AASHTO. Special attention should be made to the requirements of MoDOT's LPA Manual.
- B. When encroaching or crossing flood hazard areas, the Flood Insurance maps and their supporting maps shall be consulted
- C. The various publications of the Federal Highway Administration in their Hydraulic Engineering Circulars shall be used as appropriate
- D. All traffic control signing and pavement markings shall meet the provisions of the latest version of the "Manual on Uniform Traffic Control Devices" published by the Federal Highway Administration
- E. The design of any municipality owned utility line relocations shall be in accordance with the standards and specifications of the jurisdiction owning the utility line
- F. Bicycle consideration in accordance with "Guide for the Development of Bicycle Facilities" as published by AASHTO.
- G. Pedestrian consideration is of the utmost concern and shall be in accordance with the latest compliance regulations, such as ADAAG, and other standard drawings and details as established by MoDOT.

## 7. PROPOSAL EVALUATION CRITERIA

The COUNTY will evaluate all proposals in accordance with the following evaluation factors. Proposers selected to interview with the COUNTY for this project will have submitted a proposal that conforms to the solicitation, illustrated an exemplary understanding of the project particulars, and demonstrated the resource and project management expertise to complete the project efficiently. For this solicitation, **price will not be a factor** in source selection.

*The following list of evaluation criteria is not presented in any particular order of relevance.*

- A. Proposal demonstrates a clear understanding of the tasks outlined in the [Statement of Work](#) and deliverables defined in the [Project Scope of Services](#).
- B. Proposal shall detail the Proposer's impressions of the **unique characteristics** of this project along with a comprehensive description of the proposed project approach to address these issues.
- C. Proposal lists any **services to be subcontracted**, along with the qualifications and capabilities of the subconsultant and the past experiences of the Proposer working with the subconsultant.
- D. Proposal clearly shows that the key personnel have the **technical knowledge and experience** required for the functions, activities, and tasks described in the Statement of Work and Project Scope of Services. The qualifications of the key personnel including

length of time with firm, education, and experience on similar projects shall be included.

- E. Complete Proposed Timetable For Submittals (See [Appendix B](#))
- F. Proposal adequately describes the specific tasks and duties for each of the listed key personnel for this project. In addition, the Proposer shall demonstrate that they can dedicate adequate staff hours to complete the requirements according to their proposed timeline.
- G. Proposal defines a set of **QA/QC procedures** for ensuring the quality and timely submission of each of the project deliverables. These processes shall provide clear, logical, and specific plans, with provisions for identifying and correcting deficiencies.
- H. Proposal describes relevant experience **within the past five years** in projects of comparable size, complexity, and similarity to the objectives of this requirement. The Proposer shall submit specific examples of projects, especially those completed under the STP funding program.
- I. Proximity of the engineering firm to St. Charles County
- J. A **minimum of four** professional references will be required. Other local government agency references are preferred.
- K. The corporate philosophy of the Proposer for managing projects of this nature
- L. Completed Audit Clause for Contracts (See [Appendix A](#))

## **APPENDIX (A): AUDIT CLAUSE FOR CONTRACTS**

**THIS FORM MUST BE COMPLETED AND ENCLOSED WITH THE PROPOSAL**

### Examination of Records

The Contractor's records which shall include, but not be limited to, accounting records (hard copy, as well as computer readable data), written policies and procedures, subcontractor files, indirect cost records, overhead allocation records, correspondence, instructions, drawings, receipts, vouchers, memoranda, and any other data relating to this contract shall be open to inspection and subject to audit and/or reproduction by the COUNTY Auditor, or a duly authorized representative from the COUNTY, at the expense of the COUNTY. The contractor shall preserve all such records for a period of three years, unless permission to destroy them is granted by the COUNTY, or for such longer period as may be required by law, after the final payment. Since the Contractor is not subject to the Missouri Sunshine Law (Chapter 610, RSMo), information regarding the Contractor's operations obtained during audits will be kept confidential.

The Contractor shall require all subcontractors under this contract to comply with the provisions of this article by including the requirements listed above in written contracts with the subcontractors.

### Vendor Information

Company Name: \_\_\_\_\_

Business Address: \_\_\_\_\_

\_\_\_\_\_

Business Hours \_\_\_\_\_

Phone: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Authorized Signature: \_\_\_\_\_

(Indicates acceptance of all terms and conditions)

## APPENDIX (B): PROPOSED TIMETABLE FOR SUBMITTALS

**General notes about using this form:**

- A. This proposed timetable for submittals should be completed and submitted as part of the CONSULTANT'S proposal. The CONSULTANT will have the opportunity further refine the proposed number of days after the completion of the interview and/or during contract negotiations.
- B. The CONSULTANT shall allow for a COUNTY *two (2)* week review time for the task review or re-review of any plan or document submittals, as appropriate.
- C. The number of Calendar days between the approval date or the prior Phase and the completion of the current Phase is all inclusive of the COUNTY review time and any necessary resubmittals and re-reviews.
- D. Refer to the [Scope of Services](#) in this RFP for a full description of the particulars for each phase noted below.
- E. A Phase is not complete until COUNTY issues the approval, and said approval shall not be granted until CONSULTANT has submitted or performed complete and accurate work comprising the requirements for the Phase.
- F. The CONSULTANT is highly encouraged to plan for a comment and resubmittal period within each Phase.

<b>HOPEWELL ROAD BRIDGE REPLACEMENT PROJECT PROPOSED TIMETABLE FOR SUBMITTALS</b>			
<u>PHASE</u>	<u>MAJOR DELIVERABLES</u>	<u>CALENDAR DAYS</u>	<u>START/TRIGGER</u>
<b>Conceptual Design Phase</b>	<i>Topo Survey and Base Map; Conceptual Plans; Preliminary Hydraulic Report; Engineer's Estimate</i>	_____	days after COUNTY issues Notice to Proceed
<b>Preliminary Design Phase</b>	<i>Geotechnical Report; Final Hydraulic Report ; Preliminary Plans; Engineer's Estimate</i>	_____	days after approval of Conceptual Design Phase
<b>Right-of-Way Design Phase</b>	<i>Right-of-Way Plans; Right-of-Way Exhibits; Property Descriptions; Summary Spreadsheet</i>	_____	days after Notice to Proceed with Right-of-Way Design Phase from COUNTY
<b>Final Design Phase</b>	<i>Final Plans; Project Specifications; Engineer's Estimate</i>	_____	days after Notice to Proceed with Final Design Phase from COUNTY



**APPENDIX (C): AFFIDAVIT OF WORK AUTHORIZATION**

**AFFIDAVIT OF WORK AUTHORIZATION**

Comes now \_\_\_\_\_ as \_\_\_\_\_ first being duly  
**(Name)** **(Office held)**  
sworn, on my oath, affirm \_\_\_\_\_ is enrolled and will  
**(Company name)**  
continue to participate in a federal work authorization program in respect to employees that will work  
in connection with the contracted services related to Cappeln Osage and Femme Osage Bridge Re-  
placement Project

for the duration of the contract, in accordance with RSMo Chapter 285.530 (2). I also affirm that .  
\_\_\_\_\_ does not and will not  
**(Company name)**  
knowingly employ a person who is an unauthorized alien in connection with the contracted services  
related to the Cappeln Osage and Femme Osage Bridge Replacement Project for the duration of  
the contract.

***In affirmation thereof, the facts stated above are true and correct (the undersigned under-  
stands that false statements made in this filing are subject to the penalties provided under  
section 575.040, RSMo).***

\_\_\_\_\_  
**Signature (person with authority)**

\_\_\_\_\_  
**Printed name**

\_\_\_\_\_  
**Title**

\_\_\_\_\_  
**Date**

Subscribed and sworn to before me this \_\_\_\_\_ of \_\_\_\_\_. I am commissioned as  
a notary **(Day)** **(Month & Year)**  
Public within the County of \_\_\_\_\_, State of \_\_\_\_\_, and my  
commission expires on \_\_\_\_\_.

\_\_\_\_\_  
**Signature of Notary**

\_\_\_\_\_  
**Date**