

REQUEST FOR LEGISLATIVE ACTION

Completed by County Counselor's Office:

Res/Ord No.: 19297

Sponsor(s): Dennis Waits

Date: Oct. 24, 2016

SUBJECT	<p>Action Requested <input checked="" type="checkbox"/> Resolution <input type="checkbox"/> Ordinance</p> <p>Project/Title: <u>Awarding a Contract for Professional Consulting Services for the Rock Island Railroad Corridor Shared Use Path for the Jackson County Missouri Rock Island Railroad Corridor Authority to Burns and McDonnell of Kansas City, Missouri under the terms and conditions of Request for Qualifications No. 44-15.</u></p>																									
BUDGET INFORMATION <i>To be completed By Requesting Department and Finance</i>	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Amount authorized by this legislation this fiscal year:</td> <td style="text-align: right;">\$1,884,650.08</td> </tr> <tr> <td>Amount previously authorized this fiscal year:</td> <td></td> </tr> <tr> <td>Total amount authorized after this legislative action:</td> <td style="text-align: right;">\$1,884,650.08</td> </tr> <tr> <td>Amount budgeted for this item * (including transfers):</td> <td style="text-align: right;">\$1,884,650.08</td> </tr> <tr> <td>Source of funding (name of fund) and account code number: 014-3601-58020 Special Obligation Fund, Rock Island Rail Corridor Authority, Buildings and Improvements</td> <td style="text-align: right; vertical-align: bottom;">\$1,884,650.08</td> </tr> </table> <p>* If account includes additional funds for other expenses, total budgeted in the account is: \$</p> <p>OTHER FINANCIAL INFORMATION:</p> <p><input type="checkbox"/> No budget impact (no fiscal note required) <input type="checkbox"/> Term and Supply Contract (funds approved in the annual budget); estimated value and use of contract: Department: _____ Estimated Use: \$ _____</p> <p>Prior Year Budget (if applicable): _____ Prior Year Actual Amount Spent (if applicable): _____</p>	Amount authorized by this legislation this fiscal year:	\$1,884,650.08	Amount previously authorized this fiscal year:		Total amount authorized after this legislative action:	\$1,884,650.08	Amount budgeted for this item * (including transfers):	\$1,884,650.08	Source of funding (name of fund) and account code number: 014-3601-58020 Special Obligation Fund, Rock Island Rail Corridor Authority, Buildings and Improvements	\$1,884,650.08															
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PRIOR LEGISLATION	<p>Prior ordinances and (date): _____ Prior resolutions and (date): _____</p>																									
CONTACT INFORMATION	<p>RLA drafted by (name, title, & phone): Barbara Casamento, Purchasing Supervisor, 881-3253</p>																									
	<p>The Rock Island Railroad Corridor Authority requires Professional Consulting Services for the preliminary and final design of approximately 17 miles of shared use path; and all other consulting services necessary for federally funded projects such as environmental review, public hearings and preparation of right-of-way documents. The Purchasing Department issued Request for Qualifications No. 44-15 in response to those requirements.</p> <p>A total of 87 notifications were distributed and 4 responses were received and evaluated as follows:</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Responsiveness 10%</th> <th>Qualifications 50%</th> <th>Technical Approach 40%</th> <th>Total 100%</th> </tr> </thead> <tbody> <tr> <td>Alta Planning Chesterfield, MO</td> <td style="text-align: center;">8</td> <td style="text-align: center;">35</td> <td style="text-align: center;">24</td> <td style="text-align: center;">67</td> </tr> <tr> <td>Burns & McDonnell Kansas City, MO</td> <td style="text-align: center;">10</td> <td style="text-align: center;">45</td> <td style="text-align: center;">36</td> <td style="text-align: center;">91</td> </tr> <tr> <td>HDR Kansas City, MO</td> <td style="text-align: center;">9</td> <td style="text-align: center;">45</td> <td style="text-align: center;">28</td> <td style="text-align: center;">82</td> </tr> <tr> <td>Wilson & Company Kansas City, MO</td> <td style="text-align: center;">9</td> <td style="text-align: center;">25</td> <td style="text-align: center;">28</td> <td style="text-align: center;">62</td> </tr> </tbody> </table> <p>Pursuant to Section 1054.6 of the Jackson County Code, the Director of Finance and Purchasing recommends the award of a contract for Professional Consulting Services for the Rock Island Railroad Corridor Authority to Burns and McDonnell of Kansas City, Missouri as the best proposal received. After the selection of the best proposal, pricing was negotiated and is included in the Award Recommendation.</p>		Responsiveness 10%	Qualifications 50%	Technical Approach 40%	Total 100%	Alta Planning Chesterfield, MO	8	35	24	67	Burns & McDonnell Kansas City, MO	10	45	36	91	HDR Kansas City, MO	9	45	28	82	Wilson & Company Kansas City, MO	9	25	28	62
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CLEARANCE	<input checked="" type="checkbox"/> Tax Clearance Completed (Purchasing & Department) <input checked="" type="checkbox"/> Business License Verified (Purchasing & Department) <input checked="" type="checkbox"/> Chapter 6 Compliance - Affirmative Action/Prevailing Wage (County Auditor's Office)	
ATTACHMENTS	Abstract of Bids Received, Award Recommendation from Mr. Josh Boehm of the Rock Island Railroad Corridor Authority and the pertinent pages of Burns and McDonnell's proposal.	
REVIEW	Department Director: <i>[Signature]</i>	Date: 10-19-16
	Finance (Budget Approval): <i>If applicable</i> <i>[Signature]</i>	Date: 10/19/16
	Division Manager: <i>[Signature]</i>	Date: 10/19/16
	County Counselor's Office:	Date:

Fiscal Note:

This expenditure was included in the Annual Budget.

PC# _____

Date: October 19, 2016

RES # 19297

<u>Department / Division</u>	<u>Character/Description</u>	<u>Not to Exceed</u>
Special Obligation Fund - 014		
<u>3601 - Rock Island Rail Corridor Authority</u>	<u>58020 - Buildings & Improvements</u>	<u>\$ 1,884,650</u>
		<u>\$ 1,884,650</u>



Budgeting

Fiscal Information (to be verified by Budget Office in Finance Department)

- This expenditure was included in the annual budget.
- Funds for this were encumbered from the _____ Fund in ____.
- There is a balance otherwise unencumbered to the credit of the appropriation to which the expenditure is chargeable and there is a cash balance otherwise unencumbered in the treasury to the credit of the fund from which payment is to be made each sufficient to provide for the obligation herein authorized.
- Funds sufficient for this expenditure will be/were appropriated by Ordinance #
- Funds sufficient for this appropriation are available from the source indicated below.

Account Number:	Account Title:	Amount Not to Exceed:

- This award is made on a need basis and does not obligate Jackson County to pay any specific amount. The availability of funds for specific purchases will, of necessity, be determined as each using agency places its order.
- This legislative action does not impact the County financially and does not require Finance/Budget approval.

ABSTRACT OF BIDS

Request for Qualifications No. 44-15 Consulting Services RIRC Opens: 2:00 PM, CDT on 8/2/16		HDR		WSP Parsons Brinckerhoff		Wilson & Company		Burns and McDonnell	
NO	DESCRIPTION	UNIT	QTY	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
1				See Bid	See Bid	See Bid	See Bid	See Bid	See Bid

CERTIFICATION OF BID OPENING
 BIDS WERE PUBLICLY
 OPENED AND RECORDED
 ON: 8-2-2016, BY
Lina Sicilia
 CLERK OF THE LEGISLATURE
Barbara Casamendi
 PURCHASING



Rock Island Rail Corridor Authority

ROCK ISLAND RAIL CORRIDOR AUTHORITY
22501 WOODS CHAPEL ROAD
BLUE SPRINGS, MISSOURI 64015
WWW.JACKSONGOV.ORG

Memorandum

To: Barbara Casamento, Purchasing
From: Josh Boehm, Rock Island Railroad Corridor Authority
Date: October 14th, 2016
RE: Rock Island RFQ 44-15 Evaluation

On July 5, Jackson County issued Request for Qualifications 44-15 for Professional Consulting Services for the Rock Island Corridor. These services include the preliminary and final design of approximately 17 miles of shared use path and all other consulting services necessary for federally funded projects, such as environmental review, public hearings and preparation of right of way documents.

Jackson County received four responses led by the following firms: Alta Planning and Design, Burns and McDonnell, HDR and Wilson & Company.

Table 1 Evaluation of RFQ Submissions and In-Person Interviews

	<i>Points Possible</i>	Alta Planning & Design	Burns and McDonnell	HDR, Inc.	Wilson and Company
Responsiveness to RFQ	10	8	10	9	9
Qualifications	50	35	45	45	25
Technical Approach	40	24	36	28	28
Total Score	100	67	91	82	62

The evaluation committee was composed of stakeholders from the following departments and organizations:

- City of Lee's Summit Public Works (RFQ evaluation only)
- City of Raytown Public Works (RFQ evaluation only)
- City of Kansas City Public Works (RFQ evaluation only)
- Kansas City Area Transportation Authority (RFQ evaluation only)
- Jackson County Public Works
- Jackson County Parks
- Rock Island Railroad Corridor Authority
- Jackson County Purchasing (did not evaluate)

Burns and McDonnell and HDR were both identified for shortlist interviews by the committee. Burns and McDonnell team was identified as the most qualified consultant based on their knowledge of the corridor, experience on bicycle and pedestrian projects in the region, knowledge of federal aid projects and their approach to the project.



Rock Island Rail Corridor Authority

(816) 503-4847

ROCK ISLAND RAIL CORRIDOR AUTHORITY
22501 WOODS CHAPEL ROAD
BLUE SPRINGS, MISSOURI 64015
WWW.JACKSONGOV.ORG

While both teams indicated that they were prepared to meet our aggressive schedule, the Burns and McDonnell team showed a detailed schedule with every sub-task that demonstrated specifically how they thought the schedule could be met, whereas the HDR team only referenced major task items and deliverable dates. The Burns and McDonnell team identified many of the specific challenges of the corridor related to topography, bridges, tunnels, and retaining walls, and they showed specific examples of how bridges could be used in interim conditions and also built out in an ultimate configuration with transit. Furthermore, the Burns and McDonnell team identified a number of small yet important details that will ultimately affect the success of the walking and biking path, such as drainage, the surface of the path, and coordinating with utilities.

The Burns and McDonnell team includes TranSystems, Confluence, HgConsult, VSM, Architectural and Historical Research, Phillips-West Communications, and Gateway Geotechnical. Goals for MBE, WBE, and VBE firms were set at 5% of the contract total for each.

- MBE participation: 5.1% (HgConsult)
- WBE participation: 5.3% (VSM, Architectural & Historical Research, and Phillips – West)
- VBE participation: 7.1% (Gateway Geotechnical)

Based on the qualifications of the consultant team, the necessity of the scope of work, and the reasonableness of the fee proposal, we recommend that this consultant team be awarded the contract for RFQ 44-15 at a total fee not to exceed \$1,884,650.

**ROCK ISLAND CORRIDOR SHARED USE PATH
Jackson County, Missouri**

October 14, 2016



Fee Estimate - PHASE 2

Classification	Hours	Rate	Cost
Corporate Officer			
Level 18	0		\$0.00
Principal			
Level 17	146	\$240.00	\$35,040.00
Level 16	0	\$235.00	\$0.00
Associate			
Level 15	0	\$231.00	\$0.00
Level 14	0	\$218.00	\$0.00
Senior			
Level 13	132	\$209.00	\$27,588.00
Level 12	254	\$189.00	\$48,006.00
Staff			
Level 11	0	\$171.00	\$0.00
Level 10	732	\$157.00	\$114,924.00
Assistant			
Level 9	508	\$139.00	\$70,612.00
Level 8	160	\$119.00	\$19,040.00
Level 7	0	\$87.00	\$0.00
Technician			
Level 6	0	\$76.00	\$0.00
General Office			
Level 5	60	\$62.00	\$3,720.00
Labor Total		1,992	\$318,930.00

Expenses	Quantity	Price	Cost
Mileage	250	\$0.54	\$135.00
Misc Plotting, Public Meeting Expenses, Etc.	1	\$2,500.00	\$2,500.00
Expense Total			\$2,635.00

Labor & Expense Total: \$321,565.00

Subconsultant Fees	Cost	
TranSystems	\$296,094.00	
Confluence	\$37,570.00	
Hg Consult (MBE)	\$42,227.48	
VSM (WBE)	\$7,500.00	
Architectural & Historical Research (WBE)		
Gateway Geotechnical (VBE)		
Phillips - West Communications (WBE)	\$10,000.00	
Subtotal:		\$393,391.48

TOTAL MAXIMUM FEE: \$714,956.48

**ROCK ISLAND CORRIDOR SHARED USE PATH
Jackson County, Missouri**

October 14, 2016



Fee Estimate - PHASE 1

Classification	Hours	Rate	Cost
Corporate Officer			
Level 18	0		\$0.00
Principal			
Level 17	217	\$240.00	\$52,080.00
Level 16	0	\$235.00	\$0.00
Associate			
Level 15	0	\$231.00	\$0.00
Level 14	0	\$218.00	\$0.00
Senior			
Level 13	464	\$209.00	\$96,976.00
Level 12	278	\$189.00	\$52,542.00
Staff			
Level 11	16	\$171.00	\$2,736.00
Level 10	728	\$157.00	\$114,296.00
Assistant			
Level 9	680	\$139.00	\$94,520.00
Level 8	100	\$119.00	\$11,900.00
Level 7	0	\$87.00	\$0.00
Technician			
Level 6	0	\$76.00	\$0.00
General Office			
Level 5	96	\$62.00	\$5,952.00
Labor Total	2,579		\$431,002.00

Expenses	Quantity	Price	Cost
Mileage	500	\$0.54	\$270.00
Misc Plotting, Public Meeting Expenses, Etc.	1	\$5,000.00	\$5,000.00
Expense Total			\$5,270.00

Labor & Expense Total: \$436,272.00

Subconsultant Basic Services	Cost
TranSystems	\$418,217.60
Confluence	\$43,970.00
Hg Consult (MBE)	\$53,794.00
VSM (WBE)	\$28,500.00
Architectural & Historical Research (WBE)	\$38,500.00
Gateway Geotechnical (VBE)	\$134,340.00
Phillips - West Communications (WBE)	\$16,100.00
Subtotal:	\$733,421.60

TOTAL MAXIMUM FEE PHASE 1: \$1,169,693.60

The project will focus on the preparation of final construction plans for the Path and related trailheads and connection points. It is understood that the corridor was secured by the County with the long term objective of providing a multimodal transportation corridor that preserves the integrity of the national rail network and makes provisions for future transit use. While the planning and design of the Path will consider these possibilities, detailed studies relating to the planning of those future facilities, and their related station stops and connections are not included in the scope of this project.

Plans will be prepared in conformance with the MoDOT Engineering Policy Guide (EPG) category 136 Local Public Agency (LPA) policy, and will include the preparation of a Categorical Exclusion (CE2) and associated environmental documentation.

The basis of advancing the final design will be formulated from the Rock Island Corridor Shared-use Path Scoping Study completed in July 2016 on behalf of the KCATA and Jackson County. The design will be completed in two distinct phases: Phase 1 –NEPA Clearance (CE2) and Preliminary Plans; and Phase 2 – Final Design and Preparation of Construction Contract Package.

The primary tasks to be provided to complete the RIRC Shared Use Path design are broken down as follows:

PHASE 1 –NEPA CLEARANCE (CE2) and PRELIMINARY PLANS

- Task 1: Project Administration
- Task 2: Best Path of Trail Planning
- Task 3: Environmental Clearance
- Task 4: Design Direction and Documentation
- Task 5: Preliminary Plans

PHASE 2 –FINAL DESIGN AND PLANS, SPECS, AND ESTIMATES FOR CONSTRUCTION CONTRACTING

- Task 6: Project Administration
- Task 7: Right-of-Way Plans
- Task 8: Final Plans and Contract Plans, Specs, and Estimate (PSE)
- Task 9: Bidding Period Services

Project construction funding is budgeted in the MARC TIP at \$12,500,000. Preliminary and Final plans will be developed for the corridor, approximately 16.5 miles. Following completion of Phase 1, if the County determines that the scope or extents of the design needs to be adjusted to meet funding or other constraints, the scope and fees for development of Final Plans, Specifications, and Estimate for bidding and construction will be adjusted by a negotiated contract amendment.

The order in which the tasks are completed may or may not correspond to the sequence of the task numbers in the scope of services. In fact, the County expects that many tasks listed within the scope of services will be prepared concurrently by the Consultant in order to expedite the preparation of the Preliminary Plans, CE2, final construction contract documents, and associated deliverables. Items of work may be listed in more than one task in the scope of services, solely for the purposes of clarification. It should not be assumed that this is an indication that the items of work must be performed multiple times. However, the results from any item of work may be incorporated into multiple tasks within the scope of services.

The inherent nature and characteristics of this project may require adjustments and refinements in task efforts and deliverables as the design proceeds. Such revisions that can be incorporated into the work or performed as a tradeoff with other efforts that might be deleted or reduced in scope will be identified and negotiated between the Consultant and County, and documented as no-cost modifications to the scope. Preparation and execution of a supplemental agreement will be required prior to performance of any requested work that is considered to be an additional service not included in the original scope of services or fee budget. The Consultant will not be compensated for additional services performed prior to execution of a supplemental agreement. Written confirmation from the County of requested additional services and associated costs prior to formal execution of the supplement will formulate a basis for additional compensation under the supplement, if necessary to accommodate the Consultant's progress towards meeting the schedule. Additional services that are required due to changed or unforeseen conditions, a requested change in the specified end product or additional effort to satisfy environmental or other reviewing agency requirements outside of this scope of services will be considered for inclusion in a supplemental agreement. Additional man-hours required to complete specified tasks are not considered additional services and will not be compensated for in a supplemental agreement.

PHASE 1 –NEPA CLEARANCE AND PRELIMINARY PLANS

Task 1: Project Administration

1.1 Project Management Plan

The Consultant will prepare a Project Management Plan (PMP) to guide project management and staff through each the phases of the project. The PMP will be used as a dynamic management document and will be updated and applied through each significant phase of project development and delivery. The PMP developed in this task will function as an operating guide for County staff and the Consultant throughout the environmental and conceptual engineering process, and will outline the Consultant's plan of action to successfully complete tasks according to the scope of work and within budget. The PMP will contain a refined scope of work, project schedule, staffing allocation plan, schedule and cost control plans, a quality control plan, and a document control plan.

The Consultant will prepare and update an integrated project schedule as one of the critical elements included in the PMP. The integrated schedule will identify durations, timetable and critical path linkages for each subtask and deliverable in the scope of work and subsequent phases for project design, construction and delivery. The schedule will be updated at regular intervals throughout Phase One and used in project management meetings and documents.

The PMP document will specify the organizational structure and project management procedures, and provide a guideline for the orderly interaction of the multiple agencies, organizations and staff implementing the project. Basic elements typically addressed in the PMP are outlined below. The level of detail and emphasis will be updated and monitored as the project progresses through environmental review, preliminary engineering and final design.

- Background on project history, scope, project delivery, schedule and cost
- Organization and staffing
- Management and project controls
- Quality assurance/quality control procedures
- Procurement control
- Design program and management
- Safety and security
- Contract administration
- Public involvement
- Stakeholder involvement
- PMP control and revisions

Deliverables:

- Draft and Final Project Management Plan

1.2 Project Management Activities

1.2.1 The Consultant will perform project management activities, including scheduling, cost control, subconsultant contracting/management, and invoicing. Invoices will be completed and sent on the Consultant's 12-period accounting basis. Progress reports will accompany each invoice, describing the work completed during the subject invoice period.

1.2.2 The Consultant will attend monthly progress meetings for the project duration (assumed 10 meetings for duration of the design – Phases 1 and 2). This scope assumes two attendees from the Consultant per meeting. An additional 6 meetings are anticipated with County and two attendees from the Consultant team staff to review and resolve technical design features.

1.2.3 The Consultant will maintain a CPM schedule, using Microsoft Project, for the duration of the project. This master schedule will include the activities of the Consultant, but will also integrate overall program milestones, including key procurements and construction activities.

1.2.4 The Consultant will develop a Quality Assurance/Quality Control (QA/QC) Plan at the outset of the project. This document will focus on The Consultant's deliverables and will identify QA/QC Task Managers for the major components of the project, along with anticipated milestones for QC reviews. The document will also describe the appropriate levels of review for each of the major components.

1.2.5 The Consultant will establish document management systems for maintaining both internal documents (Consultant administrative and working files) and external documents (files to be shared with the County). The external document management system will be web-based, and will be accessible from County computers.

Deliverables:

- Monthly Invoices
- Meeting Summaries
- Integrated Project Schedule and periodic updates
- Draft and Final Quality Plan

1.3 Public Involvement Support and Assistance

Public involvement scope supports the CE2 and focuses on providing information to and seeking input from the public and stakeholders. Specific tasks include:

1.3.1 Assist with Developing Public Involvement Plan

The Consultant will assist County staff with developing a public involvement plan that outlines:

- Key public involvement activities linked to the schedule for the project and the objectives for each activity.
- Target audiences and mechanism to be used to reach each audience.
- Key messages regarding the project alignment, trailhead locations, required right-of-way or Easements, and the Categorical Exclusion.

1.3.2 County-led Public Forum Meeting

The Consultant will assist the County in planning a single Public Forum Meeting to engage the communities along the Corridor and to convey information and solicit input. The Consultant, at the County's request will furnish material and personnel to support the County at the meeting where community members would have the opportunity to learn more about the project, ask questions and provide comments. All direct costs will be borne by the County. Consultant will

provide up to two key personnel to attend and participate in the meeting. Materials relating to conceptual trail path and trailhead planning will be developed in Task 2 for presentation at the meeting.

Deliverables:

- Meeting Summaries
- Meeting Materials (Prepared in Task 2)

Task 2: Best Path of Trail Planning

2.1 Best Path of Trail Planning

The preliminary planning by the KCATA and Jackson County was completed in the *Rock Island Corridor Shared-Use Path Scoping Study* (July 2016). The *Scoping Study* alignment will be the starting point for the preferred alignment; however, there are still alignment options to be reviewed and analyzed to support a final alignment and location determination. This task will include reviewing and refining the alignment at the View High to Knobtown segment, as well as a discussion of the shared-use path location and design features along the length of the corridor. The goals of this review is to see if capital costs can be reduced and better position the alignment with more detailed information. Three alternatives for the View High to Knobtown segment will be reviewed including:

1. Rock Island Corridor (using Tunnel below Bannister Road)
2. Rock Island Corridor (not using Tunnel), and
3. Little Blue Trace streamway alignment.

Key activities in this effort will include:

- Consultant team will walk the corridor to assess detailed prevailing conditions that would affect the planning and design of the SUP, and to identify critical areas to be assessed at subsequent on-site trailblazing activities with County and key stakeholders.
- Conduct a one-day Best Path of Trail workshop with County staff and up to five key personnel from the Consultant team to review and refine the alignment, including a field visit to review critical locations

Deliverables:

- Prepare draft and final Best Path of Trail summary memorandum.

2.2 Coordination with Regional Transportation Network and Trailheads

2.2.1 Regional Transportation Network

Connections with existing and planned regional trail systems are an important component of this project. The Consultant will research regional trail systems, existing and planned on-street bicycle and pedestrians facilities. As part of this Phase, the Consultant will conduct the additional work necessary to integrate the Rock Island SUP with these existing and proposed systems. The Consultant will also work

with County and KCATA to examine and recommend interconnection with other trail and transit systems.

The Consultant will participate in up to six County-led meetings to establish and review connections with transportation network. Each meeting includes up to three Consultant staff members. Potential meeting participants may include: Kansas City, Raytown, Lee's Summit, Greenwood, Pleasant Hill, MoDOT, KCATA, MARC. No new materials will be developed for these meetings. The following is a list of potential topics of discussion which may include, but is not limited to:

- Greenwood 'gap'
- KCMO Blue River Trail/Cleaver Boulevard connection via Stadium Drive
- Rock Island Transit Feasibility Analysis
- Paragon Star and Little Blue Trace
- Noland Road Junction

2.2.2 Trailhead Locations and Typology

The previous scoping study made a number of initial assumptions with respect to trailhead locations. The following is a list of trailhead locations to be considered:

1. Truman Sports Complex
2. Raytown North
3. Woodson Road
4. Little Blue Trace Park
5. View High/Paragon Star (*assumed by others*)
6. Hartman Park (*only connecting trail/sidewalk and signage needed as this is an existing park with amenities*)
7. Scherer Road

Proposed trailheads will be spaced along the alignment at places close to major activity centers and areas that have available right of way space. The trailhead locations will be sited and configured to reduce overall project cost. Consultant will develop no more than three typologies to be considered by stakeholders. With stakeholder input, preferred components will be selected for inclusion in each trailhead location.

It is assumed that the design of trailheads will incorporate stakeholder input from the Public Forum meeting (Task 1.3.4) and Consultant will prepare exhibits to assist the County in their subsequent outreach efforts. Exhibits for presentation at the Public Forum will include, but not be limited to: colored trailhead plans, perspective views, and precedent images of various proposed components

Initially, the Consultant will start with the general locations that have been previously identified for trailheads. The key factors that the Consultant will use to determine these locations will be:

- Convenient and comfortable connections to major activity centers.
- Direct and convenient connections with roadway network or other trail systems.

- The ability to physically place a trailhead at the location, reviewing available County right of way, utilities and other control features.
- Interaction with existing and potential transit.
- Preserving space for freight and transit facilities within the corridor.

Deliverables:

- Conceptual designs for each trailhead location showing the general foot print and approximate construction limits for assessment of impacts.
- Presentation Materials of conceptual trail and trailhead location and design for use in the Public Forum meeting (Task 1.3.4)
- Prepare a technical memorandum summarizing the final trailhead locations, decision-making process, and options for funding through private sponsorships and potential site developments.

Task 3: Environmental Clearance

The purpose of this task is to prepare a Categorical Exclusion (CE2) compliant with the MoDOT LPA process. It is expected that a Categorical Exclusion (CE2) will be the class of action applicable for this project. The CE2 process and documentation will comply with local, state and Federal requirements, and will be prepared concurrently with the Preliminary Plans efforts.

No significant environmental impacts are anticipated as a result of this project, with any potential minor impacts as identified to be offset with implementation of appropriate mitigation measures or best management practices as agreed upon with MoDOT and other review agencies.

For the purposes of this scope, it is assumed that the Study Area/Area of Potential Effect (APE) is limited to within the existing railroad right-of-way. If MoDOT or other resource agencies determine that the Study Area/APE extends beyond the right-of-way, effort to further complete the resource review will be performed as an Additional Service to be negotiated. Furthermore, if any adverse effects to cultural resources are determined, an MOA and said requirements shall be included in future work.

3.1 Categorical Exclusion Document and Resource Review

Consultant will compile and document CE2 information in compliance with the MoDOT LPA procedures as outlined in Section 136 of the MoDOT EPG, including agency coordination and addressing project features identified per 23CFR771.117(d) to support the final determination of a Categorical Exclusion. The CE2 will be based on the conceptual design prior to development of 35% Preliminary Plans. Additional or refined impacts identified at the 35% Plan level will be addressed and incorporated as necessary into the CE2 prior to development of right-of-way plans.

3.1.1 Resource Review

Using the Form and MoDOT guidance, Consultant will review relevant resources. Some resources will likely require more evaluation than others. At a minimum, the following resources are considered to require evaluation: right-of-way required (including relocations and easements; temporary and permanent), displacements, community impacts, farmland impacts, wetland/stream impacts, wetland quality impacts, floodplain impacts, air quality impacts, noise impacts, cultural resources/Section 4(f)

historic sites, parkland Section 4(f)/6(f) involvement, threatened and endangered species, and hazardous waste.

3.2 Cultural Resources

3.2.1 Historic Context and Architectural Review

Consultant will complete Historic Survey Forms for all resources identified within the Area of Potential effect (APE) found within the right-of-way (i.e., bridges, tunnels, culverts and any other associated rail structures/and or buildings). It is estimated that there are approximately 40 resources that will be examined.

Consultant will prepare a Historic Context Report to include the history of this portion of the rail line, an overview of the resources within the right-of-way, historic and current images and recommendations will be prepared. The Historic Context Report will reference previous studies and reports that may have specifically addressed this portion of the corridor. The report will include historic bridge plans (if available), footnotes and bibliography, and an overarching narrative that could be used on interpretative plaques or signage.

3.2.2 Archeological Review

Consultant will prepare a comprehensive literature review for the APE including historical atlas/plat maps and background research on the development of the area.

Consultant will complete a field inspection consisting of a pedestrian survey of the APE and soil probes will be used where appropriate in open green spaces to determine ground disturbance and intact soils. Photographs will be taken while completing the pedestrian survey and provided in a photo log with reference map.

3.2.3 SHPO Coordination Letter

Consultant will draft a letter to the Missouri State Historic Preservation Office (Missouri SHPO) defining the project and the need to comply with Section 106 for the agency/applicant in charge of this project. Both a hard copy and a digital version will be delivered to include a summary of the historic context, architecture and archeology research.

NOTE: If MoDOT or the Missouri SHPO determines that the APE extends beyond the right-of-way to include adjacent buildings, structures or below ground features, effort to further complete the Section 106 process to include those features will be performed as an Additional Service to be negotiated. Furthermore, if any adverse effects are determined, development of a Memorandum of Agreement and said requirements will be included in the supplemental agreement for Additional Services.

3.3 Parkland Section 4(f)/6(f) Evaluation

3.3.1 Database/Mapping Review

Consultant will determine if adjacent 4(f) properties such as public parks, recreation areas, and wildlife/waterfowl refuges, or historic sites of local, state or national significance are impacted by the project alignment. Consultant will also determine if any adjacent property was developed under Section 6(f) of the Land and Water Conservation Fund Act.

3.3.2 Prepare Compliance Worksheet

If the situation can be handled as a de minimis determination or fits the criteria for a programmatic evaluation, the Consultant will prepare the MoDOT LPA Section 4(f) compliance worksheet and concurrence letter.

NOTE: If MoDOT or FHWA require a full Section 4(f) Evaluation, effort to further complete the Section 4(f) process will be performed as an Additional Service to be negotiated. If MoDOT or FHWA require mitigation for any park or public lands affected by the project that were funded from the Land and Water Conservation Act, effort to further conform with Section 6(f) provisions for mitigation will be performed as an Additional Service to be negotiated.

3.4 Wetland and Waters Evaluation

For this project, the following definitions will apply:

Full Delineation shall mean delineating wetlands and waters of the US (regardless of isolation or jurisdictional status) according to the 1987 Corps Wetland Delineation Manual. The delineation shall include (a) ground level photographs, (b) documentation of wetlands on Corps Wetland Determination Data Sheets (using the Midwest or Great Plains Regional Supplements) at all sample points, and (c) identification and characterization of other waters of the US (streams, lakes, ponds, pits or other impoundments), including delineation of the ordinary high water mark (OHWM) if present and determination of USGS Hydrologic Code and water regime. Field data collection shall be accomplished during the growing season, generally between 1 May and 1 November. The delineation data will be organized in to a clearly written Wetland Delineation Report.

3.4.1 Documentation of Findings and Coordination

Consultant will plot the data that has already been collected on aerial photographs with the alignment and stationing. Data will include wetland boundaries, wetland types, waters of the US (OHWM) and location of data collection points and photographs. The Consultant will prepare a letter for the United States Army Corps of Engineers to determine if a Section 404 Permit will be required as a commitment for project clearance.

3.5 Threatened and Endangered Species Review

3.5.1 Database Review

Consultant will review existing resources and prepare for the site visit. A report from the Missouri Department of Conservations' Natural Heritage Review database will be requested for state-listed species. A report from the US Fish and Wildlife Service's (USFWS) Information for Planning and Conservation (IPaC) database will be requested for state-listed species.

3.5.2 Field Survey

Consultant will visit the project site to determine if suitable habitat for state and federally listed bat species and migratory birds is present within the corridor. Suitable habitat will be delineated with GPS and plotted on aerial photographs for assessment during design.

3.5.3 Documentation of Findings and Coordination

Consultant will plot the data on aerial photographs with the alignment and stationing. Data will include habitat boundaries and types and photographs. The Consultant will prepare a letter for the Missouri Department of Conservation and USFWS to determine if any commitments are needed for project clearance.

3.6 Hazardous Waste Review

3.6.1 Database Review and Windshield Survey

Consultant will complete a Hazardous Waste review for the project's environmental study area to identify the presence or likely presence of known or potential hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures, on the property or into the ground, groundwater, or surface water of the property.

The review will include a review of previously completed Phase I and Phase II Environmental Site Assessments (ESAs) completed for the Union Pacific Railroad and the County. Findings of the ESAs will be supplemented with a windshield review of the project study area.

3.6.2 Documentation of Findings and Coordination

Any facilities identified during the review will be assessed and their potential impact on the project discussed in a technical memo. The memo will be included as an appendix to the NEPA document, with the findings summarized in the main body of the NEPA document.

Note: If MoDOT or Missouri DNR determines and request that soil testing or other hazardous material tests be performed, said work will negotiated and performed as Additional Services.

3.7 Floodplain Studies

Consultant will identify areas where mapped floodplains and regulatory floodways will be crossed, and determine extents of potential impacts. County will obtain and inventory most current and available floodplain maps, and available floodway models from local floodplain managers or FEMA sources for Phase 2 No-Rise analysis.

3.8 Documentation and Revisions

The Consultant will complete the MoDOT Standard CE2 Form. Consultant will obtain agency concurrences and produce supplemental information to attach to the Form. Figures and resource maps will also be required to be attached to the Form and produced or obtained by Consultant. The Form and attachments shall be sent to the County and MoDOT for review and approval. Consultant will submit a revised Form, addressing County, MoDOT and FHWA comments, and prepare the final version of the Form.

Deliverables:

- Draft and Final CE2 Data Form with agency concurrences and supplemental information attached.

Assumptions

Detailed noise studies, including collection of ambient noise readings and modeling are not included in this scope of services.

Detailed air quality studies, including collection of traffic volumes for air quality modeling are not included in this scope of services.

No mitigation negotiations or design is included in this scope of services.

No hazardous material or soil testing is included in this scope of services.

Task 4: Design Direction and Documentation

4.1 Memorandum of Design

Design criteria will need to be developed early in the process of finalizing the CE2 and conducting the ACE. The Consultant will develop Design Criteria for review and approval by the County and KCATA. The

final Design Criteria developed and approved will serve as the basis of design for the ACE phase and final design and construction.

Consultant will develop and deliver one design memorandum; in general, the design criteria will include the following chapters:

- General
- SUP Alignment
- Civil Work
- Structural Design
- Trailhead Design
- Landscaping and Irrigation
- Traffic Control
- Lighting Design
- Safety
- Security
- Geotechnical Research
- Storm Drainage
- Utilities
- Paving Material
- Signage Design

Deliverables:

- The Consultant will prepare a draft and final Design Criteria Manual for this project.

Task 5: Preliminary Plan Development

5.1 Collection of County GIS Base Mapping and review of Utility mapping

County will provide most recent and available GIS mapping and other map sources to support conceptual planning and initial utility coordination efforts, prior to receipt of the final design mapping from the County for preparation of Preliminary Plans.

5.2 Initial Utility Research and Coordination

The Consultant will develop a composite plan of all existing utilities and conduct an analysis to determine the possible conflicts, proposed relocations, and potential utility improvements required to accommodate the proposed project. Relocation of existing and/or construction of new utilities constitute a major element of risk to the owner for the final delivery of this project. The Consultant will identify all high risk utilities, coordinate with utility providers to determine the most appropriate method to mitigate the risk, and develop agreements between the utility owner's and the County for the most appropriate maintenance and access protocols. The County will designate a representative with whom Consultant will coordinate all utility-related activities. Elements of work under this task include:

5.2.1 Initial Utility Coordination

Consultant will work with County staff and the utility companies to progress the utility coordination effort; this will include the distribution of notices, meeting requests, initiating and facilitating

discussions, meeting with and conducting private workshops with both private and public utilities in the corridor, developing mitigation requirements, and maintenance and access protocols, and documenting key decisions.

Consultant will work with the County and each utility to collectively review existing utility franchise agreements and easements to determine each utility company's responsibilities for identification, field locating, relocation and/or replacement of utility lines to accommodate the proposed project facilities.

Consultant will assist the County in developing up to ten utility agreements.

5.2.2 Develop Utility Composite Maps

The Consultant will submit letters to utility owners to obtain as-built and/or design drawings for all utilities anticipated to be within the Rock Island corridor right-of-way, or within 25 feet of the proposed SUP alignment. The Consultant will develop composite drawings to illustrate all utilities based on the as-built and/or design drawing provided by each utility. This information will be coordinated with the design survey to be conducted as part of this scope-of-work. As-built and/or design information will be adjusted as needed based on actual field survey. In the event of discrepancies, between the plan data provided by the utility companies and the design survey, the survey location will control. Discrepancies will be reviewed with the relative utility company to reach a mutual agreement on the location of the utility.

The Consultant will submit the existing utility composite drawings to all known utility owners within the right-of-way for review, comment, and consensus to ensure their facilities, as they know them, are accurately represented in the utility base mapping. Consultant will incorporate utility owner's comments into the utility base mapping and existing utility composite drawings.

5.2.3 Develop Utility Guidelines

The Consultant will work directly with the County and utility companies to develop formal utility guidelines addressing utility protection and relocation, clearance requirements, and access and maintenance protocols for inclusion in the design criteria. The guidelines will be based on discussions with the County and affected utility owners and agreements established for this project.

5.2.4 Develop Initial Utility Conflict Plans

Conceptual utility relocation drawings will be developed to illustrate all proposed utilities to be relocated and the general scope of work anticipated for each. The drawings will identify utilities by type, size, and ownership and their agreed to disposition for each relocation along the proposed alignment.

Assumptions

Consultant will provide a maximum of 80 hours for utility coordination in this phase. Utility location accomplished during this phase will be by SUE Level B methods which includes horizontally locating all known utilities through field locates by others. No pot holing or vertical information on subsurface utilities will be obtained during this phase. If required, level A SUE procedures will be performed either by others or by Consultant as an additional service in Phase 2 design services.

Deliverables:

- Up to 10 utility meeting summaries

- Prepare updated existing utility composite drawings to be developed on existing GIS or other mapping source data.
- Assist the County in developing initial agreements with impacted utility owners. (up to 10)

5.3 Structures Condition Assessment

For the purposes of this SUP project it is assumed that in general, the existing structures will provide the structural capacity to carry SUP loads, including maintenance and emergency vehicle traffic. Structural assessment of the existing bridges will be limited to a qualitative evaluation of the physical condition of the structures, as they relate to general condition and maintenance. Consultant will provide rehabilitation and improvements recommendations based on observation of the physical condition of the structural components of the bridges. County will provide final direction to Consultant with regards to acceptance and limits of any recommendations provided by the Consultant in regards to rehabilitation and corrective improvements. These preliminary structural evaluations will be performed on the following bridges:

- | | | |
|-----|----------|------------------------------|
| 1. | MP 282.2 | 67 th Street |
| 2. | MP 281.6 | Wildwood |
| 3. | MP 280.6 | 75 th Street |
| 4. | MP 280.0 | Frost Road |
| 5. | MP 279.0 | MO Rte 350/Blue Parkway |
| 6. | MP 278.3 | White Oak Creek |
| 7. | MP 277.8 | Bannister Road tunnel |
| 8. | MP 277.0 | Little Blue River |
| 9. | MP 276.3 | Chipman Road |
| 10. | MP 274.8 | SW 3 rd Street |
| 11. | MP 273.8 | Cedar Creek (20 ft. culvert) |

Structures at MP 285.5 (Sportsman Drive), MP 285.2 (Blue Ridge Cutoff), and MP 285.0 (47th Street) will not be included in the evaluation, as new shared use path bridges adjacent to the existing bridges will be designed at these locations. It is assumed that the new bridge structures will not be designed nor rated to handle construction traffic.

This list is limited to existing railroad bridges that are envisioned to be converted to a SUP bridge. The railroad bridges are shown as over roadways or waterways. Only those drainage crossings whose concrete arch width of crossing is greater than 20 feet are classified as bridges. The Bannister Tunnel is also included in this structural assessment. Also, while the project limit starts at Stadium Drive, it is understood that the trail alignment would leave the rail corridor and access the intersection of Raytown Road and Stadium Drive. Consequently, evaluation of the Stadium Drive bridge is not included.

5.3.1 Data Collection

- Collect and review as-built drawings and rehabilitation plans of bridges and tunnels, as available
- Collect and review recent bridge and tunnel inspection reports, as available

5.3.2 Inspect Structures

- Inspect each structure to verify condition of existing bridges and tunnel
- Compare findings to recent inspection reports, as available

- Provide a condition inspection summary for each structure and document any findings that may affect SUP serviceability

Assumptions:

- Available plans will be provided by County
- Desired rating and service life of the structures shall be provided by County
- Access permits required to access the structure will be provided by County
- Traffic control, if necessary to accommodate inspection or access, will be provided by County

Condition Assessment: The intent of the Condition Assessment is to evaluate the structure as compared to the most recent Load Rating, In-Depth and Routine bridge inspection reports provided by the County, ascertain the overall general condition of the structure, and determine the extent of additional inspection and testing required to determine if capacity is sufficient to carry SUP loading.

As-built plans shall be reviewed at such level to determine if Non-Destructive / Destructive testing is necessary to perform structural calculations. This may include the location of internal reinforcement, concrete strength, and other information vital to determining structural capacities.

The inspections shall:

- Not be conducted at an element level, i.e. PONTIS Core Elements
- Be completed without the use of mechanical access equipment, climbing techniques, or other access methods
- Be completed from the ground / deck level accessed by foot using customary visual techniques including binoculars if necessary
- Be completed under the guidance of a registered Professional Engineer (PE) meeting the requirements of a Program Manager as specified in 23 CFR Part 650.309 Qualifications of Personnel
- Be completed by an NBI Team Leader and NBI Team Assistant as defined in 23 CFR Part 650.309 Qualifications of Personnel

Consultant will NOT be responsible for the following:

- Conditions which are not obvious through usual and customary visual inspection techniques.
- Conditions which are not visually accessible to inspectors. It is not the responsibility of inspectors to clean or remove excess debris in order to access bridge elements.
- Conditions or events that occur at or to a structure after the completion of the initial field inspection that may affect the results of the initial field evaluation.
- Inspection below ground surface
- Recommendations related to structure rehabilitation, i.e. mapping of delaminations, spalls, exposed rebar, or other deficiencies

5.3.3 *Assessment for SUP Use*

- Load rating calculations will not be performed for any structures.

- Results from condition inspections will be considered to evaluate if the structures can accommodate SUP service.
- Provide a one-page (no graphics or photos) summary of each bridge listing the critical issues that may affect the bridge capacity and ability to accommodate SUP service.

5.4 Preliminary Structures Design**5.4.1 Preliminary Bridge Design at Specific Locations****MP 285.8 through 280.2 – Nine (9) Drainage Structures**

- Perform refined hydraulic studies to support final design
- Develop preliminary details for lengthening structure
- Develop preliminary details for pedestrian/bike railings (fences), if required

MP 285.5 – Sportsman Drive

- Design new single span shared use path bridge adjacent to the existing structure
-

MP 285.2 - Blue Ridge Cutoff

- Design new single span shared use path bridge adjacent to the existing structure

MP 285.0 - 47th Street

- Design new single span shared use path bridge adjacent to the existing structure

MP 282.2 - 67th Street

- Existing deck plate girder bridge to be reused
- Develop plans for removal of track, ties, ballast
- Develop details for necessary structural rehabilitation
- Develop details for new bridge deck surface
- Develop details for pedestrian/bike railings (fences)
- Develop plan for painting

MP 281.6 – Wildwood Drainage

- Former structure over drainage way (on rail alignment) is unusable
- Develop plans for new trail structure over drainage on offset trail alignment
- Develop details for pedestrian / bike railings (fences)

MP 280.6 - 75th Street

- Existing concrete arch bridge to be reused
- Develop plans for removal of track, ties, ballast
- Develop details for repairs of cracks and other necessary structural rehabilitation
- Develop details for pedestrian/bike railings (fences)

MP 280.0 – Frost Road

- Existing concrete arch bridge to be reused.
- Develop plans for removal of track, ties, ballast, etc.
- Develop details for repair of cracks and other necessary structural rehabilitation.
- Develop details for pedestrian / bike railings (fences).

MP 280.0 thru 279.1 – 6 Drainage Structures

- Perform hydraulic studies
- Develop preliminary details for lengthening structure
- Develop preliminary details for pedestrian fence/railings if required

MP 279.0 – MO-350

- Existing deck plate girder bridge to be reused.
- Develop plans for removal of track, ties, ballast, etc.
- Develop details for necessary structural rehabilitation.
- Develop details for new bridge deck surface.
- Develop details for pedestrian / bike railings (fences).
- Develop plan for repainting

MP 278.3 – White Oak Creek

- Existing concrete arch bridge to be reused.
- Develop plans for removal of track, ties, ballast, etc.
- Develop details for repair of cracks and other necessary structural rehabilitation.
- Develop details for pedestrian / bike railings (fences).

MP 277.7 – Tunnel under Bannister Road

- Existing concrete arch bridge to be reused.
- Develop details for repair of cracks and other necessary structural rehabilitation.
- Develop lighting support locations and attachment method.

MP 277.0 – Little Blue River Bridge

- Existing deck plate girder bridge to be reused.
- Develop plans for removal of track, ties, ballast, etc.
- Develop details for necessary structural rehabilitation.
- Develop details for new bridge deck surface.
- Develop details for pedestrian / bike railings (fences).

MP 276.7 thru 270.5 - 20 Drainage Structures

- Perform refined hydraulic studies
- Develop preliminary details for lengthening structure
- Develop preliminary details for pedestrian fence/railings if required

MP 276.3 – Chipman Road

- Existing concrete arch bridge to be reused.
- Develop plans for removal of track, ties, ballast, etc.
- Develop details for repair of cracks and other necessary structural rehabilitation.
- Develop details for pedestrian / bike railings (fences).

MP 274.8 – SW 3rd Street

- Existing thru plate girder bridge to be reused.
- Develop plans for removal of track, ties, ballast, etc.
- Develop details for necessary structural rehabilitation.
- Develop details for new bridge deck surface.
- Develop details for pedestrian / bike railings (fences).
- Develop plan for painting

Deliverables:

- Inspection letter report containing a summary of current condition; photographs depicting general condition; updated NBI Condition Ratings (if necessary) for NBI Items 58 (Deck), 59 (Superstructure), 60 (Substructure); and recommendations for additional inspection/testing requirements, additional analysis, and general maintenance pertaining to the use of the structure for a Shared Use Path application.

5.4.2 Preliminary Retaining Wall Design

Consultant will prepare preliminary designs for all retaining walls. Retaining walls are assumed to be large block mechanically stabilized earth (MSE) wall systems with concrete foundations. Design of cast-in-place walls are not included in this scope. Note that the number of retaining walls required is assumed to be 26, based on the scoping study and subsequent design directives from the County. The previous scoping study was based on GIS data so some variance in the number of walls is expected, however the scope is limited to 30 walls.

5.5 Traffic Analysis

The Consultant will review traffic patterns at potential at-grade roadway crossings of the SUP. A traffic analysis will be performed to support determination of traffic control at mid-block crossing locations based on traffic data to be provided by the County. The Consultant will provide up to four hours of counts at the following 13 locations to supplement traffic data provided by the County:

- | | | |
|-----|----------|----------------------------|
| 1. | MP 284.1 | 53 rd Street |
| 2. | MP 283.8 | 56 th Street |
| 3. | MP 283.4 | 59 th Street |
| 4. | MP 282.4 | Railroad Street (parallel) |
| 5. | MP 281.3 | Woodson Drive |
| 6. | MP 281.0 | Irwin Road |
| 7. | MP 278.4 | Brickyard Road |
| 8. | MP 274.2 | Old Pryor |
| 9. | MP 273.9 | SW Longview |
| 10. | MP 273.2 | Ward Road |
| 11. | MP 272.2 | Scherer Road |
| 12. | MP 272.0 | Jefferson Street |
| 13. | MP 270.5 | <i>Hamblen Road</i> |

Notes:

- Bannister Road is not included in the above list since the intent is to utilize the tunnel, however traffic counts could be obtained for information sake.
- It is also recognized that Hamblen Road would not constitute a road crossing as the SUP does not cross the roadway. Similarly for purpose of traffic control components, it is assumed that Hamblen Road would not be need any traffic control as the SUP does not cross the roadway
- It is assumed that the Consultant would conduct traffic counts at the 13 locations.

This scope provides for a traffic analysis and control recommendations at up to 13 at-grade crossing locations.

Deliverables:

- Technical memorandum summarizing the traffic counts collected and recommended traffic control measures at at-grade crossings.

5.6 Geotechnical Analysis

Consultant will perform a geotechnical investigation and analysis to support conceptual analysis of retaining walls, embankments, and culvert extensions

5.6.1 Geotechnical Sampling

Consultant will perform a geotechnical investigation to support detailed design of embankments, retaining walls, pedestrian bridge abutments, and culvert extensions. A maximum of 40 samples will be obtained to support retaining wall design based on the assumption of a total of 4,000 linear feet of wall, with a representative average sample spacing of 100 feet. Borings will be advanced to 10 feet in depth, or 3 feet into rock, whichever elevation is higher.

A maximum of 6 borings will be obtained at the abutments for the three pedestrian bridges. Borings will be advanced to 10 feet in depth, or 3 feet into rock, whichever elevation is higher.

An additional 25 borings are included to be obtained to support detailed design and foundation recommendations for drainage culvert extensions.

Consultant will obtain shallow/hand borings and field classifications at selected locations along the alignment of the SUP. Borings will extend to 5 feet in depth, or to refusal, whichever elevation is higher. Locations will be coordinated with the trail designers to be in locations of concern, and at locations that will not change grade significantly. A total of 25 borings and field classifications are included in the scope.

5.6.2 Geotechnical Analysis

Consultant will perform geotechnical analysis and develop preliminary recommendations for design and construction of embankments, bridge abutments, and retaining walls. A maximum of 35 global stability analyses are included in the scope of services.

5.6.3 Staking for Geotechnical Investigation

Consultant will survey the boring locations and provide a stake at the boring with an elevation of the ground surface.

5.7 35% Complete Preliminary Plans

The Consultant will reference Category 235 of the Engineering Policy Guide (EPG) for general guidelines and requirements for preliminary design. The base drawings for the preliminary plans will be used later as full-scale base drawings for right of way and/or final design plans. Other chapters may be applicable for preliminary design preparation. Following completion of Preliminary Plans and development of opinions of construction costs, Consultant and County will establish specific limits of design package to be advanced for purposes of project budgeting and construction contracting.

5.7.1 Supplemental Design Surveys

The Consultant will be responsible for incidental surveying that is required to gather data or provide

control for the detailed design of the project. Supplemental topographic surveys are limited to a total of a 0.5 acre of area.

5.7.2 35% Complete Preliminary Plan Development

The Preliminary Plans will be prepared in accordance with the applicable sections of the MoDOT EPG, including proposed design features based on the following general plan preparation criteria:

- The plan view English scale will be 1"= 50' horizontal and extend at least 500 feet beyond the project limits.
- The profile view English scale will be 1"=50' horizontal, and 1"=10' vertical. The profile view will be placed under the plan view on a combined plan over profile sheet.
- The Preliminary Plans will include the tentative additional easement and right of way limits, property lines and ownerships, section lines, township and ranges, any U.S. Surveys, city limits, and a general outline of the construction staging and critical design items.
- Preliminary at-grade crossing design including preliminary design of traffic control, signing, and pavement marking.
- Typical sections will indicate SUP surface material types and required area of clearing.

5.7.3 Preliminary Drainage Design

- Conceptual design and location of drainage facilities consisting of ditches, small cross-trail culverts, and possible low-water crossings will be designated on the Preliminary Plans.
- For major drainage structures, the Consultant will perform the geometric analysis and hydraulic analysis to develop type, size, and location drawings consisting of a general plan and elevation of the structure, typical trail sections, and trail profiles.

5.7.4 Preliminary Construction Traffic Control Design

Preliminary Plans will include a general traffic control plan with an outline for construction staging conforming to the requirements of the MUTCD and the MoDOT EPG, and as may be supplemented by standards and practices provided by the County. Traffic control plans will be developed specifically for areas of at-grade crossings, bridge construction, and other areas where construction is in the immediate proximity to active roadways.

5.8 Preliminary Utility Coordination

As Preliminary Plans are developed, Consultant will distribute in-progress plans and will facilitate meetings with the public and private/franchise utilities to discuss the project, utility impacts, relocations and possible extensions of public and private utilities, and discuss the potential construction efforts. No utility relocation or extension designs are included in this scope.

5.9 Preliminary Trailhead Design

Consultant will develop preliminary trailhead designs for a maximum of five trailheads based on the locations and typologies established in the regional coordination stakeholder meetings (2.2.1). Understanding that some trailheads will have more amenities than others, design will include selection

of durable site fixtures/furnishings, parking layout, lighting design, and signage. Opportunities for possible future amenities such as shelters or incorporation with future transit stations may be identified, but formal designs or alternatives will not be advanced in this scope.

Trailhead grading and ADA compliance will be taken into consideration relative to trail access and access to surrounding public areas and parking. Structures shall be designed to meet ADA standards as required.

5.10 Preliminary Lighting Design for Trailheads and Tunnel

Consultant will develop preliminary security lighting design plans for trailhead and daytime lighting for the Bannister Road tunnel. Security lighting for trailheads will include KCP&L or city standard street lighting to provide illumination for security only. Tunnel daytime lighting will be based on ANSI/IESNA standards for pedestrian underpasses.

Consultant will coordinate with local electrical utility to determine costs, requirements, and schedule for power drop. County to pay all utility fees associated with this.

5.11 Preliminary Landscape Design for Trailheads

Consultant will develop preliminary landscape designs to accompany each trailhead type along the corridor. This may include a consistent palette of plans throughout the corridor with varying plant configurations related to the type of trailhead and surrounding context. Preliminary landscape designs will be presented to County and stakeholders for review and input from preliminary trailhead designs prepared under Task 5.10.

5.12 Preliminary Opinion of Construction Cost

The Consultant will prepare an opinion of construction cost estimate. The County will prepare the right of way estimate based on the right of way requirements furnished by the Consultant.

5.13 Permits

5.13.1 Section 404/401 Water Quality Permits

Consultant will prepare a United States Army Corps Section 404 Permit application for the project. It is assumed that a Nationwide Permit 14 will be prepared. Consultant will coordinate with the MDNR regarding Section 401 Water Quality Certification. This item may be combined with the above Section 404 Permit, depending on the amount of impacts to waters of the U.S.

NOTE: If an Individual Permit (IP) is required, it will be prepared as an Additional Service. If USACE, or any other agency, determines that mitigation is needed, effort to further complete those services will be performed as an Additional Service to be negotiated.

5.13.2 National Pollution Discharge Elimination System (NPDES) Permit

Consultant will coordinate with the MDNR to receive project authorization under the NPDES.

5.14 FEMA No-Rise Certifications

Consultant will perform hydraulic assessment at watercourse crossings in defined floodplains and regulatory floodways in conformance with FEMA guidelines, to secure a Certification of No-Rise on behalf of the County floodplain manager.

5.15 Combined Location/Design Public Meeting

A Combined Location/Design Public Meeting conforming to the requirements of MoDOT LPA policy guidelines will be conducted after approval of the Preliminary Plans. The County will advertise for the Hearing and will set a date, time, and place. The Consultant's representative will be required to brief the County personnel before the meeting, and to attend the meeting. The Consultant will provide exhibits as requested by the County. County will be responsible for preparation of handout materials. The Consultant will record and prepare the meeting transcript, including the executive summary, and prepare the location sketch for appropriate County Approval. .

The Consultant will assist with:

- Securing the meeting locations. Due to the corridor length, two locations are anticipated in order to effectively reach affected parties along the corridor. County responsible for any costs associated for room rentals and snacks.
- Providing public notice through multiple channels including email, flyers, posting to the project website and Facebook page, and press releases.
- Developing information materials including fact sheet, information boards, presentation and comment cards as well as press packet.
- Providing up to six key personnel to attend the public meeting.
- Summarizing comments and preparation of the meeting transcript.

Deliverables:

- Meeting Exhibits
- Meeting Transcript

PHASE 2 –FINAL DESIGN AND PLANS, SPECS, AND ESTIMATES FOR CONSTRUCTION CONTRACTING

The Scope of Services for development of Final Plans and contract documents includes preparation of final Plans, Specifications, and Estimate (PSE) construction plans for the 16.5-mile long corridor. Clearing of the corridor of potential Indiana Bat habitat will not be included in the construction contract, and will be the responsibility of the County prior to construction of the project.

Bid alternatives, within MoDOT LPA limits (Up to 10% of estimated construction costs) may be included in the bid package.

Task 6: Project Administration

6.1 Project Administration

6.1.1 The Consultant update project management activities, including scheduling, cost control, sub Consultant contracting/management, and invoicing. Invoices will be completed and sent on the Consultant’s 12-period accounting basis. Progress reports will accompany each invoice, describing the work completed during the subject invoice period.

6.1.2 The Consultant will update the CPM schedule, using Microsoft Project, for the duration of the project. This master schedule will include the activities of The Consultant, but will also integrate overall program milestones, including key procurements and construction activities.

6.1.3 The Consultant will update the Quality Assurance/Quality Control (QA/QC) Plan at the outset of the design phase for the project. This document will focus on The Consultant’s deliverables and will identify QA/QC Task Managers for the major components of the project, along with anticipated milestones for QC reviews. The document will also describe the appropriate levels of review for each of the major components.

6.1.4 The Consultant will update the document management systems for maintaining both internal documents (Consultant administrative and working files) and external documents (files to be shared with the client and partnership team). The external document management system will be web-based, and will be accessible from County computers.

Deliverables:

- Monthly Invoices
- Meeting Summaries
- Integrated Project Schedule and periodic updates
- Updated Quality Plan and Project Guide

6.2 Continued Public Involvement

6.2.1 Assist with Continued Public Involvement Activities

The Consultant will assist with continued public involvement activities include:

- Continued stakeholder coordination as requested by the County

Task 7: Right of Way Plans

Following approval of the Preliminary Plans and the CE2 determination, the Consultant will advance the design of Right of Way plans, approximately 65% level of complete plans.

The Consultant will finalize any previous review of the SUP cross sections sufficiently to determine the feasibility of constructing retaining walls versus obtaining additional right of way. This final review will consist of a comparative evaluation of construction costs versus right-of-way costs.

Upon completion of the estimates by County and Consultant, the Consultant will recommend to the County a choice at the various locations which warrant consideration of the alternate retaining wall versus right of way solutions. The County will make the final determination of purchasing right of way, or constructing retaining walls.

Right of Way plans will be submitted to the County and MoDOT for review and approval. The right of way plans will be at the same scale as the construction plans.

If directed by the County, the Consultant will be incorporate revisions to the Right of Way plans resulting from negotiations with the property owners in an effort to acquire the right of way.

The County will be responsible for execution of any agreements with the cities for construction and maintenance of the SUP. County will also be responsible for execution of any utility agreements within the right-of-way or utility-specific designated easements. A copy of the executed agreements will be furnished to the Consultant for informational purposes. The Consultant will review and incorporate design provisions of these agreements.

The County shall review, approve, and certify the Right of Way plans as completed by the Consultant.

7.1 Right of way Plan Development

The following minimum design features will be included on the right of way plans:

- Title sheet with the appropriate project limits, access note and traffic data completed.
- Typical sections
- Cross sections at 50' intervals.
- Construction limits (slope lines); drainage facilities; entrances and their reference location, width and type; property owners, with areas of new right of way, easements and remaining property; centerline bearing, ties to legal land corners from centerline stations with notation for corner witness by a registered land surveyor; existing utility locations and easements, including replacement utility easements; horizontal curvature information; and proper right of way symbolization for new right of way (access control) and easements, including areas which may be required to accommodate temporary erosion control.
- Township, Range, Section and/or U.S. Survey information on each plan sheet near the title block or appropriate survey/section line.
- Advanced trailhead design to the extent necessary to determine final right of way and temporary or permanent easements.

7.2 Incorporate Right of Way Surveys into Plans

The Consultant will rely on right of way survey and property ownership information provided by the

County as developed by others, and incorporate into the Right of Way Plans. Consultant will perform and incorporate additional right of way surveys for one additional parcel not covered in the surveys provided by County (i.e. trailhead locations and other out of right-of-way trail locations).

7.3 Ownership and Encumbrances and Legal Descriptions

Consultant will order Ownership/Encumbrance documents and Full Search Informational Reports for each tract from which right of way or easements are to be obtained, and prepare right of way acquisition legal documents based on approved right of way plans. This scope includes up to twenty properties.

7.4 Appraisals Support

The County will prepare right of way appraisals and secure the necessary right of way by negotiation or condemnation, if necessary, for construction of this project. Consultant will provide support to County in the appraisal process.

7.5 Staking Right of Way

If requested by the County and to performed as an addition, the Consultant will staked tentative right of way on individual properties, as required by County staff, during the right of way negotiation and acquisition phase of the project. If these services are requested, they will be performed as Additional Services.

Task 8: Final Plans and Contract Plans, Specs, and Estimate (PSE)

8.1 Final Plans

Final Plans will be developed for the corridor extending approximately 16.5 miles between Stadium Drive and Hamblen Road. Final plans will include the appropriate and current standards of Jackson County, the Kansas City Metro American Public Works Associations, and the Missouri Department of Transportation.

8.1.1 Final Plan Development

Consultant will develop Final Plans in conformance to MoDOT EPG section 136 and submit to MoDOT on behalf of the County. The following will be considered the as the minimum requirements for the complete Final Plans design set.

- a. Title Sheet
- b. Typical Sections
- c. Quantity Summary Sheets
- d. Alignment Tabulations
- e. Standard Notes
- f. Plan over Profile Sheets at 1"=50' horizontal (or different scale as determined by County Project Manager for clarity) and 1"=10' vertical
- g. Special Sheets for geometrics, referenced points, grading plan, landscaping, seeding, traffic control plan, construction sequencing, trailheads, parking lots, non-regulatory signage, and temporary erosion control plan and any other sheets for special design features
- h. Lighting Sheets, including quantity sheets and power drop
- i. Traffic Beacons/Signals Sheets at 1"=20' horizontal, with appropriate signal quantity

- sheets
- j. Signing and Pavement Marking Sheets, including quantity sheets
- k. Bridge plan set, complete for each structure.
- l. Retaining walls
- m. Tunnel repairs
- n. Culvert Sections at 1"=10' horizontal and vertical
- o. Earthwork Quantities, Cross Sections at 50' intervals, 1"=10' horizontal and vertical, including entrance sections with existing and proposed grades
- p. Tabulation of Quantities Sheets
- q. Construction workday study
- r. Construction estimate

8.1.2 Final Drainage Design

Final design and location of stormwater facilities on the project including ditches and pipe culverts will be designated on the Final Plans including the appropriate Hydrologic and Hydraulic design information

8.1.3 Final Bridge and Major Storm Structure Design

Final bridge design plans will be developed for the following bridges and major storm system extensions, and will include details and limits of rehabilitation as determined in Preliminary Plan Design development with concurrence from the County, including deck modifications to include a stable surface for SUP use and railings.

- MP 285.5 Sportsman Drive (New Shared Use Path Bridge)
- MP 285.2 Blue Ridge Cutoff (New Shared Use Path Bridge)
- MP 285.0 47th Street (New Shared Use Path Bridge)
- MP 282.2 67th Street
- MP 281.6 Wildwood
- MP 280.6 75th Street
- MP 280.0 Frost Road
- MP 279.0 MO Rte 350/Blue Parkway
- MP 278.3 White Oak Creek
- MP 277.8 Bannister Road tunnel
- MP 277.0 Little Blue River
- MP 276.3 Chipman Road
- MP 274.8 SW 3rd Street
- Major Drainage Structures

8.1.4 Final Retaining Wall Design

Prepare final designs for retaining walls.

8.1.5 Final Construction Traffic Control Design

The design plans will include a general traffic control plan with an outline for construction staging conforming to the requirements of the MUTCD and the MoDOT EPG, and as may be supplemented by samples provided by the County. The traffic control plan requires submittal to the County, and cities with jurisdiction for review and approval prior to inclusion in the final design plans.

8.1.6 Final Trailhead Design

Consultant will develop final trailhead designs based on the locations and typologies established in the regional coordination stakeholder meetings and as developed in Preliminary Plan development. Opportunities for possible future amenities such as shelters or incorporation with future transit station previously established may be shown on the plans, but formal designs or alternatives will not be advanced in this scope. Design will be limited to parking lot layout, surfacing, local sidewalk and trail connections, and designation of trailhead equipment as specified by the County.

Trailhead grading and ADA compliance will be taken into consideration relative to trail access and access to surrounding public areas and parking. Structures shall be designed to meet ADA standards as required.

8.1.7 Final Lighting Design for Trailheads and Tunnel

Consultant will develop final lighting design plans for trailhead and daytime lighting for the Bannister Road tunnel. Security lighting for trailheads will include KCP&L or city standard street lighting to provide illumination for security only. Tunnel daytime lighting will be based on ANSI/IESNA standards for pedestrian underpasses.

8.1.8 Final Landscape Design for Trailheads

Consultant will develop final landscape designs to accompany each trailhead type along the corridor. This may include a consistent palette of plans throughout the corridor with varying plant configurations related to the type of trailhead and surrounding context. Preliminary landscape designs will be presented to County and stakeholders for review and input from preliminary trailhead designs prepared under Task 5.10.

8.1.9 Final Temporary Erosion Control Plans

Prepare detailed temporary erosion control plans for review and approval before inclusion in the final design plans. Consultant shall develop a project specific SWPPP, transferable to the Contractor.

8.1.10 Final Opinion of Construction Costs

The Consultant will prepare an opinion of construction cost estimate. The County will prepare the right of way estimate based on the right of way requirements furnished by the Consultant.

8.1.11 Final Utility Coordination

Upon request, the Consultant will furnish design plans, which show approved right of way, drainage facilities, signing, cross sections and roadway design features, for the County's handling and coordination with the utility companies' existing facilities, and proposed plans of adjustments. Consultant will assist the County in providing schedules for utility coordination and the public and private utility company's relocations. Consultant will also assist the County in the preparation and submittal of a Status of Utilities letter of certification conforming to MoDOT policy as required prior to advertisement and construction of the project.

8.2 Plans, Specifications and Estimate Package for Construction

8.2.1 PS&E Contract Plans

Specifications and contract provisions will be based on the Jackson County standard specifications and provisions, supplemented with the appropriate specifications of the Kansas City Metro American Public Works Association, and the MoDOT *Missouri Standard Specifications for Highway Construction*. Consultant will prepare supplemental technical specifications and special provisions to standard

specifications to suit the project needs, and will include the pertinent contract provisions for federal aid projects administered through the MoDOT LPA process and guidelines.

8.2.2 Incorporate Comments and Final Contract Plans, Specifications, and Estimate (PS&E)

Consultant will address MoDOT and County comments on the PS&E package and deliver to County for subsequent advertisement and bidding by the County.

Task 9: Bid Period Services

9.1 Bidding Assistance

Following completion of the design and delivery of the final Plans, Specifications, and Estimate, the Consultant will be available to the County if requested to discuss and interpret the plans and specifications during the bidding and construction phase of the project as determined necessary by the County. During this phase of the project the Consultant will also be required to attend the pre-bid conference, the bid opening, and shall assist the County in bid award recommendations.

END OF SCOPE