

**Supplemental Agreement No. 6  
for  
Engineering/Architectural Services**

**159<sup>TH</sup> STREET & US 69 INTERCHANGE (ST-1058)**

**City of Overland Park, Kansas**

This Supplemental Agreement made this 15th day of April, 2013, by and between the City of Overland Park, Kansas, hereinafter called the "City", and HNTB Corporation, hereinafter called the "Consulting Engineer/Architect."

**WHEREAS**, the City and the Consulting Engineer/Architect have previously entered into an Agreement, dated **September 18, 2006** (the "Original Agreement") for design of **159<sup>th</sup> Street, US 69 Interchange and 159<sup>th</sup> Street, Antioch to Metcalf Projects** (the "Project"); and

**WHEREAS**, Section II of said Original Agreement provides that the Consulting Engineer/Architect may provide the City certain additional services outside the scope of the Original Agreement as requested and authorized in writing by the City; and

**WHEREAS**, the City desires to receive and the Consulting Engineer/Architect desires to provide certain additional services related to the Project as further outlined in Exhibit A, attached hereto and incorporated by reference herein (the "Additional Services"); and

**WHEREAS**, the Supplemental Agreement No. 6 between the parties outlines the understanding of the parties regarding the provision of the Additional Services by the Consulting Engineer/Architect to the City; and

**WHEREAS**, the City is authorized and empowered to contract with the Consulting Engineer/Architect for the necessary Additional Services for the Project, and necessary funds for the payment of said Additional Services are available.

**NOW THEREFORE**, the parties hereby agree as follows:

**PART A - BASIC CONSULTING ENGINEERING/ARCHITECT SERVICES**

The Consulting Engineer/Architect will complete the Additional Services to the City's full satisfaction and in accordance with Exhibit A of this Supplemental Agreement No. 6.

## **PART B - SCHEDULE**

The Consulting Engineer/Architect will complete the Additional Services in the time frame set forth below.

All work shown in Exhibit A of this Supplemental Agreement No. 6 shall be completed in accordance with the Project time frame set forth in the Original Agreement except as specifically modified by Supplemental Agreement No. 1 dated **October 16, 2006**, Supplemental Agreement No. 2 dated **January 8, 2007**, Supplemental Agreement No. 3 dated **February 18, 2008**, Supplemental Agreement No. 4 dated **February 16, 2011**, and Supplemental Agreement No. 5 dated **May 16, 2011**.

## **PART C - PAYMENT TO THE CONSULTING ENGINEER/ARCHITECT FOR SERVICES RENDERED**

The Additional Services will be provided at an amount not to exceed One Million Twenty Nine Thousand Eight Hundred and 00/100 Dollars (\$1,029,800.00) including reimbursables in accordance with Exhibit A, attached hereto and incorporated by reference herein.

This Supplemental Agreement No. 6 raises the maximum fee to Five Million One Hundred Forty Two Thousand Four Hundred Fifty and 00/100 Dollars (\$5,142,450.00) for the Project. This is the total of the fee from the Original Agreement of Eight Hundred Twenty Two Thousand Five Hundred and 00/100 Dollars (\$822,500.00), plus Zero Dollars (\$00.00) for Supplemental Agreement No. 1, plus One Million Five Hundred Forty Thousand Two Hundred and 00/100 Dollars (\$1,540,200.00) for Supplemental Agreement No. 2 plus, One Million Six Hundred Twenty Thousand Three Hundred and 00/100 Dollars (\$1,620,300.00) for Supplemental Agreement No. 3, plus Zero Dollars (\$00.00) for Supplemental Agreement No. 4, plus One Hundred Twenty Nine Thousand Six Hundred Fifty and 00/100 Dollars (\$129,650.00) for Supplemental Agreement No. 5, plus One Million Twenty Nine Thousand Eight Hundred and 00/100 Dollars (\$1,029,800.00) for this Supplemental Agreement No. 6.

## **PART D - OWNERSHIP OF ENGINEERING/ARCHITECTURAL DOCUMENTS**

Upon completion or termination of each Phase of the Project, the Consulting Engineer/Architect shall furnish to the City all documents the City provided to the Consulting Engineer/Architect that the Consulting Engineer/Architect does not need for subsequent Phases.

Upon completion or termination of all Phases for which the City retains the Consulting Engineer/Architect, the Consulting Engineer/Architect shall furnish to the City all original documents the Consulting Engineer/Architect compiled and prepared in performing its Services. Without limitation, these documents include all reports, drawings, CADD files, specifications, software, source code documentation, other electronic files, work flows, procedures, other Consulting

Engineer/Architect-generated documents, and other Consulting Engineer/Architect developed documents pertaining to the Project. These documents, including the underlying intellectual property rights incorporated into these documents, are the City's property. The City's ownership and use of these documents is unrestricted.

Upon completion or termination of each Phase of the Project and at the City's request, the Consulting Engineer/Architect shall furnish to the City copies of all correspondence, memoranda, e-mails, instructions, receipts, invoices, and any other documents pertaining to the Project. These documents are the City's property.

**IN ALL OTHER RESPECTS**, the terms and conditions of the Original Agreement shall remain in full force and effect, except as specifically modified by Supplemental Agreement No. 1 dated **October 16, 2006**, Supplemental Agreement No. 2 dated **January 8, 2007**, Supplemental Agreement No. 3 dated **February 18, 2008**, Supplemental Agreement No. 4 dated **February 16, 2011**, and Supplemental Agreement No. 5 dated **May 16, 2011**, and this Supplemental Agreement No. 6 including all policies of insurance which shall cover the work authorized by these Supplemental Agreements.

**IN WITNESS WHEREOF**, the parties hereto have caused this Supplemental Agreement No. 6 to be executed as of the day and year first above written.

HNTB Corporation

CITY OF OVERLAND PARK, KANSAS

\_\_\_\_\_  
Mike Hess, P.E.  
Vice-President

\_\_\_\_\_  
Carl Gerlach, Mayor

APPROVED AS TO FORM:

ATTEST:

\_\_\_\_\_  
Attorney for City

\_\_\_\_\_  
Marian Cook  
City Clerk

## Scope of Services

### 159<sup>th</sup> Street & US 69 Interchange

#### City Project No. ST-1058

### **Project Description**

The attached Contract Exhibit shows the proposed improvements identified in the Scope of Services. The project will be administered by the City of Overland Park and include overall coordination with the Kansas Department of Transportation (KDOT) regarding the planned bridge and retaining wall construction, interchange, and improvements to US 69. The project includes development of plans and specifications for construction of the following:

#### **159<sup>th</sup> Street & US 69 Interchange**

A modified diamond interchange will be constructed at 159<sup>th</sup> Street and US 69. The project will tie into improvements at 159<sup>th</sup> Street that were designed and constructed in the previous phase of this project. The project also includes the widening of a pair of two span bridges over US 69, associated piers, and retaining wall extensions. Improvements along 159<sup>th</sup> Street will consist of turn lanes to accommodate the interchange, including median reconfiguration and traffic signals.

Improvements along US 69 will include construction of auxiliary lanes on both the northbound and southbound lanes from 151<sup>st</sup> Street to 167<sup>th</sup> Street and the extension of several drainage structures along these new auxiliary lanes.

### **General Design Requirements**

HNTB shall be responsible to design the Project or contract to have the Project designed in conformity with the state and federal design criteria appropriate for the Project as set forth in the current versions of the following documents as applicable: Local Project LPA Project Development Manual; KDOT Design Manual; Geotechnical Bridge Foundation Investigation Guidelines; Bureau of Design's road memorandums; KDOT Standard Specifications for State Road and Bridge Construction with Special Provisions, and with any necessary Project Special Provisions; A Policy on Geometric Design of Highways and Streets of the American Association of State Highway and Transportation Officials Policy; the latest version, as adopted by the Secretary, of the Manual on Unified Traffic Control Devices (MUTCD); and the City of Overland Park Project Procedures Manual. Additionally, the design will follow any necessary Project Special Provisions with the rules and regulations of the Federal Highway Administration pertaining thereto.

The following are general assumptions for the project:

- Final plans and contract documents will be developed for the 159<sup>th</sup> Street & US 69 Interchange Project and the northbound and southbound auxiliary lanes from 151<sup>st</sup> Street to 167<sup>th</sup> Street.
- The City of Overland Park (City) will let the project and administer the contract with the successful construction contractor.
- Design and construction documents will be provided.

- City will provide updated ownership information through a contracted title company
- City will provide any necessary right-of-entry for surveys, geotechnical investigations, etc.
- The WaterOne storage facility will remain in place.

The Design plans shall be signed and sealed by the licensed professional engineer responsible for the preparation of the design plans. Geological investigations or studies shall be signed and sealed in accordance with K.S.A. 74-7042 by the licensed geologist responsible for the preparation of the geological investigations or studies. The retaining wall design shall be signed and sealed by the licensed engineer responsible for the preparation of the retaining wall design (retained by the construction contractor). Rights-of-way descriptions shall be signed and sealed by the licensed land surveyor.

HNTB shall be responsible for the adequacy and accuracy of the Design Plans for the Project. Any review of these items performed by KDOT is not intended to and shall not be construed to be an undertaking of HNTB's duty to provide adequate and accurate Design Plans for the Project. Reviews by KDOT are not done for the benefit of HNTB, the construction contractor, the City, the Developer, any other political subdivision, or the traveling public. KDOT makes no representation, express or implied warranty to any person or entity concerning the adequacy or accuracy of the Design Plans, or any other work performed by HNTB or the City.

HNTB shall submit to the City (and to KDOT upon request) progress reports at monthly or at mutually agreed intervals in conformity with the official Project schedule.

### **Schedule**

The 159<sup>th</sup> Street Interchange Project is scheduled for a January 2014 letting. Construction of the project is anticipated to begin in February 2014 and run through November 2014. Completion of all plan development stages shall occur no later than the current Project schedule's due dates as issued by KDOT, exclusive of delays beyond HNTB's control.

### **Scope of Services (Previously Completed)**

#### **Phase I - Preliminary Design**

This phase of work was scoped under the original contract (TH-0851). Materials and Research (M&R) plans were completed and delivered to KDOT and the City of Overland Park in December 2006.

#### **Phase II - Field Check / Right-of-Way**

This phase of work was scoped under the original contract (TH-0851). Field Check plans were completed and delivered to KDOT and the City of Overland Park in August 2007 for the entire project. Right-of-way plans were completed and delivered to KDOT and the City of Overland Park for the 159<sup>th</sup> Street Thoroughfare project in December 2007.

#### **Phase III - Final Design (159<sup>th</sup> Street Thoroughfare Project)**

This phase of work was scoped under the original contract (TH-0851). Final plans were completed and delivered to KDOT and the City of Overland Park in March 2011.

### **Phase IV - Bidding Phase (159<sup>th</sup> Street Thoroughfare Project)**

This phase of work was scoped under the original contract (TH-0851). The project was let in June 2011 in accordance with the City of Overland Park Procedures Manual.

### **Phase V - Construction Services (159<sup>th</sup> Street Thoroughfare Project)**

The construction phase of the project was scoped under the original contract (TH-0851). The project is scheduled to be completed by October 2012.

### **Scope of Services (Current)**

#### **Phase VI - Final Design (159<sup>th</sup> Street Interchange Project)**

#### **159<sup>th</sup> Street & US 69 Interchange Project**

This scope of services is for development of final plans and specifications for construction of the 159<sup>th</sup> Street & US 69 Interchange and the northbound and southbound auxiliary lanes between 151<sup>st</sup> Street and 167<sup>th</sup> Street, including the following tasks:

- Prepare and finalize legal descriptions for all required acquisitions as identified in the right-of-way plans
- Update and finalize typical sections for US 69 and for the 159<sup>th</sup> Street widening at the interchange
- Prepare final interchange details
- Prepare final intersection details for the ramp terminals
- Prepare final roadway and drainage plans for auxiliary lanes along US 69
- Update and finalize the cross sections for the current construction project
- Prepare final traffic signal, lighting, traffic control/construction sequencing, signing and pavement marking plans, details and quantities
- Prepare final bridge plans and details
- Prepare final retaining wall plan layout and details
- Prepare miscellaneous design details and City/KDOT standards
- Prepare project summary of quantities
- Prepare final drainage details and summary sheets
- Prepare project special provisions
- Submit Final Plans
- Coordinate with the City and KDOT to incorporate any plan comments
- Submit Construction Bid plans and contract documents

### **Roadway**

HNTB will finalize the development of all roadway details including intersection details, guardrail layouts, concrete safety barrier, impact attenuators and erosion control. Final quantities and summary tables will be prepared and all applicable City and KDOT standard details will be included. 2<sup>nd</sup> Field Check plans, Office Check plans, Traffic Engineering plans, & Final plans will be submitted to the City and KDOT for review. Project special provisions will be developed in coordination with addressing review comments. HNTB will coordinate with the City and KDOT during the final stages of the review process and incorporate any changes into the final bid documents.

**Assumptions:**

- The current pavement section will be modified from what is shown in the ROW Plans to remove the overlay of US 69. No improvements will be made to the existing mainline pavement.

**Environmental**

Environmental permits will be developed and submitted to the appropriate agencies. It is anticipated that the following permits will be required:

- Kansas Department of Health & Environment - NPDES
- Division of Water Resources (DWR) Stream Obstruction and Floodplain Fill
- USACE Nationwide
- City of Overland Park Floodplain Development (1)

**Drainage**

There are four (4) existing RCBs within the project limits. All will be extended on both sides of US-69. The extensions will be updated and finalized based on KDOT/City comments and final proposed grading. The interchange and auxiliary lanes require extensions of all four culverts on both sides of US 69. The northernmost RCB at approximate Sta. 594+00 will impact a FEMA regulatory floodplain and floodway on the downstream (east) end. However, because the RCB is inlet controlled, this extension does not influence flood elevations on the downstream (east) end of the culvert. Therefore, a FEMA Map Revision has not been included in this scope of services. The only purpose served with a map revision would be a slight reduction in the floodplain limits on KDOT R/W.

**Assumptions:**

- A FEMA submittal will not be necessary.
- The proposed network of inlets and pipes will be updated and finalized in accordance with design updates and KDOT and City comments.
- Median drain outlet pipes will be extended as necessary and lined with a flexible pipe lining. Outside of the interchange area, which is mostly enclosed storm sewer, flow is not being added to the existing median drains, and therefore replacement will not be necessary.
- Ditch calculations will be updated based on final design and appropriate ditch lining will be determined based on current KDOT design standards.

**Erosion & Sediment Control**

Erosion & sediment control plans will be adjusted based on the final project phasing. A meeting will be held with the City of Overland Park and KDOT to review the design. Updates based on City and KDOT comments will be made as necessary. An Erosion and Sediment Control strategies memo will be created detailing methods and objectives for each drainage basin within the project. This document will be furnished with the KDHE Construction Stormwater permit application.

**Landscaping/Project Aesthetics**

Final aesthetics for the bridge and retaining wall construction will be carried to final design, details, and specifications.



## **Structures**

### **159<sup>th</sup> Street Bridges over US 69:**

As part of a separate project to upgrade 159<sup>th</sup> Street in this area, two new bridges are currently under construction that will accommodate two lanes of traffic on 159<sup>th</sup> Street in each direction across US 69 Highway. Engineering services provided under this contract will include design and plans to widen each of these bridges to add the ultimate six interior lanes to complete a new tight diamond interchange. When complete, the two expanded bridges will carry a total of ten lanes of traffic to include 3 through lanes in each direction and room for double left turn lanes to connect with US 69. When this phase is completed, the new interchange will accommodate two left turn lanes for each movement. A 30 foot wide median will be employed to block usage of the innermost future lanes (ultimate six lane section) until traffic growth warrant usage of the full roadway capacity.

The bridges will be widened in kind with the structures constructed in the initial stage. Prestressed concrete beams will be used for the two equal spans of 96 feet. The piers in the center of the US 69 median will be supplemented with a new 3 column frame with matching architectural shapes. Construction of the abutments for the middle portion of the interchange will be completed with the 159<sup>th</sup> Street Thoroughfare project under construction. This will shorten construction time to complete the proposed bridge widenings.

The concrete deck slabs for the two finished bridges will be separated only by a one inch open joint located at centerline of 159<sup>th</sup> Street. A raised median will be constructed at the center to provide separation between the eastbound and westbound traffic movements.

The structural design and details for the bridges will conform to Kansas DOT design criteria and plan format and amended as directed by the City Engineer to reflect local practices and policies. The governing design code will be the AASHTO Bridge Design Specifications, LRFD, 4<sup>th</sup> Edition. Major bridge design tasks have been broken out in the man-hour summary section of this proposal.

### **Retaining Wall:**

Two mechanically stabilized earth (MSE) retaining walls were constructed with the 159<sup>th</sup> Street Thoroughfare project improvements to facilitate the pair of two-lane bridges. The retaining wall on the west side of US 69 Highway will be extended, both north and south, in order to allow construction of the new interchange ramps located in a very tight configuration. The existing wall will be extended approximately 550 feet to the north and 800 feet to the south. The wall on the east side of US 69 will not require any modification.

HNTB will develop detailed plan and profile sheets for each retaining wall extension to illustrate the required wall geometry superimposed on project planimetrics for existing topography, roadway, bridge, and drainage components and potential conflicts with both existing and new underground obstructions, including utilities, drainage structures, and miscellaneous foundations. Plan and profile details will also include illustration of wall copings profiles, existing ground profile, finished ground profile, and minimum leveling pad elevations.

Typical section details will be created for each retaining wall to illustrate critical features of the proposed retaining wall system. Typical section details will include wall type illustration, wall coping, leveling pad location, approximate limits and type of structural backfill, internal drainage systems, and general proximity to adjacent highway components and grading configuration.

### **Miscellaneous Structural Components**

HNTB will prepare details for special concrete pavement at the approaches to each bridge. City of Overland Park standard approach slab details will be used as appropriate. Plans will be prepared for 8 box culvert extensions using KDOT standard design and details. Construction details will be developed for non-standard concrete safety barriers and transitions for horizontal and/or vertical changes in shape and alignment between dissimilar roadway sections.

### **Public Involvement**

The goal of the public involvement efforts during this phase of the project will be to inform area residents of the project construction schedule, access, and any identified impacts.

**Public Meeting No. 1 (ROW)** Once the project restarts, a meeting prior to ROW acquisition with affected property owners will be conducted. This open house style meeting will be held to allow affected property owners to learn how their property will be impacted and talk with a project team member and a designated right-of-way agent. HNTB will prepare one (1) 8.5x11 handout, comment forms, and sign-in sheets for the meeting. HNTB will coordinate the location with city staff and provide set up for the open house style meeting.

**Public Meeting No. 2 (Construction):** As the project gets ready for construction, a public meeting will be held to discuss traffic control and access expectations. This meeting will review schedule and provide other construction information regarding the project. HNTB will prepare one (1) 8.5x11 handout, comment forms, and sign-in sheets for the meetings. HNTB will coordinate the location with city staff and provide set up for the open house style meeting.

### **Assumptions:**

- The City will develop and send the meeting notices to the mailing list to provide notification of the meetings.
- 100 informational fact sheets will be printed.
- One team prep meeting will be needed.

### **Traffic Engineering**

HNTB will prepare plans for the ultimate traffic signal installations at the US 69 Ramps to include the traffic signal layout, wiring diagram, details, general notes, specifications and bill of materials. Final lighting plans and details will be completed.

The traffic control/construction sequencing concept developed for Field Check will be finalized and final details will be prepared including: typical sections, temporary drainage, work zone signing, attenuation and City/KDOT standards. The preliminary pavement marking plans developed for Field Check will be finalized and final details and

quantities will be prepared. Permanent urban signing plans from field check will be finalized and final details and quantities will be prepared.

**Assumptions:**

- No photo inventory

**Sub consultants**

- Terracon will provide geotechnical services for borings at the 2 light pole foundations.
- Kaw Valley will provide surveying services for pick-up survey, reviewing and updating existing right of way, reviewing & sealing legal descriptions, and developing monumentation map.
- Donoho Appraisals will provide services for the appraisal of 2 additional tracts and the acquisition of 8 tracts.

**General Survey Requirements**

General survey requirements will follow those established in the previous Phases of the project.

**Phase VII - Bidding Phase (159<sup>th</sup> Street Interchange Project)**

The 159<sup>th</sup> Street Interchange project will be let per the City of Overland Park Procedures Manual.

**Phase VIII - Construction Services (159<sup>th</sup> Street Interchange Project)**

The construction phase of the project is assumed to last 10 months. The focus of design services during construction will be:

- Attend the pre-construction conference
- Provide assistance with plan interpretation and respond to requests for information
- Review shop drawings for the bridge, retaining walls, and storm sewer.
- Provide construction observation services for the mainline sanitary sewer work as required by Johnson County Wastewater. A representative from the City will provide construction observation services for all other sanitary sewer work on the project.

**Construction Consultation**

HNTB will attend the pre-construction conference to assist the City in answering any questions that may arise and provide plan interpretation and general consultation during construction.

**Bridges and Retaining Walls**

HNTB will review and recommend conditional approval of shop drawings prepared by manufacturers, fabricators, and/or precasters for all critical bridge components prior to their creation and incorporation into the project. Bridge items anticipated for review and approval for the construction project include: prestressed concrete girders, steel diaphragms, and auxiliary attachments; bearing devices and setting plans; and deck expansion joint assemblies.

HNTB will review Contractor proposals for critical construction operations for safety criteria and compliance with the intent of the design of the bridge. Documentation of bridge construction operations anticipated for the Engineer's review include: construction sequencing plans, girder erection plans, bridge deck formwork and temporary support systems, excavation shoring methods, and concrete placement sequence for deck slab.

HNTB will review and recommend conditional approval of detailed construction drawings prepared by the manufacturer's designer for proprietary mechanically stabilized earth retaining systems. HNTB will also perform a general review of the retaining wall design calculations to check for compliance with project defined loads and design soil parameters, geometry, and specific site conditions.

HNTB will provide general construction consultation for bridges and retaining walls, be available to construction engineering personnel to interpret or clarify bridge and retaining wall design details, supplemental specifications, or quantity estimates, and respond to questions during construction and assist with resolving issues raised by fabricators and contractors in regard to structures.

**Pre-stressed concrete girder fabrication inspection**

HNTB is not contracted for these services at this time.

**Field Inspection and Construction Observation**

HNTB is not contracted for these services at this time.

**Miscellaneous Conditions**

Because of the Secretary of Transportation of the State of Kansas' (Secretary's) obligation to administer state funds, federal funds, or both, the Secretary shall be a third party beneficiary to this agreement between the City and the Consultant. This third party beneficiary status is for the limited purpose of seeking payment or reimbursement for damages and costs the Secretary or the City or both incurred or will incur because the Consultant failed to comply with its contract obligations under this Agreement or because of the Consultant's negligent acts, errors, or omissions. Nothing in this provision precludes the City from seeking recovery or settling any dispute with the Consultant as long as such settlement does not restrict the Secretary's right to payment or reimbursement."

## Deliverables Provided by HNTB Corporation

### 159<sup>th</sup> Street & US 69 Interchange Project

- Contract Documents
- Pre and Post-Construction Certificate of Survey for property corners
- Right-of-Way documents including legal descriptions and property sketches
- 2<sup>nd</sup> Field Check Plans
- Traffic Engineering Plans
- Office Check Plans
- Project Special Provisions
- Final Plans
- Probable construction cost estimate at established milestones (2<sup>nd</sup> Field Check plans, Office Check plans and Final plans).
- Public Involvement exhibits
- Final Record Drawings
- Digital CAD and TIFF files

Item of Work	AUX. LANES					INTERCHANGE					COMBINED					
	Project Manager	Senior Engineer	Engineer	Technician	Total	Project Manager	Senior Engineer	Engineer	Technician	Total	Project Manager	Senior Engineer	Engineer	Technician	Total	
<b>Phase 6 - Final Plans US 69 Interchange Project</b>																
<b>6.1 Data Collection</b>																
6.1.1	Prepare legal descriptions and tract map exhibits for right of way acquisition process (Assumes 11 tracts).	1	8	12	8	29	3	14	26	14	57	4	22	38	22	86
6.1.2	Coordinate survey efforts with Kaw Valley.						2	2			4	2	2		4	
	<b>Subtotal</b>	<b>1</b>	<b>8</b>	<b>12</b>	<b>8</b>	<b>29</b>	<b>5</b>	<b>16</b>	<b>26</b>	<b>14</b>	<b>61</b>	<b>6</b>	<b>24</b>	<b>38</b>	<b>22</b>	<b>90</b>
<b>6.2 Traffic</b>																
	<b>Subtotal</b>															
<b>6.3 Roadway</b>																
<b>6.3.1 Pavement Details &amp; Typical Sections</b>																
6.3.1.1	Finalize US 69 Typical Sections	4	10	16	8	38						4	10	16	8	38
6.3.1.2	Finalize Ramp Typical Sections	1	2	3	3	9	3	6	9	9	27	4	8	12	12	36
6.3.1.3	Finalize 159th St turn lane Typical Sections						2	4	8	8	22	2	4	8	8	22
6.3.1.4	Finalize Miscellaneous Typical Sections	1	1	2	1	5	1	1	6	3	11	2	2	8	4	16
6.3.1.5	Finalize Gore Details	2	4	10	8	24	4	8	20	16	48	6	12	30	24	72
6.3.1.6	Pavement standards and details	1	2	2	6	11	1	2	2	6	11	2	4	4	12	22
<b>6.3.2 Geometrics</b>																
6.3.2.1	Revise and finalize pavement edges	1	2	4	4	11	1	2	4	4	11	2	4	8	8	22
6.3.2.2	Revise and finalize Plan Sheets	1	2	6	8	17	1	2	6	8	17	2	4	12	16	34
6.3.2.3	Revise and finalize Profile Sheets	1	2	6	8	17	1	2	6	8	17	2	4	12	16	34
6.3.2.4	Update guardrail design and create layout sheets	3	3	16	12	34	3	3	16	12	34	6	6	32	24	68
6.3.2.5	Update safety barrier layouts and develop special details						4	6	24	12	46	4	6	24	12	46
6.3.2.6	Complete intersection details at ramp terminals						6	10	30	12	58	6	10	30	12	58
6.3.2.7	Finalize ADA sidewalk ramp design (8)						6	12	40	20	78	6	12	40	20	78
6.3.2.8	Create joint layouts and develop joint plans	1	10	15	15	41	3	28	45	45	121	4	38	60	60	162
6.3.2.9	Update fencing plans		1	2	1	4	2	3	14	11	30	2	4	16	12	34
<b>6.3.3 Retaining Walls</b>																
6.3.3.1	Finalize retaining wall typical sections						2	2	4	4	12	2	2	4	4	12
6.3.3.2	Revise horizontal alignments						2	4	8	4	18	2	4	8	4	18
6.3.3.3	Revise vertical alignments						2	4	10	4	20	2	4	10	4	20
<b>6.3.4 Right of Way</b>																
6.3.4.1	Review updated title work and develop a list of comments for possible changes. Update tract numbers, ownership information, existing and proposed easements, and approximate construction limits based on development, review comments, and title report updates.	1	2	4	4	11	5	10	14	14	43	6	12	18	18	54
6.3.4.2	Update legal descriptions per right-of-way plan comments and during acquisition process.	1	3			4	1	7			8	2	10		12	
6.3.4.3	Attend right-of-way briefing meeting with City and the acquisition agent.	1	1			2	3	3			6	4	4		8	
<b>6.3.5 Traffic Engineering</b>																
6.3.5.1	Complete KDOT lighting plans (U.S. 69 ramp lighting) & Quantities						1	4	24	8	37	1	4	24	8	37
6.3.5.2	Traffic signal plans (2 new signals) at ramp terminals & Quantities						2	4	40	20	66	2	4	40	20	66
6.3.5.3	Complete lighting circuit design						2	4	20	16	42	2	4	20	16	42
6.3.5.4	Complete traffic signal wiring						1	4	12	8	25	1	4	12	8	25
6.3.5.5	Update to new MUTCD specifications & standards and Finalize signing plans & Quantities (urban style layout)	7	18	30	18	73	7	18	30	18	73	14	36	60	36	146
6.3.5.6	Finalize overhead sign panel layouts and details	3	6	12	6	27	3	6	12	6	27	6	12	24	12	54
6.3.5.7	Develop KDOT Signing Structural Cross Sections	1	3	4	3	11	1	3	4	3	11	2	6	8	6	22
6.3.5.8	Complete KDOT signing standards	3	6	10	8	27	3	6	10	8	27	6	12	20	16	54
6.3.5.9	Finalize pavement marking plans & Quantities	3	6	13	8	30	3	6	13	8	30	6	12	26	16	60
6.3.5.10	Complete sequencing/traffic control plans	9	30	35	25	99	9	30	35	25	99	18	60	70	50	198
6.3.5.11	Complete traffic control and detour route signing	4	10	20	12	46	4	10	20	12	46	8	20	40	24	92
6.3.5.12	Complete traffic control standards and quantities	1	14	30	12	57	3	20	40	18	81	4	34	70	30	138
<b>6.3.6 Cross Sections</b>																
6.3.6.1	Finalize and phase proposed surface model for US 69	2	20	40	10	72	2	20	40	10	72	4	40	80	20	144
6.3.6.2	Finalize and phase proposed surface model for all ramps	2	20	26	8	56	2	20	54	12	88	4	40	80	20	144
6.3.6.3	Finalize and phase proposed surface model for 159th St. turn lanes						2	4	8	4	18	2	4	8	4	18
6.3.6.4	Incorporate revised retaining wall design into cross sections						2	8	24	10	44	2	8	24	10	44
6.3.6.5	Incorporate revised drainage design into cross sections	1	2	4	2	9	1	2	4	2	9	2	4	8	4	18
6.3.6.6	Update cross section layout	1	4	10	5	20	1	4	10	5	20	2	8	20	10	40
6.3.6.7	Develop phased cross sections for earthwork calculation purposes only. Develop phased cross sections for incorporation into the plans only in areas necessary to properly illustrate the intention of the construction sequence.	1	14	30	12	57	1	14	30	12	57	2	28	60	24	114
6.3.7	Develop special provisions	1	5	4		10	3	15	12		30	4	20	16		40
6.3.8	Compile standards, details, and specifications	1	2	5	4	12	3	6	15	12	36	4	8	20	16	48
6.3.9	Coordination of future design elements (Noise walls, future reconstruction, grading, site development)						1	4	4		9	1	4	4		9

Item of Work	AUX. LANES					INTERCHANGE					COMBINED				
	Project Manager	Senior Engineer	Engineer	Technician	Total	Project Manager	Senior Engineer	Engineer	Technician	Total	Project Manager	Senior Engineer	Engineer	Technician	Total
6.3.10 Update quantities for 2nd Field Check	1	2	8	2	13	1	4	16	6	27	2	6	24	8	40
6.3.11 Update cost estimate for 2nd Field Check		2	4		6	1	6	8		15	1	8	12		21
6.3.12 Address 2nd Field Check plan comments	2	6	10	12	30	6	14	20	28	68	8	20	30	40	98
6.3.13 Calculate Office Check quantities and create quantity summaries	4	10	24	10	48	4	30	56	22	112	8	40	80	32	160
6.3.14 Develop Office Check cost estimate	1	5	8		14	3	15	16		34	4	20	24		48
6.3.15 Address Office Check plan comments	1	4	5	8	18	3	8	11	16	38	4	12	16	24	56
6.3.16 Calculate final quantities	1	2	8	2	13	1	4	16	6	27	2	6	24	8	40
6.3.17 Develop final cost estimate		2	4		6	1	6	8		15	1	8	12		21
6.3.18 Address final plan comments and Submit Bid Plans and Bid Documents	2	6	10	12	30	6	14	20	28	68	8	20	30	40	98
6.3.19 Quality Assurance		12			12		28			28		40			40
<b>Subtotal</b>	<b>71</b>	<b>256</b>	<b>440</b>	<b>257</b>	<b>1024</b>	<b>136</b>	<b>460</b>	<b>898</b>	<b>523</b>	<b>2017</b>	<b>207</b>	<b>716</b>	<b>1338</b>	<b>780</b>	<b>3041</b>
<b>6.4 Drainage</b>															
<b>6.4.1 Culvert Design (US 69: 4)</b>															
6.4.1.1 Update culvert hydraulics	2	12	30	2	46	2	12	30	2	46	4	24	60	4	92
6.4.1.2 Update culvert profiles	2	6	12	6	26	2	6	12	6	26	4	12	24	12	52
6.4.1.3 Update outlet protection calculations (3)	2	4	8	2	16	2	4	8	2	16	4	8	16	4	32
6.4.1.4 Update drainage details and construction information on roadway plan sheets	2	8	12	8	30	2	8	12	8	30	4	16	24	16	60
6.4.1.5 Update quantity spreadsheet drainage items	1	2	8	4	15	1	2	8	4	15	2	4	16	8	30
<b>6.4.3 Enclosed System</b>															
6.4.3.1 Update inlet layout						2	4	8	4	18	2	4	8	4	18
6.4.3.2 Update spread calculations and top elevations						2	4	16		22	2	4	16		22
6.4.3.3 Update shoulder inlet layout in ramp areas and along CSB on US 69						4	6	16	4	30	4	6	16	4	30
6.4.3.5 Update median inlet layout between NB/SB US 69	1	3	7	1	12	1	3	7	1	12	2	6	14	2	24
6.4.3.6 Update pipe design	1	2	5		8	1	10	15		26	2	12	20		34
6.4.3.7 Update pipe profiles	2	1	5	8	16		11	15	24	50	2	12	20	32	66
6.4.3.8 Update plan sheets/construction notes	1	4	4	6	15	1	6	12	18	37	2	10	16	24	52
6.4.3.9 Create schedule of inlets and manholes/summary tables	1	4	6	4	15	1	6	18	12	37	2	10	24	16	52
6.4.3.10 Coordinate retaining wall underdrains pipes						2	6	16		24	2	6	16		24
6.4.3.11 Evaluate Sequencing & develop temporary drainage layout	1	3	6	3	13	1	3	6	3	13	2	6	12	6	26
6.4.3.12 Calculate final quantities and create quantity summaries	1	1	4	2	8	2	2	8	4	16	3	3	12	6	24
<b>6.4.4 Ditch Design</b>															
6.4.4.1 Update ditch design and ditch profiles	2	4	10	5	21	2	4	10	5	21	4	8	20	10	42
6.4.4.2 Update permanent erosion protection for ditches	2	4	10	4	20	2	4	10	4	20	4	8	20	8	40
6.4.5 Quality Assurance		8			8		8			8		16			16
<b>Subtotal</b>	<b>21</b>	<b>66</b>	<b>127</b>	<b>55</b>	<b>269</b>	<b>30</b>	<b>109</b>	<b>227</b>	<b>101</b>	<b>467</b>	<b>51</b>	<b>175</b>	<b>354</b>	<b>156</b>	<b>736</b>
<b>6.5 Sanitary</b>															
6.5.1 Finalize sanitary sewer design (Update Plan sheets/construction notes, Update pipe encasement design, Conduct final review with JCW, Develop specifications, Calculate final quantities, and Create quantity summary tables)	1	5	4	1	11	1	3	3	1	8	2	8	7	2	19
<b>Subtotal</b>	<b>1</b>	<b>5</b>	<b>4</b>	<b>1</b>	<b>11</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>8</b>	<b>2</b>	<b>8</b>	<b>7</b>	<b>2</b>	<b>19</b>
<b>6.6 Erosion Control</b>															
6.6.1 Create narrative explanations for each phase of US 69 ESC plan.	1	8	2		11						1	8	2		11
6.6.2 Check design for 2-year return interval (hydraulic analysis).	1	2	5	7	15	1	3	5	7	16	2	5	10	14	31
6.6.3 Update ESC plans based on project phasing.	1	4	8	8	21	1	4	8	8	21	2	8	16	16	42
6.6.4 Develop ESC quantities for US 69. Include summary table of these quantities.	1	3	8	4	16	2	3	8	4	17	3	6	16	8	33
6.6.6 Review design with City & KDOT staff and make requested revisions.	2	2	5	3	12	1	3	5	3	12	3	5	10	6	24
6.6.7 Create erosion and sediment control strategies memo detailing methods and objectives for each drainage basin within the project.	1	6	1		8	1	6			7	2	12	1		15
6.6.8 Quality assurance		2			2		2			2		4			4
<b>Subtotal</b>	<b>7</b>	<b>27</b>	<b>29</b>	<b>22</b>	<b>85</b>	<b>6</b>	<b>21</b>	<b>26</b>	<b>22</b>	<b>75</b>	<b>13</b>	<b>48</b>	<b>55</b>	<b>44</b>	<b>160</b>

Item of Work	AUX. LANES					INTERCHANGE					COMBINED					
	Project Manager	Senior Engineer	Engineer	Technician	Total	Project Manager	Senior Engineer	Engineer	Technician	Total	Project Manager	Senior Engineer	Engineer	Technician	Total	
<b>6.7 Environmental</b>																
6.7.1	Prepare the necessary plans and applications for permit submission to and approval of: Develop and submit permits: NPDES, COE 404 Nationwide, DWR Stream Obstruction															
6.7.1.1	Division of Water Resources (DWR) Stream Obstruction & Floodplain Fill.	2	8	24	6	40										
6.7.1.2	US Army Corps of Engineers (COE) 404 Nationwide						4	10	30	16	60	4	10	30	16	60
6.7.1.3	NPDES		2	6	2	10	1	2	6	2	11	1	4	12	4	21
6.7.1.4	City of Overland Park Floodplain Development	2	4	16	4	26						2	4	16	4	26
6.7.2	Quality Assurance		2			2		2			2		4			4
	<b>Subtotal</b>	<b>4</b>	<b>16</b>	<b>46</b>	<b>12</b>	<b>78</b>	<b>5</b>	<b>14</b>	<b>36</b>	<b>18</b>	<b>73</b>	<b>9</b>	<b>30</b>	<b>82</b>	<b>30</b>	<b>151</b>
<b>6.8 Geotechnical</b>																
6.8.1	Coordination with Terracon	2				2	2				2	4				4
	<b>Subtotal</b>	<b>2</b>				<b>2</b>	<b>2</b>				<b>2</b>	<b>4</b>				<b>4</b>
<b>6.9 Structural</b>																
6.9.1	<b>159th Street Bridges (Widen 2 bridges by 36'-4" each)</b>															
6.9.1.1	Prepare a common General Notes sheet.						2	6	10	6	24	2	6	10	6	24
6.9.1.2	Create common quantity summary for all bridge pay items.						1	8	16	12	37	1	8	16	12	37
6.9.1.3	Develop Contour Map and Construction Layout drawings to illustrate proposed bridge widenings.						2	18	36	28	84	2	18	36	28	84
6.9.1.4	Create two Engineering Geology sheets.						1	12	24	18	55	1	12	24	18	55
6.9.1.5	Complete design of pier columns, drilled shafts, and capbeams.						2	36	60	32	98	2	36	60	32	98
6.9.1.6	Create final plans for center piers and crash protection walls.						4	16	56	32	108	4	16	56	32	108
6.9.1.7	Prepare design and details for elastomeric bearing devices.							4	8	6	18		4	8	6	18
6.9.1.8	Design framing scheme for prestressed concrete beams and diaphragms and prepare details for framing plans.						1	8	18	14	41	1	8	18	14	41
6.9.1.9	Design prestressed concrete beams, diaphragms, and attachments.							12	32	24	44		12	32	24	44
6.9.1.10	Develop details for prestressed concrete beams and diaphragms.						2	16	40	20	78	2	16	40	20	78
6.9.1.11	Design concrete deck slab components: deck, raised median, and expansion joints.						2	8	16		26	2	8	16		26
6.9.1.12	Prepare slab plans, deck sections, and concrete placing details.						2	18	44	32	96	2	18	44	32	96
6.9.1.13	Create details for barrier removal, raised medians, and attachments.						2	6	20	16	44	2	6	20	16	44
6.9.1.14	Provide tabular summary of pavement elevations and dead load beam deflections at span tenth points.							6	12	6	24		6	12	6	24
6.9.1.15	Provide tabular summary of all reinforcing steel.						1	12	20	8	41	1	12	20	8	41
6.9.1.16	Perform calculations for estimated quantities for all pay items.						6	16	32	8	62	6	16	32	8	62
6.9.1.17	Estimate probable construction costs based on final quantities.						2	4	6		12	2	4	6		12
6.9.1.18	Perform project supervision and participate in team meetings.						12	40	16		68	12	40	16		68
6.9.2	<b>MSE Retaining Wall (extension of existing west wall)</b>															
6.9.2.1	Coordinate with geotechnical subconsultant and MSE wall manufacturer to evaluate project impacts for selected retaining wall solutions.						2	12	8		22	2	12	8		22
6.9.2.2	Develop final Plan & Profile details of extensions for existing retaining wall to illustrate horizontal and vertical geometry, including top of wall, existing ground, finished ground, and minimum embedment.						10	40	90	60	200	10	40	90	60	200
6.9.2.3	Develop typical section details and special details for site specific conditions.						6	16	32	32	86	6	16	32	32	86
6.9.2.4	Prepare general notes, including requirements for partial dismantling of the existing wall system and sequence of construction of all new segments.						2	12	18	8	40	2	12	18	8	40
6.9.2.5	Prepare final pay item quantities and construction cost estimates.						2	10	14		26	2	10	14		26



Item of Work	AUX. LANES					INTERCHANGE					COMBINED				
	Project Manager	Senior Engineer	Engineer	Technician	Total	Project Manager	Senior Engineer	Engineer	Technician	Total	Project Manager	Senior Engineer	Engineer	Technician	Total
<b>6.9.3 Drainage Structures and Roadside Safety Structures</b>															
6.9.3.1 Finalize structure geometrics for barrel lengths, headwall configurations, and culvert profiles for the extensions (both ends) of 4 existing box culverts.		4	8	5	17	1	4	8	5	18	1	8	16	10	35
6.9.3.2 Order available KDOT standard drawings for conventional R.C. box culverts and determine scope of additional structural details.	1	2	5	1	9		2	5	1	8	1	4	10	2	17
6.9.3.3 Coordinate with hydraulic design engineer to finalize site plan, scour and erosion protection.		3	6		9	1	3	6		10	1	6	12		19
6.9.3.4 Finalize structural details for RCB barrels and headwalls.	1	9	30	24	64	1	9	30	24	64	2	18	60	48	128
6.9.3.5 Prepare metal handrail details for top of headwalls.	2	3	14	9	28	2	3	14	9	28	4	6	28	18	56
6.9.3.6 Prepare quantity calculations for RCB contract pay items and estimate of construction costs.	1	2	12	8	23	1	2	12	8	23	2	4	24	16	46
6.9.3.7 Develop details for concrete bridge approach pavement for the 159th Street bridges. Accommodate unique interchange joint patterning and construction phasing requirements.						2	12	32	24	70	2	12	32	24	70
<b>6.9.4 Quality Assurance for Structural Work Tasks</b>							40			40		40			40
<b>Subtotal</b>	<b>5</b>	<b>23</b>	<b>75</b>	<b>47</b>	<b>150</b>	<b>72</b>	<b>411</b>	<b>735</b>	<b>377</b>	<b>1595</b>	<b>77</b>	<b>434</b>	<b>810</b>	<b>424</b>	<b>1745</b>
<b>6.10 Public Involvement</b>															
6.10.1 Prep for and attend two open house public meetings. Prep includes drafting display information, handouts, comment forms, sign in sheets, securing location and set up for the meetings. One 8 1/2 x 11 color newsletter handout will be created for each meeting and sent out to area residents and business owners along the corridor.	1	1	8	6	16	1	1	8	6	16	2	2	16	12	32
6.10.2 Comment Log Development--manage and track all incoming comments and arrange systematically for ease of tracking and responses. Organize in a electronic file as well as a hard copy.		2	8		10	1	2	8		11	1	4	16		21
6.10.3 Quality Assurance		2			2		2			2		4			4
<b>Subtotal</b>	<b>1</b>	<b>5</b>	<b>16</b>	<b>6</b>	<b>28</b>	<b>2</b>	<b>5</b>	<b>16</b>	<b>6</b>	<b>29</b>	<b>3</b>	<b>10</b>	<b>32</b>	<b>12</b>	<b>57</b>
<b>6.11 Utility Coordination</b>															
6.11.1 Update existing utilities per as built from utilities.	1	6	4	4	15	1	6	4	4	15	2	12	8	8	30
6.11.2 Locate & Field Check existing utilities.		2	2		4		2	2		4		4	4		8
6.11.3 Review final utility agreements for KDOT Right of Way	1	1			2	1	1			2	2	2			4
6.11.4 Update "List of Utilities and Status" (1304) form		4			4		4			4		8			8
6.11.5 Meetings to notify utilities and determine status. (Assume 2 meetings)		3	3		6		3	3		6		6	6		12
6.11.6 Verify required permitting has been completed and approved	1	2	6		9	1	2	6		9	2	4	12		18
6.11.7 Coordinate Staking effort		1	6		7		1	6		7		2	12		14
6.11.8 Quality Assurance		3			3		3			3		6			6
<b>Subtotal</b>	<b>3</b>	<b>22</b>	<b>21</b>	<b>4</b>	<b>50</b>	<b>3</b>	<b>22</b>	<b>21</b>	<b>4</b>	<b>50</b>	<b>6</b>	<b>44</b>	<b>42</b>	<b>8</b>	<b>100</b>

Item of Work	AUX. LANES					INTERCHANGE					COMBINED												
	Project Manager	Senior Engineer	Engineer	Technician	Total	Project Manager	Senior Engineer	Engineer	Technician	Total	Project Manager	Senior Engineer	Engineer	Technician	Total								
<b>6.12 Administration/Meetings</b>																							
6.12.1	Project Coordination with the City and others (Assume monthly meetings or conference calls)(10 months)					6	10	3			19	20	32	19			71	26	42	22			90
6.12.2	Appear at eminent domain or appraiser's hearings necessary to acquire easements and right-of-way for the project (Assumes two meetings).						2				2		6				6		8				8
6.12.3	Prepare monthly progress reports					3	6				9	7	14				21	10	20				30
6.12.4	Prepare for and attend 2nd Field Check review meeting with the City & KDOT.					2	8	2			12	6	16	6			28	8	24	8			40
6.12.5	Prepare for and attend Traffic Engineering review meeting with the City & KDOT. (Assume meeting @ HNTB)						4	1			5		6	1			7		10	2			12
6.12.6	Prepare for and attend Office Check review meeting with the City & KDOT. (Assume meeting @ HNTB)						4				4	2	4	2			8	2	8	2			12
6.12.7	Prepare for and attend Final Plan review meeting with the City & KDOT. (Assume meeting @ HNTB)						4				4	2	4	2			8	2	8	2			12
<b>Subtotal</b>																							
<b>Phase 6 - Final Plans US 69 Interchange Project</b>																							
<b>Phase 6 Fee Summary</b>																							
<b>Labor:</b>		Project Manager @ \$72/hour 9,144 Sr. Engineer @ \$51/hour 23,766 Engineer @ \$41.5/hour 32,204 Technician @ \$35/hour 14,420 Direct Payroll: \$ 79,534					Project Manager @ \$72/hour 21,528 Senior Engineer @ \$51/hour 58,293 Engineer @ \$41.5/hour 83,747 Technician @ \$35/hour 37,310 Direct Payroll: \$ 200,878					Project Manager @ \$72/hour 30,672 Sr. Engineer @ \$51/hour 82,059 Engineer @ \$41.5/hour 115,951 Technician @ \$35/hour 51,730 Direct Payroll: \$ 280,412											
		Multiplier (3.0) \$ 238,600					Multiplier (3.0) \$ 602,600					Multiplier (3.0) \$ 841,200											
<b>Expenses:</b>		Printing/Plotting = 1,000 Travel = 250 Misc. = 200 Total Expense = \$ 1,450					Printing/Plotting = 4,000 Travel = 750 Misc. = 600 Total Expense = \$ 5,350					Printing/Plotting = 5,000 Travel = 1,000 Misc. = 800 Total Expense = \$ 6,800											
<b>Subconsultants:</b>		Kaw Valley Engineering = 3,000 Donoho Appraisals Inc. = 4,000 Total Subconsultant Expense = \$ 7,000					Kaw Valley Engineering = 14,000 Donoho Appraisals Inc. = 5,000 Terracon = 5,000 Total Subconsultant Expense = \$ 24,000					Kaw Valley Engineering = 17,000 Donoho Appraisals Inc. = 9,000 Terracon = 5,000 Total Subconsultant Expense = \$ 31,000											
		<b>Total Fee = \$ 247,050</b>					<b>Total Fee = \$ 631,950</b>					<b>Total Fee = \$ 879,000</b>											

Item of Work	AUX. LANES						INTERCHANGE						COMBINED						
	Project Manager	Senior Engineer	Engineer	Inspector	Technician	Total	Project Manager	Senior Engineer	Engineer	Inspector	Technician	Total	Project Manager	Senior Engineer	Engineer	Inspector	Technician	Total	
<b>Phase 7 - Bidding Phase</b>																			
7.1.1	Prepare and provide plans and specifications in either or both hard copy and electronic (.pdf) formats to bidders at cost to recover expenses of duplication and handling.	1	2	2		4	9	1	4	4		8	17	2	6	6		12	26
7.1.2	Supply plans and specifications in both hard copy and electronic (.pdf) formats to Plan Rooms. Assumes up to 5 sets of full size plans will be provided at no cost.		2	3		5	10		4	7		11	22		6	10		16	32
7.1.3	Maintain bid holders list and attend bid letting.	1	4	2			7	3	8	6			17	4	12	8			24
7.1.4	Consult with and advise the City as to the acceptability of subcontractors and others proposed to do work by the general contractor.	1	2	2			5	3	6	6			15	4	8	8			20
7.1.5	Prepare written addenda to the bidding documents as required and/or requested. Assumes only minor plan or specification revisions. Any significant changes shall be negotiated as additional services in a separate supplemental agreement.		2	2		6	10		6	4			10		8	6		6	20
7.1.6	Assist the City in analyzing bids and making recommendation for award of the construction contract.	1	2	2			5	3	6	6			15	4	8	8			20
7.1.7	Prepare report for City identifying why bids exceeded estimate (if applicable).	1	1	1			3	1	3	3			7	2	4	4			10
7.1.8	Prepare a bid tabulation in printed and MS Excel format.		2	4			6		4	8			12		6	12			18
7.1.9	Arrange for, attend, and prepare meeting minutes for a pre-bid conference.	1	2	2			5	3	6	6			15	4	8	8			20
7.1.10	Provide up to 5 sets of half size (11"x17") color utility relocation plans to the Contractor. Provide up to 10 sets of full (6 sets) and half size (11"x17") (4 sets) final bid plans and contract documents to the Contractor.			1		2	3		3			6	9		4			8	12
7.1.11	Provide 1 set of Mylar full size (22"x34") final bid plans to KDOT.		2			2	4								2			2	4
7.1.12	Provide CAD drawings, TIFF images, and shape files to the City.	1	1	1		1	4	1	1	3		3	8	2	2	4		4	12
<b>Phase 7 - Bidding Phase</b>																			
<b>Phase 7 Fee Summary</b>																			
<b>Labor:</b>		7	23	21		20	71	15	51	53		28	147	22	74	74		48	218
		Project Manager @ \$72/hour 504						Project Manager @ \$72/hour 1,080						Project Manager @ \$72/hour 1,584					
		Sr. Engineer @ \$51/hour 1,173						Project Manager @ \$51/hour 2,601						Sr. Engineer @ \$51/hour 3,774					
		Engineer @ \$41.5/hour 872						Project Manager @ \$41.5/hour 2,200						Engineer @ \$41.5/hour 3,071					
		Technician @ \$35/hour 700						Project Manager @ \$35/hour 980						Technician @ \$35/hour 1,680					
		Direct Payroll: \$ 3,249						Direct Payroll: \$ 6,861						Direct Payroll: \$ 10,109					
		Multiplier (3.0) \$ 9,700						Multiplier (3.0) \$ 20,600						Multiplier (3.0) \$ 30,300					
<b>Expenses:</b>		Printing/Plotting = 5,200						Printing/Plotting = 800						Printing/Plotting = 6,000					
		Travel = 50						Travel = 150						Travel = 200					
		Misc. = 150						Misc. = 350						Misc. = 500					
		Total Expense \$ 5,400						Total Expense \$ 1,300						Total Expense \$ 6,700					
		<b>Total Fee = \$ 15,100</b>						<b>Total Fee = \$ 21,900</b>						<b>Total Fee = \$ 37,000</b>					

Item of Work	AUX. LANES						INTERCHANGE						COMBINED						
	Project Manager	Senior Engineer	Engineer	Inspector	Technician	Total	Project Manager	Senior Engineer	Engineer	Inspector	Technician	Total	Project Manager	Senior Engineer	Engineer	Inspector	Technician	Total	
<b>Phase 8 - Construction Services Phase (Interchange Project)</b>																			
<b>8.1 Data Collection</b>																			
8.1.1	Coordinate Property Corner Restoration. Update the Monumentation Map showing all original, undisturbed property corners and those reset due to construction activities. Submit final copies to the City and County for inclusion in their project files.																		
	2				2	4	4					6	10	6				8	14
<b>Subtotal</b>																			
	2				2	4	4					6	10	6				8	14
<b>8.2 Traffic Engineering</b>																			
<b>Subtotal</b>																			
<b>8.3 Roadway</b>																			
8.3.1	Provide assistance with plan interpretation																		
	4	10	12		6	32	8	22	28		14	72	12	32	40		20	104	
8.3.2	Create and produce minor revisions to plans																		
	2	4	8		5	19	6	8	16		11	41	8	12	24		16	60	
8.3.3	Prepare one set of final record drawings which reflect all change orders, minor design changes, changes made in the field by City representatives and are clearly marked on the construction plan set.																		
	1	2	2		5	10	3	6	6		11	26	4	8	8		16	36	
<b>Subtotal</b>																			
	7	16	22		16	61	17	36	50		36	139	24	52	72		52	200	
<b>8.4 Drainage</b>																			
8.4.1	Provide assistance with plan interpretation																		
	3	5	15		3	26	3	5	15		3	26	6	10	30		6	52	
8.4.2	Review shop drawing for storm sewer inlets.																		
	1	6	2			9	1	8	2		11	2	14	4				20	
8.4.3	Evaluate misc. drainage items (underdrains, etc.)																		
								4	2		2	8		4	2		2	8	
<b>Subtotal</b>																			
	4	11	17		3	35	4	17	19		5	45	8	28	36		8	80	
<b>8.5 Sanitary</b>																			
<b>Subtotal</b>																			
<b>8.6 Erosion Control</b>																			
<b>Subtotal</b>																			
<b>8.7 Environmental</b>																			
<b>Subtotal</b>																			
<b>8.8 Geotechnical</b>																			
<b>Subtotal</b>																			
<b>8.9 Structural</b>																			
8.9.1	Review and recommend approval of shop drawings for bridge superstructure components: beams, diaphragms, bearing devices, and miscellaneous attachments.																		
							2	12	36			50	2	12	36			50	
8.9.2	Review contractor's design and details for bridge formwork for deck slab, including evaluation of overhang brackets and construction loads.																		
								4	12			16		4	12			16	
8.9.3	Review fabricator's shop drawings for bridge deck expansion joint assemblies.																		
								4	10			14		4	10			14	
8.9.4	Review retaining wall manufacturer's design calculations for proprietary system for conformance to project design parameters.																		
							2	4	8			14	2	4	8			14	
8.9.5	Review and recommend approval of retaining wall manufacturer's detailed construction drawings for segmental wall system.																		
							4	12	32			48	4	12	32			48	
8.9.6	Assist with retaining wall modifications required when unexpected geologic conditions are encountered or adjustments become necessary to avoid underground obstructions.																		
							2	8	10		4	24	2	8	10		4	24	
8.9.7	Allow for approximately three field visits to observe sample panels, answer design questions, and help solve problems.																		
							2	12	12			26	2	12	12			26	
8.9.8	Produce revised plan sheets or new plan sheets for owner approved and directed design changes.																		
							2	8	18		8	36	2	8	18		8	36	
8.9.9	Provide general consultation services for bridges and retaining walls. Be available to construction engineering personnel to interpret or clarify bridge and retaining wall design details, specifications, or quantity estimates.																		
							8	40	20			68	8	40	20			68	
<b>Subtotal</b>																			
							22	104	158		12	296	22	104	158		12	296	
<b>8.10 Public Involvement</b>																			
<b>Subtotal</b>																			
<b>8.11 Utility Coordination</b>																			
8.11.1	Coordination with project contractor to review utility information																		
	1	1	1			3	1	1	1			3	2	2	2			6	
<b>Subtotal</b>																			
	1	1	1			3	1	1	1			3	2	2	2			6	

Item of Work	AUX. LANES						INTERCHANGE						COMBINED					
	Project Manager	Senior Engineer	Engineer	Inspector	Technician	Total	Project Manager	Senior Engineer	Engineer	Inspector	Technician	Total	Project Manager	Senior Engineer	Engineer	Inspector	Technician	Total
<b>8.12 Bridge &amp; Retaining Wall Inspection</b>																		
<b>Subtotal</b>																		
<b>8.13 Administration/Meetings</b>																		
8.13.1 Attend preconstruction meeting	1	2	2			5	3	6	4			13	4	8	6			18
8.13.2 Attend weekly progress meetings as directed by the City. Assumes meetings at 2 hours each for 10 months during construction.		28				28		60				60		88				88
8.13.3 Participate in final walk-through inspection	1	2				3	3	6				9	4	8				12
8.13.4 Prepare monthly progress reports	1	2				3	3	4				7	4	6				10
<b>Subtotal</b>	<b>3</b>	<b>34</b>	<b>2</b>			<b>39</b>	<b>9</b>	<b>76</b>	<b>4</b>			<b>89</b>	<b>12</b>	<b>110</b>	<b>6</b>			<b>128</b>
<b>Phase 8 - Construction Phase</b>	<b>17</b>	<b>62</b>	<b>42</b>		<b>21</b>	<b>142</b>	<b>57</b>	<b>234</b>	<b>232</b>		<b>59</b>	<b>582</b>	<b>74</b>	<b>296</b>	<b>274</b>		<b>80</b>	<b>724</b>
<b>Phase 8 Fee Summary</b>																		
<b>Labor:</b>	Project Manager @ \$72/hour 1,224 Sr. Engineer @ \$51/hour 3,162 Engineer @ \$41.5/hour 1,743 Technician @ \$35/hour 735 Direct Payroll: \$ 6,864 Multiplier (3.0) \$ 20,600						Project Manager @ \$72/hour 4,104 Senior Engineer @ \$51/hour 11,934 Engineer @ \$41.5/hour 9,628 Technician @ \$38/hour 2,065 Direct Payroll: \$ 27,731 Multiplier (3.0) \$ 83,200						Project Manager @ \$72/hour 5,328 Sr. Engineer @ \$51/hour 15,096 Engineer @ \$41.5/hour 11,371 Technician @ \$35/hour 2,800 Direct Payroll: \$ 34,595 Multiplier (3.0) \$ 103,800					
<b>Expenses:</b>	Printing/Plotting = 1,000 Travel = 300 Misc. = 300 Total Expense \$ 1,600						Printing/Plotting = 4,000 Travel = 700 Misc. = 700 Total Expense \$ 5,400						Printing/Plotting = 5,000 Travel = 1,000 Misc. = 1,000 Total Expense \$ 7,000					
<b>Subconsultants:</b>	Kaw Valley Engineering = 1,000 Total Subconsultant Expense \$ 1,000 <b>Total Fee = \$ 23,200</b>						Kaw Valley Engineering = 2,000 Total Subconsultant Expense \$ 2,000 <b>Total Fee = \$ 90,600</b>						Kaw Valley Engineering = 3,000 Total Subconsultant Expense \$ 3,000 <b>Total Fee = \$ 113,800</b>					
<b>Phase 6, 7, and 8 Fee Summary</b>																		
<b>Phase 6 Fee (Final Plans Interchange) =</b>	Labor = 238,600 Expenses = 1,450 Subconsultant = 7,000 Total Fee = \$ 247,050						Labor = 602,600 Expenses = 5,350 Subconsultant = 24,000 Total Fee = \$ 631,950						Labor = 841,200 Expenses = 6,800 Subconsultant = 31,000 Total Fee = \$ 879,000					
<b>Phase 7 Fee (Bidding Services) =</b>	Labor = 9,700 Expenses = 5,400 Subconsultant = - Total Fee = \$ 15,100						Labor = 20,600 Expenses = 1,300 Subconsultant = - Total Fee = \$ 21,900						Labor = 30,300 Expenses = 6,700 Subconsultant = - Total Fee = \$ 37,000					
<b>Phase 8 Fee (Construction Services) =</b>	Labor = 20,600 Expenses = 1,600 Subconsultant = 1,000 Total Fee = \$ 23,200						Labor = 83,200 Expenses = 5,400 Subconsultant = 2,000 Total Fee = \$ 90,600						Labor = 103,800 Expenses = 7,000 Subconsultant = 3,000 Total Fee = \$ 113,800					
<b>Total Phase 6, 7 and 8 =</b>	<b>\$ 285,350</b>						<b>\$ 744,450</b>						<b>\$1,029,800</b>					
<b>Supplement Agreement No. 6 Amount =</b>													<b>\$1,029,800</b>					

## 159th Street & US 69 Interchange Project Schedule

