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|---|---|
| Project Name: Relief Sewer: Dykes Branch Interceptor | Document Type: Design Recommendation |
| Project Number: 81000990 | Contract Number: 1659 |
| Project Manager: Dave Hauser | Contract Administrator: Jamie Driskell |

| Review Schedule | |
|--|---|
| This final version of this document is needed no later than the following date: | A |
| The First Line Review is to be completed no later than the following date: | S |
| The Objective Review is to be completed no later than the following date: | A |
| Smart Sewer Program Approval for Issuance needed no later than the following date: | P |

| First Line Review | |
|--|---------------|
| Project Manager: Dave Hauser | April 6, 2023 |
| Signature | Date |

| Smart Sewer Design/Construction Manager | |
|---|----------|
| <i>Kyle Toujes</i> | 4/6/2023 |
| Signature | Date |

| KC Water Smart Sewer Program Manager | | |
|--------------------------------------|-------------------------------------|---------|
| <i>[Signature]</i> | DocuSigned by: <i>Wes Minder</i> | 4/11/23 |
| Signature | <small>50CCF2C28AE1472...</small> | Date |



smartsewer
INNOVATION & INFRASTRUCTURE TO LAST A LIFETIME

MEMORANDUM

DATE: April 6, 2023

TO: Wes Minder, P.E., Director

CC: Andy Shively, P.E., Deputy Director

FROM: Dave Hauser, P.E., Smart Sewer Project Manager Andrew Kimeu 4/12/2023

SUBJECT: **Design Professional Contract recommendation for Relief Sewer: Dykes Branch Interceptor, Project No. 81000990, Contract No. 1659**

DS

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On October 17, 2022, WSD advertised a request for proposals from design professionals to assist in the updating of the Relief Sewer; Dykes Branch Interceptor. Work includes the development of sanitary sewer system capacity improvement alternatives related to the sizing and alignment of the relief sewer, the quantity and location(s) of cross connections between the existing interceptor and the relief sewers to share flow, and preliminary and final design of the selected alternative to provide the necessary conveyance capacity to meet the Consent Decree level of service requirements. The City will provide the updated hydraulic modeling results that will need to be evaluated by the Design Professional. A pre-proposal meeting was held on October 26, 2022. Proposals were received on November 10, 2022.

Project Description:

The Water Services Department of the City of Kansas City, Missouri, intends to convey the 5-year peak sanitary sewer flow without the occurrence of sanitary sewer overflows by designing a parallel relief sewer and cross connections that improve the conveyance capacity of the Dykes Branch Interceptor in the Blue River South Basin. Task series listing to be included in the Basic Scope of Services is organized as follows:

1. Task Series 100 – Project Management and Administration
2. Task Series 200 – Public Involvement
3. Task Series 300 – Field Investigations and Data Review
4. Task Series 400 – Alternatives and Routing Alignment Evaluation
5. Task Series 500 – Preliminary Design
6. Task Series 600 – Utility Coordination
7. Task Series 700 – Envision™ Sustainability Design
8. Task Series 800 – Work Tracking Application
9. Task Series 900 – Develop Construction Contract Drawings and Limited Specifications
10. Task Series 1000 – Bidding Phase Services

ATTACHMENT C: BUDGET SUMMARY
 Contract No. 1659 Project No. 81000990
 Relief Sewer: Dykes Branch Interceptor
 DESIGN PROFESSIONAL SERVICES FEES

| FEE SUMMARY | TASK SERIES % of total Base Fee | TOTAL LAMP RYNEARSON PROJECT HOURS | TOTAL PROJECT = LAMP RYNEARSON LABOR + TOTAL EXPENSES FEE | LAMP RYNEARSON LABOR (PRIME) | EXPENSES (Subcontractor Costs and Prime Contractor Reimbursable Expenses) | | | | | Taliaferro & Browne (WBE) |
|--|---------------------------------------|---|---|------------------------------------|---|---|-------------------------------|------------------|------------------|---------------------------------|
| | | | | | TOTAL EXPENSES (Subcontractor & Prime Reimbursable) | LLR Reimbursable Expenses (mileage, printing) | McCurdy Engineers (WBE) | EAE (WBE) | Tsi (WBE) | |
| Task 100 - Project Management and Administration | 13.7% | 740 | \$ 152,840 | \$ 152,640 | \$ 200 | \$ 200 | \$ - | \$ - | \$ - | \$ - |
| Task 200- Public Involvement | 1.4% | 64 | \$ 16,040 | \$ 13,140 | \$ 2,900 | \$ 500 | \$ 2,400 | \$ - | \$ - | \$ - |
| Task 300 - Field Investigations and Data Review | 17.2% | 272 | \$ 192,140 | \$ 44,000 | \$ 148,140 | \$ 50 | \$ - | \$ 33,456 | \$ 114,634 | \$ - |
| Task 400 - Alternatives and Alignment Evaluations | 15.2% | 824 | \$ 169,820 | \$ 143,850 | \$ 25,970 | \$ 250 | \$ 10,300 | \$ 15,420 | \$ - | \$ - |
| Task 500 - Preliminary Design | 16.5% | 1,050 | \$ 184,500 | \$ 174,030 | \$ 10,470 | \$ 500 | \$ 9,970 | \$ - | \$ - | \$ - |
| Task 600 - Utility Coordination | 3.9% | 32 | \$ 43,400 | \$ 5,740 | \$ 37,660 | \$ - | \$ - | \$ 37,660 | \$ - | \$ - |
| Task 700 - Envision™ Sustainability Design | 1.1% | 32 | \$ 12,160 | \$ 6,400 | \$ 5,760 | \$ - | \$ - | \$ 5,760 | \$ - | \$ - |
| Task 800 - Work Tracking Application | 0.4% | 32 | \$ 4,760 | \$ 4,760 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Task 900 - Develop Contract Documents and Limited Specifications | 27.6% | 1,388 | \$ 309,270 | \$ 271,340 | \$ 37,930 | \$ 500 | \$ 27,410 | \$ 10,020 | \$ - | \$ - |
| Task 950 - Bid Phase Services | 3.0% | 170 | \$ 34,100 | \$ 30,180 | \$ 3,920 | \$ 100 | \$ 3,820 | \$ - | \$ - | \$ - |
| TOTAL BASE FEE | 100.0% | 4,604 | \$ 1,119,030 | \$ 846,080 | \$ 272,950 | \$ 2,100 | \$ 59,900 | \$ 68,860 | \$ 33,456 | \$ 114,634 |
| Percentage of Total Base Fee Per Firm | | | 100% | 75.6% | | 0.2% | 4.8% | 6.2% | 3.0% | 10.2% |

| | |
|-------------------------|-------|
| MBE % (T&B and TSI) | 13.2% |
| WBE % (McCurdy and EAE) | 11.0% |

Optional Services \$110,970
 Total Contract Amount \$1,230,000

ATTACHMENT C: McCurdy Fee Buildup

Contract No. 1659 Project No. 81000990

Relief Sewer: Dykes Branch Interceptor

| | | Traffic Engineer | Design Engineer / QAQC | Direct Labor |
|-----------------|---|------------------|------------------------|------------------|
| | <i>Labor Hourly Rate (includes 3.04 multiplier)</i> | \$ 150 | \$ 130 | |
| Task 200 | Public Involvement | | | |
| 201 | Public Meeting Assistance (1 meeting) <i>Attend 1 public meeting & prepare traffic control material for meetings</i> | 16 | | |
| | <i>Subtotal Task 200 Hours & Fee</i> | 16 | | \$ 2,400 |
| Task 400 | Alternatives and Routing Alignment | | | |
| 401 | Relief Sewer Alternatives Evaluation <i>Maintenance of Traffic (MoT) plan for 2 alternative sewer alignments, estimates, BOD write up, and attend up to 2 meetings with Engineer and/or City.</i> | 60 | 10 | |
| | <i>Subtotal Task 400 Hours & Fee</i> | 60 | 10 | \$ 10,300 |
| Task 500 | Preliminary Design | | | |
| 501 | Integrated Public Infrastructure Evaluation (ADA only) <i>Narrative detailing ADA facilities & potential improvements, update est. MoT alternatives, narrative for BOD report updated.</i> | 24 | 4 | |
| | QAQC Preliminary Design Plans | | 45 | |
| | <i>Subtotal Task 500 Hours & Fee</i> | 24 | 49 | \$ 9,970 |
| Task 900 | Develop Contract Documents | | | |
| | Project Administration | 12 | | \$ 1,800 |
| 901 | 60% Construction Contract Documents <i>Temporary Traffic Control (TTC) & detour plans, quantities, details. General traffic control plan for neighborhood streets. Attend 1 meeting with City staff.</i> | 85 | 15 | \$ 14,700 |
| 901 | QAQC 60% Plans | | 45 | \$ 5,850 |
| 904 | 90% Construction Contract Documents | 30 | | \$ 4,500 |
| 905 | Prepare 90% Temporary Traffic Control Opinion of Probable Construction Cost | 2 | 2 | \$ 560 |
| | <i>Subtotal Task 900 Hours & Fee</i> | 129 | 62 | \$ 27,410 |
| Task 950 | Bid Phase Services | | | |
| 951 | Pre-bid Conference | 6 | | \$ 900 |
| 953 | Bid Assistance and Evaluation (Respond to TTC related RFIs) | 16 | 4 | \$ 2,920 |
| | <i>Subtotal Task 950 Hours & Fee</i> | 22 | 4 | \$ 3,820 |
| | TOTAL HOURS / SUBTOTAL | 251 | 125 | |
| | Staff Labor | \$ 37,650 | \$ 16,250 | |
| | Total Labor Loaded, x 3.04 | | | \$ 53,900 |
| | PROJECT TOTAL | | | \$ 53,900 |

ATTACHMENT C: TSi Geotech Fee Buildup

Contract No. 1659 Project No. 81000990
Relief Sewer: Dykes Branch Interceptor

| Task 303 - Geotechnical Investigations | | | | | | | | | | | | | |
|--|--|-----------|---------------|----------------------------|-------------|------------|------------------|--------------|----------------|-------|------------|-------------------|---------------|
| | | Principal | Group Manager | Engineer VI / Sr. Engineer | Engineer II | Eng I/Tech | Admin / Clerical | Lead Driller | Driller Helper | Labor | Expenses # | Expense Unit Cost | Expense Total |
| Field Investigation | Engineering Labor | | | | | | | | | | | | |
| | Drilling Labor | | | | | | | | | | | | |
| | Drilling Direct Expenses: | | | | | | | | | | | | |
| | Mob/Demob, Local | | | | | | | | | | | | |
| | Daily Truck Usage (Logger) | | | | | | | | | | | | |
| | Daily Rig Usage Charge - ATV | | | | | | | | | | | | |
| | Daily Support Truck Usage | | | | | | | | | | | | |
| | Pavement Repair, Remove Cuttings | | | | | | | | | | | | |
| | Bentonite Chips (per bag) | | | | | | | | | | | | |
| | Stemming Plug (each) | | | | | | | | | | | | |
| | Fuel Surcharge | | | | | | | | | | | | |
| | Rock Coring - \$600 per 10-foot (coring, testing, & reporting fees). Note 1 section of 10 foot rock boring estimated. Additional Rock will be Optional Services. | | | | | | | | | | | | |
| | Drilling In-Direct Expenses: | | | | | | | | | | | | |
| | Traffic Control, lane closure, per day | | | | | | | | | | | | |
| | Site Clearing, per day | | | | | | | | | | | | |
| KC/MO Permit | | | | | | | | | | | | | |
| Laboratory Testing | Supervision Labor | | | | | | | | | | | | |
| | Laboratory Direct Expenses: | | | | | | | | | | | | |
| | Classification | | | | | | | | | | | | |
| | Moisture Content | | | | | | | | | | | | |
| | Penetrometer | | | | | | | | | | | | |
| | Extrusion | | | | | | | | | | | | |
| | Unit Weight | | | | | | | | | | | | |
| | Unconfined Compression | | | | | | | | | | | | |
| | Atterberg Limits | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Analysis & Report Preparation | Labor | | | | | | | | | | | | |
| | TOTAL HOURS / SUBTOTAL | | | | | | | | | | | | |
| | Staff Unloaded Labor \$ | | | | | | | | | | | | |
| | Total Labor | | | | | | | | | | | | |
| EXPENSES TOTAL | | | | | | | | | | | | | |
| PROJECT TOTAL | | | | | | | | | | | | | |

