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Mr. Gary S. Beck, P.E.
Vice President
George Butler Associates, Inc.
9801 Renner Boulevard, Ste. 300
Lenexa, Kansas 66219

RE: Project No. 81000801/Contract No. 1401 – Birmingham Area 2 Inflow and Infiltration (I/I) Reduction Project

Dear Mr. Beck:

Please find attached the signed copy of the executed Amendment No. 1 for the subject of work associated with Project No. 81000801/Contract No. 1401.

If you have any questions regarding the attached Amendment No. 1, please contact Julie McNiff, Project Manager at (816) 447-9892 or ijmcniff@burnsmcd.com.

Sincerely,

Karen B. Lopez Contract Administration
Enclosure

cc: Julie McNiff, Project Manager
Contract File 1401

**DESIGN PROFESSIONAL SERVICES
AMENDMENT NO. 1**

CONTRACT NO. 1401 PROJECT NO. 81000801

**BIRMINGHAM AREA 2 INFLOW AND INFILTRATION (I/I) REDUCTION PROJECT
WATER SERVICES DEPARTMENT**

This amendment is between KANSAS CITY, MISSOURI, a constitutionally chartered municipal corporation (City), and George Butler Associates, Inc. (Design Professional). The parties amend the Agreement entered into on July 24, 2018 as follows:

WHEREAS, City has previously entered into a contract dated July 24, 2018 in the amount of \$715,000.00; and

WHEREAS, the City desires to execute Amendment No. 1, in the amount of \$335,000.00, to amend the total contract amount to \$1,050,000.00 and

NOW, THEREFORE, in consideration of the payments and mutual agreements contained in this Amendment No. 1, City and Design Professional agree as follows:

Sec. 1. Sections Amended. The Contract is amended as follows:

- A. Add the following section(s):
 - a. Under Attachment A – Scope of Services, add Attachment A1 Scope of Services for Design Phase Services.
 - b. Under Attachment C – Engineering Fee Summary and Schedule of Positions Classification, add Attachment C1 – Engineering Fee Estimate for 50 Percent Design through Bid Phase Services and Additional Services.
- B. Delete and replace the following section(s):
 - a. Delete Sec. 4 – Compensation and Reimbursables, Subparagraph A and replace with the following Sec. 4 – Compensation and Reimbursables, Subparagraph A:

Section 4. Compensation and Reimbursables

- A. The maximum amount that City shall pay Design Professional under this Agreement is \$1,050,000.00, as follows:
 - 1. \$569,191.00, for the services performed by Design Professional under this Agreement.
 - 2. For Design Professional services described in the Scope of Services, City shall pay Design Professional compensation amounting to actual salary of office personnel for time charges

directly to the project, times an approved multiplier. The multiplier to be used shall not exceed 3.04. Engineering Fee Summary and schedule of position classifications and the salary range for each position is included as a part of **Attachment C**.

3. Actual reasonable expenses incurred by Design Professional directly related to Design Professional's performance under this Agreement, to include only the following, in an amount not to exceed \$350,959.00. The following are the reimbursable expenses that City has approved: Subcontractor direct cost paid by Design Professional, reproduction of deliverables, local transportation, travel expenses for Design Professional associated with the Physical Model Test and public outreach materials.
4. Design Professionals' maximum amount shown in Sec. 4, Compensation and Reimbursables, includes a total allowance amount of One Hundred Twenty-Nine Thousand and Eight Hundred and Fifty Dollars and no cents (\$129,850.00) for Optional Services not yet authorized by the City that may be required throughout the course of work. This allowance amount will not be utilized by Design Professional unless specifically authorized in writing by the City to perform Optional Services. Optional Services will not be performed, nor is the Design Professional approved to utilize any allowance monies unless the City provides written authorization to Design Professional that includes the scope of work for each optional task to be performed and a maximum billing limit for compensation that has been mutually agreed upon.
5. Compensation for all Optional Services will be based on the actual salary of office personnel for time charges directly to the project, times an approved multiplier. The multiplier to be used shall not exceed 3.04. Engineering Fee Summary and schedule of position classifications and the salary range for each position is included as a part of **Attachment C**. The amount billed for each Optional Service shall not exceed the amount established for it without further written authorization. Additional amounts for Optional Services may be authorized, if deemed by City to be necessary, as the work progresses.
6. City is not liable for any obligation incurred by Design Professional except as approved under the provisions of this Agreement.

7. Design Professional's Engineering Fee Summary is contained in **Attachment C** and represents the basis for the maximum amount that City shall pay Design Professional under this agreement.

Sec. 2. Sections not Amended. All other sections of the Agreement shall remain in full force and effect.

Sec. 3. Authorization. If the amount of the original Agreement plus the amount of any amendments to the original Agreement total over \$400,000.00, then this amendment requires City Council authorization. Notwithstanding the foregoing, City Council authorization is not required if (1) the total amount of the original Agreement plus the amount of any amendments to the original Agreement are within ten percent (10%) of the maximum amount authorized by the City Council or (2) a previous ordinance or Resolution authorized amendments without further City Council approval.

Sec. 4. Effectiveness; Date. This amendment will become effective when the City's Director of Finance has signed it. The date this amendment is signed by the City's Director of Finance will be deemed the date of this amendment.

Each party is signing this amendment on the date stated opposite that party's signature.

DESIGN PROFESSIONAL

I hereby certify that I have authority to execute this document on behalf of Design Professional

Date: 11-11-19

By: Jay S. Beck

Title: Vice President

KANSAS CITY, MISSOURI

Date: 1/7/20

By: [Signature]

Title: Chief Financial Officer

Approved as to form:

[Signature]

Assistant City Attorney

I hereby certify that there is a balance, otherwise unencumbered, to the credit of the appropriation to which the foregoing expenditure is to be charged, and a cash balance, otherwise unencumbered, in the Treasury, to the credit of the fund from which payment is to be made, each sufficient to meet the obligation hereby incurred.

for the Eric B. Clevenger 1/17/20
Director of Finance (Date)

ATTACHMENT A1

**SCOPE OF SERVICES FOR 50 PERCENT DESIGN THROUGH BID PHASE
SERVICES AND ADDITIONAL SERVICES**

ATTACHMENT A1

SCOPE OF SERVICES FOR 50 PERCENT DESIGN THROUGH BID PHASE SERVICES AND ADDITIONAL SERVICES

Design Professional: George Butler Associates, Inc.
Owner: City of Kansas City, Missouri
Water Services Department
Project: Birmingham Area 2 Inflow and Infiltration (I/I) Reduction
Project
City Contract No: 1401
City Project No: 81000801

I. GENERAL

The following paragraphs provide a general description of the Work required of this Scope of Services. Subsequent paragraphs describe in detail the professional services to be provided by DESIGN PROFESSIONAL to facilitate the implementation of rehabilitation recommendations for reducing inflow and infiltration (I/I) flows into the sanitary sewer systems in the Birmingham Project Area 2 basin in Kansas City, Missouri.

- A. The Project. CITY of Kansas City (CITY), Missouri, intends to reduce I/I flows in the sanitary sewer system by implementing rehabilitation recommendations in the Birmingham Project Area 2 basin, which is located north of the Missouri River. As such, CITY is contracting with DESIGN PROFESSIONAL to provide the necessary professional services.
- B. Federal Consent Decree. This Project is included in the Federal Consent Decree pertaining to CITY of Kansas City, Missouri's Overflow Control Program. As such, requirements of the Federal Consent Decree must be adhered to by DESIGN PROFESSIONAL and its subconsultants and subcontractors.
- C. Background Information. CITY is undertaking this Project as mandated by the Federal Consent Decree to prepare design documents for the Birmingham Project Area 2 I/I Reduction project as part of the KC Water Smart Sewer Program. The project will focus on I/I reduction through rehabilitation of public sanitary sewers and manholes within the project area. The estimated footage of sewer pipe and number of manholes in the project area are approximately: 238,000 linear feet of 6-inch to 48-inch diameter sewer mains and 1,217 manholes.
- D. Follow-On Phases. At the discretion of CITY, DESIGN PROFESSIONAL may be requested to provide construction phase services for the project.
- E. General Description of Activities. The Basic Scope of Services to be performed by DESIGN PROFESSIONAL consists of professional services for the development and implementation

of rehabilitation recommendations for reducing I/I flow and volume in the project area. The determination of which sewer lines and manholes are to be selected for review and rehabilitation shall be based on a prioritization method discussed herein. The Work consists of the following professional services:

1. Flow and Rainfall Monitoring Data Analysis (2019 Data)
2. Field Data Evaluation
3. Development of Preliminary Recommendations for Sewer System Rehabilitation
4. Development of 90% and Final Construction Contract Documents and Limited Specifications for Sewer System Rehabilitation

F. Task Series Listing. The Basic Scope of Services is organized under the following Task Series:

1. Task Series 110 – Project Management and Administration
2. Task Series 310 – Flow and Rainfall Data Analysis 2019 Data
3. Task Series 510 – Field Data Evaluations and Rehabilitation Recommendations
4. Task Series 610 – Finalize Construction Contract Drawings and Prepare Limited Specifications for Sewer System Rehabilitation
5. Task Series 900 – Bid Phase Services

G. Explicit Responsibilities. The Basic Scope of Services explicitly sets forth what DESIGN PROFESSIONAL shall perform and does not implicitly put any additional responsibilities or duties upon DESIGN PROFESSIONAL. DESIGN PROFESSIONAL agrees to provide the specific Basic Services as identified herein. Work not specifically discussed herein shall not be performed without an amendment or shall be provided as Optional Services upon written authorization from CITY.

H. Capital or Annual Cost Opinions. All opinions of probable construction cost developed by DESIGN PROFESSIONAL shall generally follow the recommendations of the Association for the Advancement of Cost Engineering (AACE) International Recommended Practice No. 18R-97 with regard to methodology and accuracy. Since DESIGN PROFESSIONAL has no control over the cost of labor, material or equipment furnished by others not under contract to DESIGN PROFESSIONAL, DESIGN PROFESSIONAL's opinion of probable cost for construction of the Work shall be made based on experience and qualifications as a DESIGN PROFESSIONAL. DESIGN PROFESSIONAL does not guarantee that proposals, bids or actual project cost will not vary from DESIGN PROFESSIONAL's opinions of probable construction cost. The cost opinions' level of accuracy presented by DESIGN PROFESSIONAL shall be as noted in subsequent paragraphs of this Scope of Services.

II. PROJECT MILESTONES AND CITY REVIEW REQUIREMENTS

A. DESIGN PROFESSIONAL shall complete Task Series 310, 510, and 610 no later than July 14, 2020 and Task Series 110 and 900 within 90 calendar days thereafter. DESIGN

PROFESSIONAL's completion schedule will be extended by CITY for delays beyond the reasonable control of DESIGN PROFESSIONAL as approved by CITY.

- B. CITY hereby commits to review deliverables and provide comments within fourteen (14) calendar days after receipt of deliverables from DESIGN PROFESSIONAL. CITY will endeavor to provide consolidated written review comments to DESIGN PROFESSIONAL within a fourteen (14) calendar day period. A review meeting will be scheduled and conducted by DESIGN PROFESSIONAL no more than fourteen (14) calendar days after receipt of written consolidated CITY review comments, unless a mutually agreed upon date outside this schedule window is selected.
- C. Reference the applicable Water Services Department (WSD) protocols for field data evaluation guidance and the WSD Guidance Documents for design guidance. Reference documents include:
 - 1. Manhole Inspection Protocol, July 2014
 - 2. Smoke Testing Protocol, October 2017
 - 3. CCTV Investigation Protocol, July 2016
 - 4. Dyed Water Testing Protocol, September 2013
 - 5. Flow Metering and Data Analysis Protocol, November 2018
 - 6. I/I Quantification and Rehabilitation Selection Guidance Document (I/I Guidance Document), February 2019

III. BASIC SCOPE OF SERVICES

The following Task Series describe the Basic Scope of Services to be provided by DESIGN PROFESSIONAL under the Project.

TASK SERIES 110 - PROJECT MANAGEMENT AND ADMINISTRATION

The purpose of Project Management and Administration will be to manage, direct and oversee each element of Basic Services identified herein and the subcontractors employed by DESIGN PROFESSIONAL in completion of the Work. The following management activities will be provided by DESIGN PROFESSIONAL.

Task 111 Project Management Services

DESIGN PROFESSIONAL shall provide project management services necessary throughout the project to successfully manage and complete the work, including project correspondence and consultation with CITY Staff; supervision and coordination of services; implementation of a project specific Work Plan; scheduling and assignment of personnel resources; coordination of subconsultants; continuous monitoring of work progress; and maintenance of project controls.

Task 112 Monthly Invoicing and Project Status Reports

DESIGN PROFESSIONAL shall prepare and submit monthly invoices on a form acceptable to CITY and provide a monthly project status report and updated schedule, which shall accompany the monthly invoice submittal. A PDF copy of the invoice and project status report shall be uploaded to CITY's Aconex document management system. CITY will provide a template for the project status report. Each invoice by DESIGN PROFESSIONAL and subcontractors shall have labor hours and fee and unit price items broken down by task series and shall be in general conformance with the invoice template provided by CITY. The monthly project status report shall identify work performed by DESIGN PROFESSIONAL, the work activities anticipated to be performed the next month, action items required by CITY, potential project scope variances with corrective action, a general assessment of DESIGN PROFESSIONAL's ability to meet M/WBE participation goals and project schedule milestones, including identification of any delays beyond its control, an estimate of work percent completion for each Task Series in the Basic Scope of Services based on the work completed, and the earned value of the completed work for each task series. A short narrative shall be provided to describe the work activity performed for each task within each Task Series.

Task 113 Schedules in Microsoft Project

An updated schedule shall be provided with each monthly invoice to reflect the progress reported in the project status report. Schedule shall be produced in Microsoft Project. The layout shall include the following, in order: Task ID, Activity Name, Original Duration (OD), Remaining Duration (RD), Actual Start, Actual Finish, Start, Finish, Late Start, Late Finish, Free Slack, Baseline Variance, Predecessors, Successors, Resource ID (if requested).

The schedule shall be submitted in an Aconex workflow on a monthly basis, one week prior to invoicing. DESIGN PROFESSIONAL shall include the approved schedule with the monthly invoice submittal. If the invoice falls behind contractual dates, DESIGN PROFESSIONAL shall propose a recovery schedule and plan for approval.

Task 114 Quality Control

DESIGN PROFESSIONAL's Quality Control Program will be implemented on all phases of the project to provide an independent review of the work. Quality control reviews will include checks for conformance with regulatory agency requirements, completeness and correctness of evaluations, design accuracy, feasibility of implementing recommendations, and adherence to contract requirements.

Task 115 Monthly Progress Meetings

DESIGN PROFESSIONAL shall participate in up to four (4) progress meetings with CITY to provide updates on work progress, budget and schedule status, current issues, and variances in the scope of work. Anticipated future activities and CITY action items shall be discussed. DESIGN PROFESSIONAL shall prepare and provide an agenda for each meeting and prepare/distribute a meeting summary to attendees.

TASK 310 - FLOW AND RAINFALL DATA ANALYSES 2019 DATA

Task 311 Review and Analyze Flow and Rainfall Monitoring Data

DESIGN PROFESSIONAL shall review the 2019 pre-rehabilitation flow and rainfall data provided by CITY for up to twelve (12) meter locations and perform analyses of the data in accordance with Section 5 of the Flow Metering and Data Analysis Protocol (FMDA). Analyses activities include, but are not limited to:

1. Analysis of flow and rainfall monitoring data
2. Determination of Average Daily Dry Weather Flow (ADDF)
3. Determination of high groundwater infiltration
4. Determination of inflow
5. Determination of Peak System Flow Rates versus System Capacity
6. Preparation of Volumetric and Statistical Analyses

DESIGN PROFESSIONAL will combine the results of the 2018 flow monitoring data with the 2019 flow monitoring data. Flow analysis results will be discussed with CITY at a regular monthly progress meeting. The results will be agreed upon prior to DESIGN PROFESSIONAL revising the Draft Flow Monitoring Report in Task 312.

Task 312 Flow and Rainfall Monitoring Data Analysis Report

Revise tables, figures, and text in the 2018 Draft Flow Monitoring Report to include the 2019 data. Incorporate CITY review comments into the Combined 2018 and 2019 Draft Flow Monitoring Report. Submit the following for CITY review:

1. One (1) PDF copy of the Draft Flow and Rainfall Monitoring Data Analysis Report for determination of I/I quantities for pre-rehabilitation conditions as described in Section 5 of the FMDA Protocol shall be submitted on Aconex.
2. Two (2) printed copies of the Final Flow and Rainfall Monitoring Data Report for determination of I/I quantities for pre-rehabilitation conditions that incorporates review comments and input from CITY. Submit a pdf of the final report on Aconex.

TASK SERIES 510 - FIELD DATA EVALUATIONS AND REHABILITATION RECOMMENDATIONS

Task 511 Field Data Review

1. Review and summarize manhole inspection reports provided by CITY. Review and identify defects in up to seventy-five (75) additional manhole inspection reports provided by CITY. Reference the applicable WSD protocols for field data evaluation guidance and the WSD I/I Quantification and Rehabilitation Selection Guidance Document (I/I Guidance Document), February 2019.
2. Calculate Revised F1 Factors and Assign I/I to Assets. Assign I/I flow rates to each defect identified through manhole inspections and main sewer CCTV investigations.

Smoke and dyed water testing data shall be used to supplement the defects identified by manhole and CCTV inspections and to help determine the severity of defects. I/I flow rates shall be assigned per the I/I Guidance Document. Follow the guidelines in the document to calculate a Project Specific Adjustment Factor for each basin to be applied to the unit defect flow rates. Using the adjusted unit defect flow rates, calculate the I/I rate per asset.

3. Perform Revised I/I Quantification Analysis and Submittals. An I/I flow balance shall be conducted by comparing identified I/I from source defects to actual basin flow monitoring results as determined under Task Series 310. I/I percentages for manholes and main sewers as compared to total basin I/I shall be calculated.

The following information shall be revised based on the additional 2019 flow monitoring data and included in the revised Draft Preliminary Design Report. I/I Quantification results shall be agreed upon at a regular monthly progress meeting prior to proceeding with revisions to the Draft Preliminary Design Report.

- a. Master Defect Database – Database to include line segments and manholes. Do not include costs for this submittal.
- b. I/I Flow Rate versus Asset – Provide separate graphs for line segments and manholes.
- c. Main Sewer Segment QR Grade Classification Summary Table
- d. Manhole Condition Summary Table
- e. Monitored and Defect I/I Table
- f. Basin Characteristics

Task 512 Preliminary Assets Recommended for Repair

1. Recommend Repairs to Manholes. Assign a method of repair to each manhole (as needed) for up to seventy-five (75) additional manholes. Recommended methods for rehabilitation include:
 - a. Complete replacement of manholes
 - b. Cementitious manhole lining
 - c. Alternate CITY approved rehabilitation methods
2. Assign Costs and Perform Diminishing Returns Analysis. Assign asset repair costs for main sewer segments, manholes, and service laterals. The cost of rehabilitation per main sewer segment shall include the cost for service lateral rehabilitation. Cost shall be determined using rehabilitation cost data provided by CITY.

Calculate the cost-effectiveness ratio to remove I/I by dividing the estimated rehabilitation cost per asset by the calculated I/I flow contributed per asset.

Provide an Excel spreadsheet with the assets sorted by cost-effectiveness with the most cost-effective assets (lowest cost per I/I removed) at the top. Include in the spreadsheet

the asset I/I and asset cost as well as the cumulative I/I and cumulative cost. Assets with zero costs shall be included at the end of the spreadsheet.

Prepare a graph of the cumulative dollars per gallon per day (\$/gpd) versus the percent I/I removed. Identify the point of diminishing returns on the graph. Provide a comparison of recommended segments to be rehabilitated to those determined under I/I Quantification.

3. **Create GIS Maps of Assets to Repair.** Prepare two maps. The first map shall include color coding of main sewer segments based on their NASSCO QR. Color coding shall be based upon the highest defect grade (3, 4, or 5), but pipes with QR ratings of 0, 1, or 2 do not need to be color coded. Label segments with pipe diameter, QR, and number of defects which contribute I/I. Color code any manhole based on a condition rating of "fair" or "poor". Rating shall be based on the worst condition rating identified per manhole.

The second map will be of all main sewer segments and manholes recommended for repair. Color code the assets based on the type of recommended repair. Label segments with pipe diameter, QR, and cost-effectiveness to repair (\$/gpd).

Task 513 Finalize Assets Recommended for Repair

DESIGN PROFESSIONAL shall finalize asset selection for repair. Include the following in the recommendations:

4. **Work Orders and Basement Backup Data.** Consider and incorporate CITY's list of historical and outstanding work orders and basement backup data into the rehabilitation recommendations.
5. **Total System Approach.** Manholes on both ends of a main sewer segment identified for rehabilitation or replacement are to be rehabilitated with a lining material or replaced. A main sewer segment not recommended for rehabilitation but that is located between segments receiving rehabilitation or replacement should be evaluated to determine if it is cost effective to rehabilitate or replace.

Task 514 Preliminary Opinion of Probable Construction Cost

DESIGN PROFESSIONAL shall prepare a preliminary opinion of probable construction cost for assets recommended for rehabilitation or replacement. This estimate shall be a Class 3 estimate consistent with AACE standards. The expected accuracy on the low end shall be -10 to -20 percent and the expected accuracy on the high end shall be from +10 to +30 percent.

Task 515 Revised Draft Preliminary Design Report

DESIGN PROFESSIONAL will prepare a revised draft report of the findings from the field data review including the additional seventy-five (75) manholes, revised I/I quantification, and revised preliminary recommendations for system rehabilitation for the project area. The draft report shall include at a minimum the following sections:

1. Executive Summary

2. Introduction
3. Summary of Existing System Field Investigations
4. I/I Quantification
5. Preliminary Rehabilitation Analysis
6. Recommended Improvements
7. Estimated I/I Removal
8. Private Sector I/I
9. Preliminary Opinion of Probable Construction Cost
10. Conclusions

Prepare draft of main sewer and manhole rehabilitation schedules in MS Excel format and submit as appendices to the Draft Preliminary Design Report.

Provide updated rehabilitation maps for submittal with the Draft Preliminary Design Report. The map shall include all main sewer segments and manholes recommended for repair. Color code the assets based on the type of recommended repair. Label segments with pipe diameter, QR, and cost-effectiveness to repair (\$/gpd).

Submit to CITY pdf file of the Draft Preliminary Design Report on Aconex.

Task 516 Final Preliminary Design Report (included under Task 509 of the original scope)

DESIGN PROFESSIONAL will incorporate draft review comments into the Final Preliminary Design Report. Submit to CITY two (2) printed copies of the Final Preliminary Design Report within thirty 30 calendar days of receiving review comments from CITY. Upload a pdf copy of the Final Preliminary Design Report on Aconex.

TASK SERIES 610 – FINALIZE CONSTRUCTION CONTRACT DRAWINGS AND PREPARE LIMITED SPECIFICATIONS FOR SEWER SYSTEM REHABILITATION

Task 611 50% Review Meeting

The DESIGN PROFESSIONAL shall conduct a review meeting, up to two (2) hours in length, with CITY staff following the CITY's review of the 50% deliverables. DESIGN PROFESSIONAL shall prepare an agenda for the meeting and prepare and distribute a meeting summary to all attendees.

Task 612 Develop 90% Construction Contract Documents

After submittal of the final Preliminary Design Report and approval of 50% design schedules and drawings, prepare 90% design schedules and drawings for CITY review. The 90% design submittal is meant to provide the CITY an opportunity to review the construction drawings before advancement to final design.

1. 90% Design Plan Sheets: Address review comments received from CITY related to the 50% submittal and incorporate them into the design documents. Prepare and submit drawings to CITY for review and comment at 90% design stage.
2. DESIGN PROFESSIONAL shall provide three (3) sets of drawings to the CITY for review. A pdf of the drawings will be uploaded to Aconex. CITY will provide review comments within fourteen (14) days for incorporation into the Final design documents.
3. DESIGN PROFESSIONAL shall provide review comments to specification sections 01270 and 01015 that have been drafted by CITY.

Task 613 90% Opinion of Probable Construction Cost

DESIGN PROFESSIONAL shall prepare an updated Opinion of Probable Construction Cost based on the 90% Design documents and any comments received from CITY from its review of the 50% Opinion of Probable Construction Cost. The 90% cost opinion will be Class 1 consistent with AACE standards; the expected accuracy on the low end will be -3 to -10 percent and the expected accuracy on the high end will be from +3 to +15 percent. 1. The cost opinion will be submitted in bid form format (00412) using a CITY provided template.

Task 614 90% Review Meeting

DESIGN PROFESSIONAL shall conduct a review meeting, up to two (2) hours in length, with CITY staff following CITY's review of the 90% deliverables. DESIGN PROFESSIONAL shall prepare an agenda for the meeting and prepare and distribute a meeting summary to attendees.

Task 615 Final Construction Contract Documents

The DESIGN PROFESSIONAL shall address review comments received from CITY related to the 90% design submittal and prepare final Contract Documents, including rehabilitation drawings, maps, schedules, and Project Manual, sealed by a registered professional engineer licensed in the State of Missouri.

Prior to submittal of the signed and sealed Construction Contract Documents, DESIGN PROFESSIONAL shall submit a pdf copy on Aconex of the corrected final documents for review and acceptance by CITY.

Task 616 Opinion of Probable Construction Cost

DESIGN PROFESSIONAL shall update the 100% Class 1 cost opinion based on the Final Bidding and Construction Contract Documents and any comments received from CITY on the 90% design submittal.

Task 617 Submit Final Deliverables

Submit the following final deliverables:

1. Drawings, Maps, and Schedules: Three (3) copies; all copies – "D" size and properly bound.

2. Electronic Contract Drawings: One (1) pdf copy uploaded to Aconex.
3. A pdf of sealed Certification Page, Bid Form 00412 and Sections 01015 and 01270 e-mailed to CITY.
4. Final Opinion of Probable Cost on Bid Form 00412.

TASK SERIES 900 – BID PHASE SERVICES

Task 901 Pre-Bid Conference

DESIGN PROFESSIONAL shall attend a pre-bid meeting and respond to questions regarding interpretation of Contract Drawings, Specifications and technical issues. Project advertisement will have a maximum duration of thirty (30) calendar days.

Task 902 Respond to Questions and Addenda

The DESIGN PROFESSIONAL shall assist CITY with interpretation of the Contract Documents and prepare addenda (up to three) as may be required during the bid advertisement period to clarify Contract Documents. CITY will issue addenda.

Task 903 Update and Submit Engineer's Opinion of Probable Construction Cost

Update the Final Class 1 cost opinion to reflect items impacted by addenda changes or changes in market conditions, as required. The cost opinion shall be submitted on the bidding form included in the bidding documents and provided to CITY in a sealed envelope. The level of accuracy shall be the same as that for the final estimate and shall be determined using the most current rehabilitation cost data provided by CITY.

Task 904 Review Bids and Recommend Award

Evaluate the acceptability of the apparent successful bidder and the proposed major or specialty subcontractors. The review and evaluation will include such factors as work previously completed for the CITY, work completed for others, contractor's proposed project manager, superintendent and subcontractors, financial resources, technical experience, responses from references and other relevant facts. CITY shall provide one copy of each bid as well as a bid tab to DESIGN PROFESSIONAL for evaluation. DESIGN PROFESSIONAL shall provide to CITY a written review of the apparent successful bidder.

Task 905 Review and Process Substitutions and Or Equals

Review and recommend the acceptance or rejection of material submitted by CONTRACTOR for substitution or equal to a named item specified in the Construction Contract Documents to CITY. To establish basis for DESIGN PROFESSIONAL's compensation, two requests for substitution or request for approval of equivalent materials or equipment is budgeted.

IV. OPTIONAL SERVICES

Any work requested by CITY that is not specifically stated in one of the Basic Scope of Services listed above shall be classified as Optional Services. DESIGN PROFESSIONAL's contract maximum upper limit for compensation includes an allowance amount for Optional Services not yet authorized by CITY that may be required throughout the course of the work. This allowance amount shall not be utilized unless specifically authorized in writing by CITY to perform Optional Services. Optional Services shall not be performed, nor is DESIGN PROFESSIONAL approved to utilize any of the allowance amount, unless CITY provides written authorization to DESIGN PROFESSIONAL that includes the scope of work for each Optional Service to be performed and a maximum billing limit for compensation that has been mutually agreed upon. Optional Services shall include, but not limited to:

- A. Meetings with local, State, or Federal agencies beyond those contemplated under the Basic Scope of Services.
- B. Appearances at public hearings or before special boards beyond those contemplated under the Basic Scope of Services.
- C. Field subsurface investigations, geotechnical investigations, environmental site assessments, or easement or right-of-way selection, preparation, negotiation, or acquisition work.
- D. Legal description and exhibits for easements obtained by CITY for point repair excavations, including topographic survey and related calls for utility locates.
- E. Assisting CITY with appraisal and/or acquisition of easements.
- F. Changes in the general scope, extent, design, or character of the project, including, but not limited to:
 - 1. Changes in size or complexity;
 - 2. CITY's project schedule, design, or character of construction;
 - 3. Method of financing or availability of funding;
 - 4. A change to the method of construction procurement, which is assumed to be a conventional procurement approach (i.e. design-bid-build) herein; and
 - 5. A change to the number of bid packages, which is assumed herein to be one package.
- G. Providing Construction Phase Services.
- H. Providing Post Construction Flow Monitoring and data analysis.

V. CITY'S RESPONSIBILITIES

CITY will furnish, as required by Basic Services and not at the expense of DESIGN PROFESSIONAL, the following items:

- A. Provide assistance by placing at DESIGN PROFESSIONAL's disposal available information pertinent to the assignment, including GIS data, CCTV and manhole inspection data, previous reports, drawings, specifications, sewer as-built records, plats, water-in-basement

complaints, and any other data relative thereto. Available information will be provided within thirty (30) calendar days of receipt of a written request from DESIGN PROFESSIONAL.

- B. CITY's Project Manager will coordinate meetings between CITY staff and DESIGN PROFESSIONAL.

(End of Scope of Services)

ATTACHMENT C1

**ENGINEERING FEE ESTIMATE
FOR 50 PERCENT DESIGN THROUGH BID PHASE SERVICES
AND ADDITIONAL SERVICES**