

RESOLUTION NO. _____

A RESOLUTION AUTHORIZING THE ADMINISTRATOR OF THE DEPARTMENT OF PUBLIC WORKS TO ENTER INTO AN AGREEMENT WITH BROWN AND CALDWELL, FOR PROFESSIONAL SERVICES RELATIVE TO CONTRACT NO. W-12-021-101, FOCUSED SANITARY SEWER EVALUATION STUDY (SSES) AND REHABILITATION OF SOUTH CHICKAMAUGA CREEK 5 SUB-BASIN, FOR AN AMOUNT NOT TO EXCEED ONE MILLION TWENTY THOUSAND DOLLARS (\$1,020,000.00).

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CHATTANOOGA, it is hereby authorizing the Administrator of the Department of Public Works to enter into an agreement with Brown and Caldwell for professional services relative to Contract No. W-12-021-101, Focused Sanitary Sewer Evaluation Study (SSES) and Rehabilitation of South Chickamauga Creek 5 Sub-Basin, for an amount not to exceed \$1,020,000.00.

ADOPTED: _____, 2013.

/mms

City of Chattanooga



Resolution/Ordinance Request Form

Date Prepared: 3/15/13

Preparer: Dennis Malone

Department: Public Works

Brief Description of Purpose for Resolution/Ordinance:

Res./Ord. # _____ Council District # 5

A Council Action is requested for the Administrator of the Department of Public Works to enter into an agreement with Brown and Caldwell, for professional services, relative to Contract No. W-12-021-101, Focused Sanitary Sewer Evaluation Study (SSES) and Rehabilitation of South Chickamauga Creek 5 Sub-basin, in an amount not to exceed \$1,020,000.00.

Name of Vendor/Contractor/Grant, etc. Brown and Caldwell

New Contract/Project? (Yes or No) No

Total project cost \$ 1,020,000.00

Funds Budgeted? (YES or NO) Yes

Total City of Chattanooga Portion \$ 1,020,000.00

Provide Fund 6011

City Amount Funded \$ 1,020,000.00

Provide Cost Center _____

New City Funding Required \$ 0

Proposed Funding Source if not budgeted ISS - CD

City's Match Percentage % _____

Grant Period (if applicable) _____

List all other funding sources and amount for each contributor.

Amount(s)

Grantor(s)

\$

Agency Grant Number _____

CFDA Number if known _____

Other comments: (Include contingency amount, contractor, and other information useful in preparing resolution)

Consent Decree Project - ISS

Approved by: _____

Reviewed by: FINANCE OFFICE

DESIGNATED OFFICIAL/ADMINISTRATOR

Please submit completed form to @budget, City Attorney and City Finance Officer

Revised: 1/26/09



CITY OF CHATTANOOGA
STANDARD AGREEMENT FOR ENGINEERING SERVICES

SOP 2003-9
 Date of Issue 10-16-03
 Rev. 11-13-12

THIS AGREEMENT, is between the City of Chattanooga, Tennessee, a municipal corporation in the state of Tennessee, hereinafter called Owner, and

Brown and Caldwell,

Hereinafter called Engineer.

The Owner wishes to employ the Engineer to perform professional engineering services for

W-12-021-101-Focused Sanitary Sewer Evaluation Study and Rehabilitation of South Chickamauga Creek 5 Sub-basin For Waste Resources Division,

hereinafter called Project.

In consideration of the provisions contained in this Agreement, the Owner and Engineer agree to the following:

1. **EFFECTIVE DATE**
 The effective date of this Agreement shall be _____, 20_____.
2. **GOVERNING LAW**
 This Agreement shall be governed by the laws of the State of Tennessee and the codes of the City of Chattanooga.
3. **SERVICES TO BE PERFORMED BY ENGINEER**
 Engineer shall perform the Services described in Attachment A, Scope of Services, in accordance with applicable sections of the City of Chattanooga Design and Construction Standards in effect on the date of this agreement.
4. **COMPENSATION**
 Owner shall pay Engineer in accordance with the Attachment B, Compensation.
5. **OWNER'S RESPONSIBILITIES**
 Owner shall be responsible for all matters described in Attachment C, Owner's Responsibilities.
6. **SUPPLEMENTAL AGREEMENTS**
 The provisions set forth in Attachment D, Supplemental Agreements, shall be incorporated into this Agreement
7. **PROJECT SCHEDULE**
 The provisions set forth in the Attachment E, Project Schedule, shall be incorporated into this Agreement.
8. **RATE SCHEDULE**
 The Engineer shall provide a schedule of standard hourly rates for all employees to be used in the performance of all contracts with a cost-not-to-exceed basis. This schedule shall be incorporated into the agreement as Attachment F.
9. **INVOICING**
 The Engineer will use the format established in Attachment G, Standard Invoice, for all invoices submitted for services on the Project.



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10. STANDARD OF CARE

Engineer shall exercise the same degree of care, skill, and diligence in the performance of Services as is ordinarily possessed and exercised by a professional engineer under similar circumstances in the same area of practice. Engineer makes no warranty or guarantee, either expressed or implied, as part of this agreement.

11. INDEMNIFICATION

Engineer hereby agrees to fully indemnify and hold harmless Owner and any of its departments, divisions, agencies, officers, employees and elected officials from all loss, damage, cost, or expenses specifically including attorneys' fees and other expenses of litigation incurred by or on behalf of the Owner and any of its officers, employees or elected officials arising out of Engineer's actual negligent performance of Services under this Agreement, including errors or omissions.

Owner hereby agrees to fully indemnify and hold harmless Engineer and any of its officers, employees, or designated agents from all loss, damage, cost, or expenses specifically including attorneys' fees and other expenses of litigation incurred by or on behalf of the Engineer and any of its officers, employees or designated agents arising out of Owner's negligence to the extent provided by the Tennessee Governmental Tort Liability Act, T.C.A. 29-20-201 et seq.

12. INSURANCE

Engineer shall purchase and maintain during the life of this Agreement, insurance coverage which will satisfactorily insure him against claims and liabilities which arise because of the execution of this Agreement, with the minimum insurance coverages as follows:

- a. Commercial General Liability Insurance, with a limit of \$1,000,000 for each occurrence and \$2,000,000 in the general aggregate.
- b. Automobile Liability Insurance, with a limit of \$1,000,000 for each accident, combined single limit for bodily injury and property damage.
- c.
- d. Worker's Compensation Insurance and Employer's Liability Insurance, in accordance with statutory requirements, with a limit of \$500,000 for each accident.
- e. Professional Liability Insurance, with a limit of \$1,000,000 for each claim and aggregate.

Prior to issuance of the Notice to Proceed by Owner, Engineer shall have on file with Owner certificates of insurance acceptable to Owner. Said certificates of insurance shall be filed with Owner in January of each year or may be submitted with each agreement. Upon completion of all Services, obligations, and duties provided for in this Agreement, or if this Agreement is terminated for any reason, the terms and conditions of this section shall survive.

Notwithstanding any other provision of the Agreement, Owner waives any claim against Engineer and, to the maximum extent permitted by law, agrees to defend, indemnify, and hold Engineer harmless from any claim, liability, and/or defense costs for injury or loss arising from Engineer's discovery of unanticipated hazardous materials or suspected hazardous materials, including, but not limited to, any costs created by delay of the project and any cost associated with possible reduction of the property value.

13. LIMITATIONS OF RESPONSIBILITY

Engineer shall not be responsible for: (1) construction means, methods, techniques, sequences, procedures, or safety precautions and programs in connection with the Project, (2) the failure of



any contractor, subcontractor, vendor, or other Project participant, not under contract to Engineer, to fulfill contractual responsibilities to the Owner or to comply with federal, state or local laws, regulations, and codes; or (3) procuring permits, certificates, and licenses required for any construction unless such responsibilities are specifically assigned to Engineer in Attachment A, Scope of Services.

14. OPINIONS OF COST AND SCHEDULE

Since Engineer has no control over the cost of labor, materials, or equipment furnished by others, or over the resources provided by others to meet Project construction schedules, Engineer's opinion of probable construction costs and of construction schedules shall be made on the basis of experience and qualifications as a professional engineer. Engineer does not guarantee that costs will not vary from Engineer's cost estimates or that actual construction schedules will not vary from Engineer's projected schedules.

15. REUSE OF DOCUMENTS

All documents, including, but not limited to calculations, drawings, specifications, and computer software prepared by Engineer pursuant to the Agreement are instruments of service in respect to the Project. They are not intended or represented to be suitable for reuse by Owner or others on extensions of the Project or on any other project. Any reuse without prior written verification or adaptation by Engineer for the specific purpose intended will be at Owner's sole risk and without liability or legal exposure to Engineer. Any verification or adaptation requested by Owner shall entitle Engineer to compensation at rates to be agreed upon by Owner and Engineer.

16. OWNERSHIP OF DOCUMENTS AND INTELLECTUAL PROPERTY

Except as otherwise provided herein, engineering documents, calculations, drawings, specifications, and other documents prepared by Engineer as part of the Services shall become and be the sole property of Owner. However, both Owner and Engineer shall have the unrestricted right to their use. Engineer shall retain its rights in its standard drawing details, specifications, databases, computer software, and other proprietary property protected under the copyright laws of the United States. Rights to intellectual property developed, utilized, or modified in the performance of services shall remain the property of Engineer.

17. RECORDS RETENTION AND AUDIT PROVISION

The term "Engineer" is used interchangeably to describe signatories to contracts, grants, and agreements with the City and applies to reflect the relationship with the City (Engineer, Contractor, Licensee, Supplier, Vendor, Consultant, Grant Recipient, etc.).

- a. All records relating in any manner whatsoever to the Project, or any designated portion thereof, which are in the possession of the Engineer or the Engineer's consultants, shall be made available for inspection and copying upon written request to the Owner. Additionally, said records shall be made available, upon request by the Owner, to any state, federal or other regulatory authorities and any such authority may review, inspect and copy such records. Said records include, but are not limited to, all plans, specifications, submittals, correspondence, minutes, memoranda, tape recordings, videos, or other writings or things which document the Project, its design and its construction. Said records expressly include those documents reflecting the time expended by the Engineer and its personnel to perform the obligations of this Agreement and the records of expenses incurred by the Engineer in its performance under said Agreement. The Engineer shall maintain and protect these records for no less than seven (7) years after the completion of the Project, or for any longer period of time as may be required by applicable law, good engineering practice, and upon notice during the pendency of any claims or litigation arising from the Project.



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- b. The Owner or its assign may audit all financial and related records (including digital) associated with the terms of the contract or agreement including timesheets, reimbursable out of pocket expenses, materials, goods, and equipment claimed by the Engineer. The Owner may further audit any of Engineer's records to conduct performance audits (to identify waste and abuse or to determine efficiency and effectiveness of the contract or agreement) or to identify conflicts of interest.
- c. The Engineer shall at all times during the term of the contract or agreement and for a period of seven years after the end of the contract, keep and maintain records of the work performed pursuant to this Contract or Agreement. This shall include proper records of quotations, contracts, correspondence, invoices, vouchers, timesheets, and other documents that support actions taken by the Engineer. Documents shall be maintained by the Engineer, which are necessary to clearly reflect all work and actions taken. All such records shall be maintained in accordance with generally accepted accounting principles. The Engineer shall at its own expense make such records available for inspection and audit (including copies and extracts of records as required) by the Owner at all reasonable times and without prior notice.
- d. The obligations of this Section shall be explicitly included in any subcontracts or agreements formed between the Engineer and any subcontractors or suppliers of goods or services to the extent that those subcontracts or agreements relate to fulfillment of the Engineer's obligations to the Owner.
- e. Costs of any audits conducted under the authority of this section and not addressed elsewhere will be borne by the Owner unless the audit identifies significant findings that would benefit the Owner. The Engineer shall reimburse the Owner for the total costs of an audit that identifies significant findings that would benefit the Owner.
- f. This Section shall not be construed to limit, revoke, or abridge any other rights, powers, or obligations relating to audit which the Owner may have by Federal, State, or Municipal law, whether those rights, powers, or obligations are express or implied.

18. TERMINATION

This Agreement may be terminated by either party upon written notice in the event of substantial failure by the other party to perform in accordance with the terms of this Agreement. The nonperforming party shall have fifteen calendar days from the date of the termination notice to cure or to submit a plan for cure acceptable to the other party. Owner may terminate or suspend performance of this Agreement for Owner's convenience upon written notice to Engineer. If termination or suspension is for Owner's convenience, Owner shall pay Engineer for all Services performed prior to the date of the termination notice. Upon restart, an adjustment acceptable to Owner and Engineer shall be made to Engineer's compensation.

19. DELAY IN PERFORMANCE

Neither Owner nor Engineer shall be considered in default of the Agreement for delays in performance caused by circumstances beyond the reasonable control of the nonconforming party. For purposes of this Agreement, such circumstances include abnormal weather conditions; floods; earthquakes; fire; epidemics; war, riots, or other civil disturbances; sabotage; judicial restraint; discovery of unanticipated hazardous wastes; and inability to procure permits, licenses, or authorizations from any local, state, or federal agency for any of the supplies, materials, accesses, or services required to be provided by either Owner or Engineer under this Agreement. Should such circumstances occur, the nonconforming party shall, within a reasonable time of being prevented from performing, give written notice to the other party describing the circumstances preventing continued performance and the efforts being made to resume performance of the



Agreement. If the Engineer is delayed in the performance of the services for more than 365 calendar days, either by the Owner or circumstances beyond his control, an equitable adjustment to the contract amount can be made to compensate for additional costs incurred.

For delays in performance by Engineer, as set forth in Attachment E, Project Schedule, caused by circumstances which are within its control, such delays shall be documented on the Engineer's Project Performance Evaluation form. Said form shall be completed at the conclusion of Project and acknowledged by both Owner and Engineer. Completed form shall be retained by Owner for a period of seven years and reviewed prior to consultant selection for City projects. In the event Engineer is delayed in the performance of Services because of delays caused by Owner, Engineer shall have no claim against Owner for damages or contract adjustment other than an extension of time.

20. HAZARDOUS MATERIALS

Hazardous materials may exist at a site where there is no reason to believe they could or should be present. The Owner and Engineer agree that the discovery of unanticipated hazardous materials constitutes a changed condition mandating a renegotiation of the scope of work or termination of services. Owner and Engineer also agree that the discovery of unanticipated hazardous materials may make it necessary for the Engineer to take immediate measures to protect health and safety. Owner agrees to compensate Engineer for any equipment decontamination or other costs incident to the discovery of unanticipated hazardous materials.

Engineer agrees to notify Owner when unanticipated hazardous materials or suspected hazardous materials are encountered. Owner agrees to make any disclosures required by law to the appropriate governing agencies, and agrees to hold Engineer harmless for any and all consequences of disclosures made by Engineer which are required by governing law. In the event the project site is not owned by Owner, the Owner agrees to inform the property owner of the discovery of unanticipated hazardous materials or suspected hazardous materials.

21. COMMUNICATIONS

Any communication required by this Agreement shall be made in writing to the address specified below:

Engineer: **Brown and Caldwell, Jeffery Parker**
501 Great Circle Road, Suite 150
Nashville, TN 37228
Phone: 615-250-1242, Fax: 615-256-8332, jparker@brwncald.com

Owner: City of Chattanooga
Department of Public Works
Engineering Division
Suite 2100, Development Resource Center
1250 Market Street
Chattanooga, TN 37402
(423) 643- 6033

Nothing contained in the Article shall be construed to restrict the transmission of routine communications between representatives of Engineer and Owner.

22. WAIVER

A waiver by either Owner or Engineer of any breach of this Agreement shall be in writing. Such a waiver shall not affect the waiving party's rights with respect to any other or further breach.



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23. DISPUTE RESOLUTION

Claims, disputes or other matters in question between the parties to this Agreement arising out of or relating to this Agreement or breach thereof shall be subject to mediation in Chattanooga, Tennessee, in accordance with the following provisions:

- a. The mediation shall be conducted by a mediator mutually acceptable to both parties.
- b. The parties agree to share equally in the expenses of mediations.
- c. Such mediation may include the Engineer or any other person or entity who may be affected by the subject matter of the dispute.
- d. Unless the parties agree otherwise, mediation shall be a condition precedent to the exercise of any legal remedy other than a proceeding seeking an immediate injunction or restraining order to protect the rights of a party pending litigation. Notwithstanding the issuance of an injunction or restraining order or the refusal of a court to issue such an order, the dispute shall continue to be subject to mediation.

24. SEVERABILITY

The invalidity, illegality, or unenforceability of any provision of this Agreement or the occurrence of any event rendering any portion or provision of this Agreement void shall in no way affect the validity or enforceability of any other portion or provision of this Agreement. Any void provision shall be deemed severed from this Agreement, and the balance of this Agreement shall be construed and enforced as if this Agreement did not contain the particular portion or provision held to be void. The parties further agree to amend this Agreement to replace any stricken provision with a valid provision that comes as close as possible to the intent of the stricken provision. The provisions of this Article shall not prevent this entire Agreement from being void should a provision which is of the essence of this Agreement be determined void.

25. INTEGRATION

This Agreement represents the entire and integrated agreement between Owner and Engineer. All prior and contemporaneous communications, representations, and agreements by Engineer, whether oral or written, relating to the subject matter of this Agreement, as set forth in Attachment D, Supplemental Agreements, are hereby incorporated into and shall become a part of this Agreement.

26. SUCCESSORS AND ASSIGNS

Owner and Engineer each binds itself and its directors, officers, partners, successors, executors, administrators, assigns, and legal representatives to the other party of this Agreement and to the directors, officers, partners, successors, executors, administrators, assigns, and legal representatives of such other party in respect to all provisions of this Agreement.

27. ASSIGNMENT

Neither Owner nor Engineer shall assign any rights or duties under this Agreement without the prior written consent of the other party. Unless otherwise stated in the written consent to an assignment, no assignment will release or discharge the assignor from any obligation under this Agreement. Nothing contained in this Article shall prevent Engineer from employing independent consultants, associates, and subcontractors to assist in the performance of the Services; however, other agreements to the contrary notwithstanding, in the event Engineer employs independent consultants, associates, and subcontractors to assist in performance of the Services, Engineer shall be solely responsible for the negligent performance of the independent consultants, associates, and subcontractors so employed.



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28. THIRD PARTY RIGHTS

Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than Owner and Engineer.

29. RELATIONSHIP OF PARTIES

Nothing contained herein shall be construed to hold or to make the Owner a partner, joint venturer, or associate of Engineer, nor shall either party be deemed the agent of the other, it being expressly understood and agreed that the relationship between the parties is and shall at all times remain contractual as provided by the terms and conditions of this Agreement.

30. NON-DISCLOSURE

Engineer agrees not to disclose or to permit disclosure of any information designated by the Owner as confidential, except to the engineer's employees and subcontractors who require such information to perform the services specified in this agreement.

31. NON-DISCRIMINATION

Engineer agrees to comply with all federal, state, and local non-discrimination laws and regulations. Engineer agrees not to discriminate against any participant in this Agreement on the basis of race, color, religion, sex, age or national origin. Engineer further agrees to comply with all federal, state and local laws regarding treatment and accommodations for individuals with disabilities.

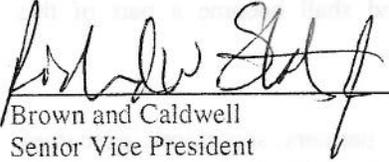
32. DRUG FREE WORKFORCE

Engineer certifies that it will provide a drug-free workplace and agrees to comply with the applicable requirements of the Drug-Free Workplace Act of 1988.

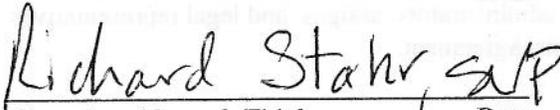
33. FEDERAL OR STATE FUNDING

In the event that the Project is funded in whole or in part by Federal or State grants, Engineer agrees to abide by all applicable Federal and State laws, regulations, grant conditions and procedures.

IN WITNESS WHEREOF, Owner and Engineer have executed this Agreement.


 Brown and Caldwell
 Senior Vice President
 Date 3/18/2013

 Administrator of Public Works Date


 [Consultant Name & Title] Date

 Director of Purchasing Date

Reviewed by City Attorney Office _____
 Initial Date



ATTACHMENT A

Owner: City of Chattanooga, Tennessee

Engineer: Brown and Caldwell
Project Number & Name: W-12-021-101
Focused Sanitary Sewer Evaluation Study and Rehabilitation of South Chickamauga Creek 5 Sub-basin For Waste Resources Division

SCOPE OF SERVICES

1. BASIC SERVICES

The project is specifically defined as:

A.1 A Sanitary Sewer Evaluation Study (SSES) is to be conducted on the South Chickamauga Creek 5, a sub-basin of the sanitary sewer system. The project area consists of approximately 90,000 linear feet (lf) of gravity separate sanitary sewer piping, ranging in size from approximately 6" to 66" diameter. The quantities per pipe size are assumed per the following table:

South Chickamauga Creek 5 Pipe Size Summary		
Diameter	Pipe Segments	Length
4	5	957
6	5	3,332
8	213	48,331
10	22	5,228
15	7	2,272
18	1	20
21	7	2,844
24	2	501
36	13	4,789
42	9	3,299
60	33	12,684
64	8	3,241
66	2	828
Unknown	4	1,088
Total:	331	89,414

For the purposes of this Task Order Brown and Caldwell and its subconsultants shall be known as "Engineer". The City of Chattanooga and its Program Manager shall be known as "Owner." Where Attachment A is in conflict with Attachment D, Attachment A shall supercede Attachment D.

Engineer will conduct an SSES and submit the collected data to the Owner who will make rehabilitation recommendations for the project area. The Engineer will prepare contract documents for the recommended rehabilitation. For the purposes of this scope rehabilitation is assumed as 40% (approximately 36,000 lf) of the project area, with 75% of the pipe sizes and quantities (approximately 27,000 lf) assumed to be suitable for trenchless methods; and 25% of the pipe sizes and quantities (approximately 9,000 lf) assumed to be suitable for open cut methods. It is assumed that there is no open cut in



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South Chickamauga Creek. In addition, it is assumed that there will be no need for access in the I-75 corridor right-of-way.

Our engineering estimate is based on the assumptions above regarding the percentage of pipe in the sub-basin to be rehabilitated and the percentage of open replacement cut versus trenchless rehabilitation. Once the SSES recommendations are complete, the project team will meet together to agree upon a scope of services for the rehabilitation design that falls within the engineering budget of the project. It is also understood that no wholesale replacement of pipe will be included. The fee for this scope of work is dependent upon the assumptions listed in this document and negotiations for a change order may be required after completion of the SSES report if any of the following conditions occur:

- Rehabilitation and replacement lengths exceed 36,000 linear ft (lf)
- More than 9,000 lf of pipe requires open cut replacement, or
- Additional engineering services are required for permitting and surveying beyond the current scope

The Engineer agrees to provide the following services:

A.2.1 Task 1 – Data Gathering and Project Management

1. Project Management Plan (PMP): Prepare and submit to Owner a PMP within 21 calendar days after the date of the Notice to Proceed (NTP). The purpose of this PMP is to provide a baseline of project tasks, Critical Path scheduling, team organization, and Quality Control. The PMP will be updated as needed as part of the monthly progress report under this Task Order. The PMP shall include:
 - a. Organization Chart and narrative that identifies team members, including subconsultants; and responsibilities of key technical and project management personnel.
 - b. Description of tasks and subtasks to be performed and associated costs. This breakdown will be used as the basis for measuring progress and preparation/approval of Engineer invoicing.
 - c. A Critical Path Schedule that identifies project tasks and their impact the schedule. The SSES and Design activities are assumed to be completed within 360 calendar days of the NTP.
 - d. Quality Control Plan that details Quality Assurance/Quality Control procedures for collected SSES data and the follow-on designs.
 - e. Health and Safety Plan for field activities performed during the Task Order, including Traffic Control Plans.

2. Meetings



Engineer will prepare agenda and meeting minutes for meetings during the Task Order. It is assumed that there will be the following meetings:

- a. SSES and Design Kick-off Meetings (2 assumed)
- b. SSES and Design Workshops (3 assumed)

Progress meetings required will be held concurrently with the meetings assumed above.

3. Gather Project Information

Engineer will gather available data from the Owner including:

- a. As-built Drawings
- b. Flow and hydraulic model data
- c. USGS maps
- d. GIS Data

4. Project Management

Engineer will provide project management as required including:

- a. Ensuring resources are available for the work
- b. Managing project performance and schedule
- c. Ensuring QA/QC is performed
- d. Managing project activities and budgets
- e. Preparing invoices and status reports as required by the Owner

A.2.2 Task 2 –SSES

1. Engineer shall conduct the SSES for the lengths and quantities in Attachment A1. The SSES shall be in accordance with the following Owner specifications:

- a. Section 33 01 30.14 - Precondition and Cleaning of Sewers (assume approximately 69,000 lf)
- b. Section 13328 - Close Circuit TV Inspection of Sewers (assume approximately 90,000 lf)
- c. Section 33 01 30.22 - Flow Isolation Inspection of Underground Sewer Pipelines (50 assumed in pipes 36-inch diameter and less)
- d. Section 13333 - Smoke Testing of Underground Sewer Pipelines (assume approximately 90,000 lf)
- e. Section 33 01 30.29 - Inspection of Sanitary Sewer Manholes (335 MACP Level 2 inspections assumed utilizing a pole mounted camera)
- f. Section 13335 - Sonar Inspection of Sewers (assume approximately 21,000 lf)

2. The following assumptions have been used to develop the scope for the SSES:

- a. The four pipe segments (1,088lf) shown as “unknown” are 8-inch diameter or less.
- b. Debris disposal site at Moccasin Bend WWTP to be provided at no charge



- c. Water for cleaning will be purchased by the Engineer.
 - d. Light cleaning includes up to three passes of a jetter.
 - e. Only pipes 36 inches in diameter and smaller will be cleaned. It is our recommendation that cleaning of pipes greater than 36 inches in diameter not be performed. Combined CCTV/Sonar inspection has been proposed and included in the SSES task (Task II). This will be performed by floating the camera and sonar equipment through the pipe. If cleaning of the larger diameter sewers is required, we anticipate an increased schedule duration of at least 3 months and increased cost on the order of \$50-\$75 per linear foot (to be negotiated if required).
 - f. Pipes greater than 36 inches in diameter will be CCTV/Sonar combined inspected by camera floated through pipe.
 - g. Heavy cleaning of 8-inch diameter pipes and smaller will be required in only 10% of the pipe and is in addition to light cleaning.
 - h. Heavy cleaning of pipes larger than 8-inch up to 36-inch diameter will be required in only 25% of the pipe and is addition to light cleaning.
 - i. It is assumed that bypass pumping will be required in 50% of the pipes 10-inch up to 36-inch diameter and that smaller diameter pipes will utilize flow-through plugs. An allowance of \$18,785 has been provided for bypass pumping. Bypass pumping in sewers larger than 36-inch diameter is not included.
 - j. Dyed water tracing and dyed water flooding of storm sewers according to Section 33 01 30.26 - Dye Water Testing of Underground Sewer Pipelines is not anticipated.
 - k. Laser Profile Inspection according to Section 13336 - Laser Profile Inspection of Sewers is not anticipated.
 - l. Major traffic control that will only be required on Brainerd Road/Lee Highway will be provided by others. If we were to perform this work, we have estimated 8 days of major traffic with an estimated cost for each day of \$2,500. All traffic control will be in accordance with MUTCD and traffic control required for other sections of the sewer shed will be provided.
3. Engineer shall provide the findings of SSES inspections to owner. Deliverable shall be electronic copies of CCTV inspections and other SSES field activity documentation on a hard drive per the Owner specifications stated in Section A.2.2.1 above.

A2.3 Task 3 – Preliminary Engineering Report / SRF Facility Plan

1. Owner shall prioritize rehabilitation recommendations in MS Access 2010 database format, linked to structure Facility ID's.
2. Engineer shall review pipes, manholes, and the associated rehabilitation methods. Review shall include a field walk through of the proposed rehabilitation areas as required to address ingress/egress, contractor staging, make-up water access, cleanings disposal, and permitting considerations.
3. Once the scope of the required rehabilitation known, Owner and Engineer will meet to determine the scope of work that can be included in the project.



4. Preliminary Engineering Report (PER)

- a. The Engineer shall summarize the evaluation of the Owner rehabilitation recommendations and the portion of the work to be constructed under this project in a PER that includes 30% conceptual design drawings; cost opinion; and a listing of specification sections.
 - b. Engineer shall develop Conceptual Plans as plan view only at 1"=100 horizontal scale as part of the PER. Base mapping shall be developed from Owner GIS (Esri ArcGIS) that shall include, but not be limited to, land and water features, roadways, parcels, buildings, and any other feature that may be incorporated into base mapping.
 - c. Engineer will submit five (5) copies of the PER as hard copies and one (1) copy on DVD.
5. Perform SRF present worth analysis and alternatives comparison. The four alternatives to be evaluated will be provided by the Program Manager (PM) along with comparison language from previous SRF submittals prepared by the PM for Chattanooga. One of the alternatives will be do nothing.
 6. Perform SRF environmental review with input from the PM including language and information from previous SRF Facility Plans for Chattanooga.
 7. Address SRF Environmental Justice issues. Owner to provide data on minority and low income populations in the project area and PM to provide language from previous SRF Facility Plans prepared by PM for Chattanooga.
 8. Prepare final PER and submit to Owner for review and approval and compile the SRF Facility Plan. Five paper copies and one electronic copy will be provided.
 9. Engineer will assist in Owner conducting one (1) public meeting to present alternatives. PM will prepare presentation exhibits as required. 8 man-hours has been budgeted for this effort.

It has been assumed that the Owner will provide input to other requirements of the SRF Facility Plan including:

- a. Purpose and Need for project
- b. General Information
- c. Future Conditions

A2.4 Task 4 – Finalize Design Drawings and Specifications

1. Based on PER approval from Owner, Engineer will prepare Plan and Profiles drawings at a scale of 1"=50' horizontal and 1"=10' vertical in AutoCAD 9 or higher release. CAD layers, title blocks and sheet templates shall be provided



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by Owner to Engineer. Fees are based on the preparation of an estimated 45 drawings according to the following draft drawing list.

Dwg No.	Description	Comments
1	Title Sheet	
2	Project Location	
3	General Notes	
4	Erosion and Sedimentation Details	
5-41	Plan and Profile Sheets	Assumes 36,000lf utilizing a 21" by 32" sheet area (National CAD Standards) or 1,000lf per drawing (36 sheets)
42, 43	Traffic Control Details	
44, 45	Miscellaneous Details	

2. It is assumed that one construction package will be prepared. Five (5) submittal copies plus one digital copy on DVD shall be submitted for 90% design submittals to Owner for review. Due to the rapid schedule, it is proposed that no 60% submittal be prepared or submitted.
3. Engineer shall review and respond to Owner review comments in writing and during a workshop. Contract drawings and specifications will be updated to address comments generated during the previous submittal.
4. Final Design
Engineer will develop the 90% design and opinion of probable construction costs. Engineer will submit five (5) copies of the 90% as hard copies and one (1) copy on DVD. This phase of the task order includes:
 - a. Preparation of Bid Documents and Bid Schedule utilizing standardized specifications (including Division 00 and 01) provided by Owner.
 - b. Preparation of Final Takeoff and updated Class 1 Cost Opinion. In accordance with the Association for the Advancement of Cost Engineering International (AACE) criteria, this is a Class 1 estimate. A Class 1 estimate is defined as a Baseline Check Estimate or Final Control Estimate. Typically, engineering is from 50 percent to 100 percent complete. Class 1 Estimates are used to compare against received bids, evaluate change order requests and for construction claim evaluations and dispute resolution. Expected accuracy for Class 1 estimates typically range from -10 percent to +15 percent, depending on the technological complexity of the project, appropriate reference information, and the inclusion of an appropriate contingency determination. In unusual circumstances, ranges could exceed those shown.
 - c. Submittal of 90% Documents to SRF for review, comment and approval.
 - d. Incorporate SRF and Owner final comments and prepare plans and specifications for bid. The City will be the plan holder and 20 hard copies



of the bid documents including full size drawings will be submitted to the Owner.

A2.5 Task 5 - Bid Phase Services

Engineer shall assist Owner with Bid Phase Services, including:

1. Prepare Advertisement for Bids.
2. Answer Contractor questions and issue Addendums as required. 40 man-hours have been assumed for this effort.
3. Participate in Bid Opening and prepare Bid Tabulation.
4. Evaluate Bids and make Recommendation of Award.
5. Assist in submitting MBE/WBE documentation to SRF and get Approval to Award.
6. Prepare Contract Documents for execution (Conformed Set).

A2.6 Task 6 - Construction Phase Services

Engineer shall assist Owner with Construction Phase Services as detailed below. It is assumed that construction will be 6 months duration. Level of effort more than assumed will be considered as Supplemental Services.

1. Attend one pre-construction conference for the project. The Engineer will prepare and distribute meeting minutes to attendees.
2. Attend up to 5 monthly progress meetings for the project. The Engineer will prepare and distribute meeting minutes to attendees and review up to 6 pay requests and process them for submittal to Owner.
3. Engineer will provide the following shop drawing review services:
 - a. Review shop drawing submissions in accordance with specifications of the Contract Documents.
 - b. Maintain a shop drawing log with action dates and comment status.
 - c. Shop drawings submissions that are substantially non-compliant with the project documents will be rejected without comment or full review.
 - d. Shop drawing review will be limited to two submissions for each shop drawing (one initial submittal and one resubmittal). Additional reviews beyond one resubmission will be performed as additional services. For the project there are 20 submittal reviews assumed, including re-submittal reviews.
4. Engineer will review and respond to up to six (6) RFIs and process up to two (2) change orders.



5. Engineer will provide up to four (4) site visits for engineering interpretations and clarifications. 32 man-hours have been assumed for this effort.
6. Engineer will assist Owner with Substantial Completion inspection and Project Closeout documentation, including the site inspection, preparation of punch list items and confirmation of Final completion.
7. Engineer will prepare Record Drawings at the completion of construction, in AutoCAD format, based on Owner-provided Contractor's "red-line" modifications of contract documents provided by the Owner. The Engineer will deliver one review set of drawings and one set of the final electronic drawing files (AutoCAD) on CD to the Owner.

2. SUPPLEMENTAL SERVICES

Any work requested by the Owner that is not included in the Basic Services will be classified as Supplemental Services. Supplemental Services shall include, but are not limited to the following:

A3.1 Task 7 – Easements and Permitting as Required

1. Identify easements and property owners as required. Based on input received to date, no new permanent easements will be required.
2. Engineer shall assist Owner in development of permit applications for this project. The permits included in this scope are limited to: temporary access to easements and Notice of Intent and Storm Water Pollution Prevention Plan as required. Permit applications shall be provided with the 90% Design submittal. Owner will review the applications and upon their approval the Engineer shall provide to Owner the necessary drawings, calculations, and attachments necessary for application submission. It is assumed one meeting will be held to discuss permit requirements and details. Owner will submit the applications to the permitting agencies and shall pay any application fees required by the permitting agencies. Notifications and annotations required by permitting agencies shall be incorporated within the contract drawings and specifications. 80 manhours have been reserved for this task.

A3.2 Task 8 – Surveying & Mapping as Required

Survey will be limited to the open cut areas (assumed as 9,000 lf). Owner will provide GIS data including manhole rim and invert information sufficient to prepare plan and profile drawings for the trenchless rehabilitation (assumed as 27,000 lf).



- a. Engineer will establish horizontal and vertical control for this project based on the State Plane Coordinate System. Benchmark information will be provided by Owner from established control network.
- b. Engineer will collect topographic survey as spot elevations and 2-foot contours 20' either side of the pipe center line for existing gravity separate sanitary sewers.
- c. The Engineer will not conduct any property research for the establishment of easements for this project.
- d. The field survey is not intended to locate underground utilities. Where others have marked utility lines, they will be added to the field survey where observed within 20 feet of the sewer center line, including ephemeral and perennial bodies of water.

A3.3 Task 9 – Resident Project Representative (RPR) as Required

1. Engineer shall furnish a full-time Resident Project Representative ("RPR"), assistants, and other field staff to assist Engineer in observing progress and quality of the Work. Based on schedule assumptions, the RPR will be provided for the duration of 6 months of construction.
2. Through such additional observations of Contractor's work in progress and field checks of materials and equipment by the RPR, Engineer shall endeavor to ensure work is constructed per plans and specifications. However, Engineer shall not, during such visits or as a result of such observations of Contractor's work in progress, supervise, direct, or have control over the Contractor's Work nor shall Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures selected or used by Contractor, for security or safety at the Site, for safety precautions and programs incident to the Contractor's work in progress, for any failure of Contractor to comply with Laws and Regulations applicable to Contractor's performing and furnishing the Work, or responsibility of construction for Contractor's failure to furnish and perform the Work in accordance with the Contract Documents.
3. The duties and responsibilities of the RPR are as follows:
 - a. *General:* RPR is Engineer's agent at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions. RPR's dealings in matters pertaining to the Contractor's work in progress shall in general be with Engineer and Contractor, keeping Owner advised as necessary. RPR shall generally communicate with Owner with the knowledge of and under the direction of Engineer.
 - b. *Schedules:* Review the progress schedule, schedule of Shop Drawing and Sample submittals, and schedule of values prepared by Contractor and consult with Engineer concerning acceptability.
 - c. *Conferences and Meetings:* Attend meetings with Contractor, such as



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preconstruction conferences, progress meetings, job conferences and other project-related meetings, and prepare and circulate copies of minutes thereof.

d. Shop Drawings and Samples:

- 1). Record date of receipt of Samples and approved Shop Drawings.
- 2). Receive Samples which are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
- 3). Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal for which RPR believes that the submittal has not been approved by Engineer.

e. *Modifications:* Consider and evaluate Contractor's suggestions for modifications in Drawings or Specifications and report such suggestions, together with RPR's recommendations, to Engineer. Transmit to Contractor in writing decisions as issued by Engineer.

f. Review of Work and Rejection of Defective Work:

- 1) Conduct on-Site observations of Contractor's work in progress to assist in determining if the Work is in general proceeding in accordance with the Contract Documents and advise Engineer of that part of work in progress that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

g. Inspections and Tests:

- 1) Consult with Engineer in advance of scheduled major inspections and tests of important phases of the Work.
- 2) Verify that tests are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
- 3) Observe, record, and report to Engineer appropriate details relative to the test procedures.

h. Records:

- 1). Maintain at the office orderly files for correspondence, reports of job conferences, reproductions of original Contract Documents.
- 2). Prepare a daily report recording Contractor's hours on the Site, weather conditions, Contractor's equipment usage, Site visitors, daily activities, decisions, observations in general, and specific observations in more



detail as in the case of observing test procedures; and send copies to Engineer.

i. Reports:

- 1) Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the progress schedule and schedule of Shop Drawing and Sample submittals.
- 2) Draft and recommend to Engineer proposed Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
- 3) Furnish to Engineer and Owner copies of all inspection and test reports.
- 4). Immediately notify Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, damage to property by fire or other causes, or the discovery of any Constituent of Concern..

j. Payment Requests: Review Applications for Payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the schedule of values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

k. Completion:

- 1). Participate in a Substantial Completion inspection, assist in the determination of Substantial Completion and the preparation of lists of items to be completed or corrected.
- 2). Participate in a final inspection in the company of Engineer, Owner, and Contractor and prepare a final list of items to be completed and deficiencies to be remedied.
- 3). Observe whether all items on the final list have been completed or corrected and make recommendations to Engineer concerning acceptance and issuance of the Notice of Acceptability of the Work.

3. REIMBURSABLE EXPENSES:

Project specific reimbursable expenses and charges shall include the following:

1. Subconsultants
2. Travel expenses for BC personnel not residing in Chattanooga to conduct field visits and attend workshops and progress meetings
3. Miscellaneous expenses including equipment rental, incidental materials, express delivery, etc.



ATTACHMENT B

Owner: City of Chattanooga, Tennessee

Engineer: Brown and Caldwell
Project Number & Name: W-12-021-101
Focused Sanitary Sewer Evaluation Study and Rehabilitation of South Chickamauga Creek 5 Sub-basin For Waste Resources Division

COMPENSATION

For the services covered by this Agreement, the Owner agrees to pay the Engineer as follows:

- For the Basic Services described in Attachment A, compensation shall be made based on billing rates and expenses with a not to exceed limit of \$900,765. Payments shall be made monthly in amounts which are consistent with the amount of engineering services provided, as determined by the Engineer.

Task 1 – Data Gathering and Project Management	\$83,360
Task 2 – SSES	\$443,820
Task 3 – Preliminary Engineering Report / SRF Facility Plan	\$86,840
Task 4 – Finalize Design Drawings and Specifications	\$182,985
Task 5 - Bid Phase Services	\$22,330
Task 6 – Construction Phase Services	\$81,430

Subtotal \$900,765

- Compensation for Supplemental Services shall be made as defined below, when authorized in writing by the Owner. The maximum limit for each item of additional service shall be established individually and specifically agreed to by the Owner as stated below, unless the service is included in a subsequent agreement.

Task 7 – Easements and Permitting as Required	\$10,880
Task 8 – Surveying & Mapping as Required	\$22,795
Task 9 – Resident Project Representative (RPR) as Required	\$85,560

Subtotal \$119,235

Grand Total \$1,020,000

- Hourly rates for each classification as defined by the Engineer's rate schedule, see Attachment F. Overtime, when authorized by the Owner, will be billed at 1.5 times the rates listed (non-engineer time only).
- Reimbursable charges will be considered the amount of actual costs of project related expenses or charges times a markup of 10% (5% on SSES Subcontractor. Charges for use of computer equipment or software, local travel, local telephone, project photographs, miscellaneous supplies, and reproduction are not considered reimbursable charges. Allowable project-specific reimbursable expenses shall be outlined in Attachment A.
- The entire amount of each statement shall be due and payable 30 days after receipt by the Owner.



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6. The Engineer shall keep records on the basis of generally accepted accounting practice of costs and expenses which records shall be available for inspection at all reasonable times.
7. Invoices shall be submitted using the Standard Invoice form, Attachment G.

OWNER'S RESPONSIBILITIES

- The Owner will furnish, as required by the work and not at the expense of the Engineer, the following:
1. The Owner will provide the Engineer copies of all current and necessary permits and approvals from all federal, state and local regulatory agencies. These include air quality, water quality, storm water quality, solid waste, special wastes, and other regulatory permits that may be required.
 2. The Owner will provide Engineer access to all of available NPDES reports as required.
 3. The Owner will coordinate and facilitate meetings or the exchange of information between any other interested parties that may also prospectively participate in the project as required.
 4. The Owner will coordinate for the Engineer the acquisition of those population and employment figures from regional planning institutions as required for the project as required.
 5. The Owner will provide the Engineer copies of all available sewer reports related to sewer facility planning as required.
 6. The Owner will provide access to the system with hydraulic model copies as required.
 7. The Owner will provide the Engineer the most up-to-date GIS data available for all sewer system components as required.
 8. The Owner will provide the Engineer access to all its pump station and CSSTF sites as required.
 9. The Owner will provide Engineer access to all available plans and specifications for the facilities as required.
 10. The Owner will provide the Engineer with documentation of existing O&M procedures related to the operation of the treatment works that may be related to the project as required.
 11. The Owner will provide the Engineer with documentation of existing standards and procedures related to the sewer system development and expansion as required.
 12. The Owner will provide the Engineer with documentation of existing standards and procedures related to the treatment works as required.
 13. The Owner will arrange for facilities for the Engineer and attend public information meetings.



ATTACHMENT C

Owner: City of Chattanooga, Tennessee

Engineer: Brown and Caldwell

Project Number & Name: W-12-021-101

Focused Sanitary Sewer Evaluation Study and Rehabilitation of South
Chickamauga Creek 5 Sub-basin For Waste Resources Division

OWNER'S RESPONSIBILITIES

The Owner will furnish, as required by the work and not at the expense of the Engineer, the following:

1. The Owner will provide the Engineer copies of all current and necessary permits and approvals from all federal, state and local regulatory agencies. These include air quality, water quality, storm water quality, solid waste, special wastes, and other regulatory permits that may be required.
2. The Owner will provide Engineer access to all of available NPDES reports as required.
3. The Owner will coordinate and facilitate meetings or the exchange of information between any other interested parties that may also prospectively participate in the project as required.
4. The Owner will coordinate for the Engineer the acquisition of future population and employment figures from regional planning institutions as required for the project as required.
5. The Owner will provide the Engineer copies of all available sewer reports related to sewer facility planning as required.
6. The Owner will provide access to the system wide hydraulic model outputs as required.
7. The Owner will provide the Engineer the most up-to-date GIS data available for all sewer system components as required.
8. The Owner will provide the Engineer access to all its pump station and CSOTF sites as required.
9. The Owner will provide Engineer access to all available plans and specifications for the facilities as required.
10. The Owner will provide the Engineer with documentation of existing O&M procedures related to the operation of the treatment works that may be relative to the project as required.
11. The Owner will provide the Engineer with documentation of existing standards and procedures related to the sewer system development and expansion as required.
12. The Owner will provide the Engineer with documentation of existing standards and procedures related to the treatment works as required.
13. The Owner will arrange for facilities for the Engineer and attend public information meetings



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as required. The Owner will prepare and mail invitations for public information meetings as required. The Owner and the Engineer will conduct monthly project progress meetings as required.

14. The Owner will designate a project representative to be the liaison between the Engineer and the Owner on the project.
15. Owner will make a reasonable effort to evaluate if hazardous materials are on or near the project site, and will inform Engineer of findings relative to the possible presence of such materials.



ATTACHMENT D

Owner: Owner of Chattanooga, Tennessee

Engineer: Brown and Caldwell

Project Number & Name: W-12-021-101

Focused Sanitary Sewer Evaluation Study and Rehabilitation of South Chickamauga Creek 5 Sub-basin For Waste Resources Division

SUPPLEMENTAL AGREEMENTS

A. Engineers Responsibilities:

1. During Contract negotiation, the Engineer shall describe in detail its overall approach that will be used by its Engineer's Project Team to perform the scope of work described herein for the development of the project for the Owner.
2. The Engineer shall provide all labor, benefits, equipment, materials, fuel, utilities, insurance, out-of-pocket expenses, and other related services required in connection with development of the project.
3. The Engineer shall obtain all necessary permits and approvals from all federal, state, and local regulatory agencies related to development of the project as required. Furnish copies of all required permits and approvals to the Owner.
4. The Engineer shall provide and submit reports and certifications as required by all applicable EPA and/or State regulations of development of the project as required. Furnish a copy of all required reports to the Owner in a timely manner.
5. The Engineer shall coordinate its work with the operating schedule of the Owner as required.
6. The Engineer shall conduct the work for the development of the project in compliance with all applicable federal, state, and local laws, regulations, permits, and approvals.
7. The Engineer shall provide adequate supervision and technical and managerial oversight of the Engineer's employees, subcontractors, and agents
8. The Engineer shall support and utilize the Owner's Standard Operating Procedures developed for the Consent Decree (CD) Program. Specifically, the design of each project shall comply with CADD standards, standardized specifications, or approved design guidelines, cost estimating guidelines, and materials and functional layout and operation of equipment and systems as required.
9. The Engineer shall administer the project to comply with the scheduling goals established by the Program Manager (PM) to ensure that the CD milestones are being met. The Engineer shall timely report project information as prescribed by the PM.
10. The Engineer shall prepare an initial and minimum monthly update to its project schedule;



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- updates can be more frequent or as significant activities change.
11. The Engineer shall prepare, implement and execute a project quality management plan which complies with quality program guidelines and requirements and goals to be established by the PM, and the Engineer's own internal quality procedures/program requirements. The Engineer shall be fully responsible for the quality of their work products and associated quality assurance and quality control activities.
 12. The Engineer shall prepare, implement and execute a written project safety management plan which following the Engineer's own internal safety procedures/program requirements and which will also reflect the goals of the safety program to be established by the PM for the CD program project.
 13. The Engineer shall provide all documents in a timely manner and format prescribed by the PM to support a document management/imaging repository. All documents shall be maintained in this manner for general and financial record keeping, contract compliance, claims and litigation, warranty issues, and related purposes.
 14. The Engineer may assist the PM in reviewing the preliminary project budget and provide recommendations relative to project updates for design, construction contract administration and inspection, contracting costs, and industry appropriate level of contingency as required. The Engineer shall assist the PM in coordinating the program budget with the plan schedule in order to ensure compliance with the CD needs and constraints regarding the overall budget as required. Engineer shall maintain and input pertinent information to account for all costs of the project in a form and manner prescribed by the PM as required.
 15. The Engineer shall assist the PM with the preparation of project progress reports as required. Reports shall include, but not be limited to, all reports required to satisfy requirements of the CD.
 16. The Engineer may be asked to provide technical support to the CD Public Relations Plan.
 17. The Engineer shall utilize the Owner's standardized Division 00 and 01 specifications as in developing project specific specifications- In addition the PM will provide to the Engineer certain technical specifications, details and minimum design guidelines intended to provide consistency across the design deliverables from various Engineers on similar types of work as required.
 18. The Engineer shall submit all Requests for Information (RFIs) and change order for their professional services agreement to the PM first for approval.
 19. The Engineer shall submit all pay requests/invoices to PM first for approval.
 20. Engineer shall identify any and all permits during the first month of project activity from Notice to Proceed (NTP). Likely easements and permanent real estate acquisitions shall be identified with special purpose survey exhibits depicting areas needed based on a schedule to be developed by the Engineer within the first month of project activity from NTP.
 21. The PM may conduct monthly progress meetings, value engineering (VE) reviews and constructability review as required and include Owner and PM staff as needed.



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B. Owner and Engineer agree that the following communications, representations, and agreements by Engineer relating to the subject matter of the Agreement are hereby incorporated into and shall become a part of the Agreement.

[All necessary items as Supplemental]



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ATTACHMENT E

Owner: Owner of Chattanooga, Tennessee

Engineer: Brown and Caldwell

Project Number & Name: W-12-021-101

Focused Sanitary Sewer Evaluation Study and Rehabilitation of South
Chickamauga Creek 5 Sub-basin For Waste Resources Division

PROJECT SCHEDULE

Owner and Engineer recognize that time is of the essence of the Agreement and that Owner may suffer financial loss if the work is not completed within the times stipulated herein, plus any extensions thereof. Accordingly, Engineer will develop for this Agreement a preliminary schedule based on the schedule requirements specified in the Specific Scope of Work for this project and either provide it below or as Attachment E1.

A detailed schedule (project schedule) will be required as one of the Project Management deliverables as specified in the Specific Scope of Work for this project once the Agreement is executed. The Engineer will produce the project schedule using industry accepted scheduling software approved by the Owner.

It is understood and agreed that the Engineer shall start the performance of Services within 10 days of receipt of a written Notice to Proceed and shall complete the work in accordance with the contract times set forth herein.



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ATTACHMENT F

Owner: Owner of Chattanooga, Tennessee

Engineer: Brown and Caldwell
 Project Number & Name: W-12-021-101
 Focused Sanitary Sewer Evaluation Study and Rehabilitation of South Chickamauga Creek 5 Sub-basin For Waste Resources Division

RATE SCHEDULE

See attached Rate Schedule



Brown and Caldwell Schedule of Hourly Billing Rates

Level	Engineering	Technical/Scientific	Administrative	Hourly Rate
A			Office/Support Services I	\$55
B	Drafter Trainee	Field Service Technician I	Word Processor I Office/Support Services II	\$60
C	Assistant Drafter	Field Service Technician II	Word Processor II Office/Support Services III	\$65
D	Drafter Engineering Aide Inspection Aide	Field Service Technician III	Accountant I Word Processor III Office/Support Services IV	\$80
E	Engineer I Senior Drafter Senior Illustrator Inspector I	Geologist/Hydrogeologist I Scientist I Senior Field Service Technician	Accountant II Word Processor IV	\$85
F	Engineer II Inspector II Lead Drafter Lead Illustrator	Geologist/Hydrogeologist II Scientist II	Accountant III Area Business Operations Mgr Technical Writer Word Processing Supervisor	\$110
G	Engineer III Inspector III Senior Designer Supervising Drafter Supervising Illustrator	Geologist/Hydrogeologist III Scientist III	Accountant IV Administrative Manager	\$130
H	Senior Engineer Principal Designer Senior Construction Engineer Senior Engineer	Senior Geologist/Hydrogeologist Senior Scientist	Senior Technical Writer	\$145
I	Principal Engineer Principal Construction Engineer Supervising Designer	Principal Geologist/Hydrogeologist Principal Scientist	Corp.Contract Administrator	\$165
J	Supervising Engineer Supervising Constr. Engineer Supervising Engineer	Supervising Scientist Supervising Geologist/ Hydrogeologist	Assistant Controller	\$185
K	Managing Engineer	Managing Geologist/Hydrogeologist Managing Scientist	Area Bus Ops Mgr IV	\$200



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L	Chief Engineer Executive Engineer	Chief Scientist Chief Geologist/Hydrogeologist	Corp Marketing Comm. Mgr.	\$205
M	Vice President			\$235
N	Senior Vice President			\$240
O	President/Executive Vice President			\$245
P	Chief Executive Officer			\$250

Other Direct Costs		
Identification	Unit	Rate
Personal Automobiles	Mile	\$.55*
Subcontractors		Cost plus 10%
Other Outside Services		Cost plus 10%
Rental Equipment, and Direct Project Expenses		10%

Effective January 1 through December 31, 2013

Hourly billing rates for professional labor are revised annually to reflect actual change in pay rates.

*Mileage Rate will be adjusted to federal mileage reimbursement rate during time of travel.



ATTACHMENT G

STANDARD INVOICE

Indicates MANDATORY Item

CONSULTANT LETTERHEAD

ATTN: City Project Manager
REF:
CODE:
PO:

INVOICE

TERMS: Net 25 days
DUE: 08/01/03

Provided by City

Must be Sequential Number

Invoice Number 5
Dated 07/07/03

Invoice Must show Billing Period.

This Breakdown must list each item of the Contract.

Consultant Project No.	Description	Fee	Work	Percent	Amount	Previous	This
		Fee Basis		to Date	Billed	Billed	Invoice Billed
C03009-01	01 - Design	\$51,500.00	LS	55%	\$26,325.00	\$18,540.00	\$9,785.00
	02 - Survey	\$15,700.00	LS	0%	\$0.00	\$0.00	\$0.00
C03009-02	Barton Avenue and Brown Acres Golf Course Design	\$20,000.00	CP	12%	\$2,391.02	\$2,033.00	\$358.02
C03009-03	Permitting/Easement Assistance	\$5,000.00	CP	6%	\$291.08	\$0.00	\$291.08
C03009-04	Bidding/Construction Assistance	\$10,000.00	CP	0%	\$0.00	\$0.00	\$0.00
C03009-05	Misc. As-Requested Services	\$5,000.00	CP	7%	\$363.85	\$0.00	\$363.85
Total Contract Amount					\$107,200.00	\$31,370.95	\$20,573.00
TOTAL THIS INVOICE							\$10,797.95

Must Match Contract Amount

Prior invoices	\$20,573.00
This invoice	\$10,797.95
Payments	-\$20,573.00
Balance on Account	\$10,797.95

- NOTE
- * There shall be only one invoice per contract per billing period
 - * Any necessary details should be attached as backup