

RESOLUTION NO. _____

A RESOLUTION AUTHORIZING THE ADMINISTRATOR FOR THE DEPARTMENT OF PUBLIC WORKS TO ENTER INTO AN AGREEMENT WITH CDM SMITH, INC. FOR PROFESSIONAL SERVICES RELATIVE TO CONTRACT NO. W-12-026-102, DUPONT PUMP STATION AND BASIN IMPROVEMENTS-PHASE 2, FOR AN AMOUNT NOT TO EXCEED ONE MILLION FIVE HUNDRED NINETY-FIVE THOUSAND SIX HUNDRED DOLLARS (\$1,595,600.00).

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF CHATTANOOGA, it is hereby authorizing the Administrator for the Department of Public Works to enter into an agreement with CDM Smith, Inc. for professional services relative to Contract No. W-12-026-102, DuPont Pump Station and Basin Improvements-Phase 2, for an amount not to exceed \$1,595,600.00.

ADOPTED: _____, 2015

/mem

City of Chattanooga



Resolution/Ordinance Request Form

Date Prepared: April 15, 2015

Preparer: Dennis Malone

Department: Public Works

Brief Description of Purpose for Resolution/Ordinance:

Res./Ord. # _____

Council District # _____

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A Council Action is requested for the Administrator of the Department of Public Works to enter into an agreement with CDM Smith Inc., for professional services, relative to Contract No. W-12-026-102, DuPont Pump Station and Basin Improvements – Phase 2, in an amount not to exceed \$1,595,600.00.

Name of Vendor/Contractor/Grant, etc. CDM Smith Inc.

New Contract/Project? (Yes or No) Yes

Total project cost \$ 1,595,600.00

Funds Budgeted? (YES or NO) Yes

Total City of Chattanooga Portion \$ 1,595,600.00

Provide Fund 6012

City Amount Funded \$ 1,595,600.00

Provide Cost Center K37142

New City Funding Required \$ 0

Proposed Funding Source if not budgeted _____

City's Match Percentage % _____

Grant Period (if applicable) 2014-xxx

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 _____

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



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

CDM Smith Inc.,

Hereinafter called Engineer.

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

W-12-026-102 – DuPont Pump Station and Basin Improvements – Phase 2,

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.



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: **CDM Smith Inc.**
Attn: Andrew Romanek
651 East 4th Street, Suite 100
Chattanooga, TN 37403
(423) 771-4495
romanekap@cdmsmith.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



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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.



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.

 04/16/15
Josh Norton
Vice President
CDM Smith Inc.

Date

Administrator of Public Works Date

Date

Director of Purchasing Date

Reviewed by City Attorney Office _____
Initial Date



ATTACHMENT A

Owner: City of Chattanooga, Tennessee

Engineer: CDM Smith Inc.
Project Number & Name: W-12-026-102
DuPont Pump Station and Basin Improvements – Phase 2

SCOPE OF SERVICES

1. BASIC SERVICES

The project is specifically defined as:

To improve the management and storage of wastewater flows and to address requirements outlined in the City of Chattanooga's Consent Decree for sewer overflows, the City of Chattanooga plans to build a new wet-weather pump station and above ground storage tank at the DuPont Parkway Pump Station site. CDM Smith will complete the detailed design for this project, assist with contractor procurement, and provide construction administration services, as noted in the tasks detailed herein. Supplemental Services for this project include site investigations, permitting, provision of a Resident Project Representative (RPR), and additional services. The specific scope of work for this project is based on the Phase 1 recommended improvements outlined in the DuPont Parkway Pump Station System Improvements Facilities Plan (CTI, February 2015) and includes the following:

- A new wet-weather pump station with a minimum capacity of 14 million gallons per day (MGD) to pump wet-weather flows to a new wet-weather storage basin and with provisions for future expansion;
- A 10 million gallon (MG) above-ground, covered storage tank and development of a site plan to allow a potential future 6.5 MG storage tank;
- A new diversion structure to control flow to the existing pump station and new wet-weather pump station;
- A standby generator with an automatic transfer switch to run the new wet-weather pump station in case of a power failure;
- Installation of a fourth pump in the existing pump station to increase the pumping capacity of this station to its design capacity;
- Replacement of the existing 30-inch interceptor down Elm Street from the existing diversion structure to Atlanta Drive with a 36-inch interceptor; and
- Connections in the immediate vicinity of the new wet-weather pump station and storage tank to the existing sewer network.



The Engineer agrees to provide the following services:

Task 1: Data Gathering and Project Management

As part of this task, CDM Smith will perform the following:

- Prepare and submit a project management plan.
- Prepare a detailed baseline schedule. This schedule will be updated monthly and submitted in accordance with the latest City of Chattanooga Consent Decree Program Procedures.
- Prepare invoices in accordance with the latest City of Chattanooga Consent Decree Program Procedures.
- Request and gather relevant project information, including record drawings, Geographic Information System (GIS) data, floodplain maps, and property records.
- Coordinate with the City and Program Manager regarding the project status and any issues.
- Perform subcontractor management and oversight.
- Prepare a health and safety plan for work (e.g., survey and geotechnical drilling) that will be performed on site.
- Upload and maintain documents in the Chattanooga Consent Decree Program Management SharePoint system.

Task 1 Assumptions

- The total project duration, from notice-to-proceed through closeout, including planning, design, bidding, State Revolving Fund Loan Program (SRFLP) approval, bidding, permitting, construction, and final closeout documentation, is estimated at 36 months. Project Management as part of Task 1 is budgeted to last this duration.
- Participation in and facilitation of up to 12 conference calls with the City / Program Manager throughout the life of the project.
- All relevant information necessary to begin work on this project is readily available from the Program Manager and other sources (e.g., Federal Emergency Management Agency [FEMA] floodplain maps, property records, existing pump station record drawings, and any previous geotechnical work performed for the existing pump station). Additional data collection is not needed beyond the survey and geotechnical work identified under Task 6.

Task 2: Preliminary Engineering Report

Task 2.1 Preliminary Engineering Report

CDM Smith will prepare and submit a Preliminary Engineering Report that provides sufficient detail to establish the basis of design. This report will include the following:

- Background on the project and the proposed upgrades;
- Summary level information regarding the anticipated operation scenarios;



- Detailed descriptions for the pump station and storage tank including capacities, design criteria and associated calculations;
- Preliminary equipment selection and sizing;
- A site plan and conceptual layout drawings;
- The results of the site investigations and impact on design;
- Other design considerations, including safety, reliability, maintenance, energy efficiency, and ability to maintain operation of the existing system during construction;
- A list of anticipated permits;
- Applicable codes and design standards; and
- A preliminary opinion of probable construction cost (OPCC) based on the conceptual design.

A draft Preliminary Engineering Report will be submitted to the Program Manager and City for review. A final Preliminary Engineering Report will be submitted after addressing comments on the draft report.

Task 2.2 Meetings

As part of Task 2, CDM Smith will facilitate two meetings with the City and Program Manager. The first will be a workshop to discuss the design basis. This workshop will be held after CDM Smith has gathered relevant information and begun a formulation of design options but prior to preparing a detailed draft of the Preliminary Engineering Report. The purpose of this workshop will be to achieve consensus on design features, including but not limited to diversion design, pumping system, building architecture, storage tank number/type/dimensions, odor control, treatment of contents, tank cleaning, tank access provisions, generator, flow return, aesthetic features, landscaping, and site security. CDM Smith will route questions prior to the meeting so that the City and Program Manager have time to review and will be prepared to discuss in the workshop.

The second meeting will be to present and discuss the draft Preliminary Engineering Report. The draft report will be routed prior to the meeting. Comments received during the meeting will be addressed in the final Preliminary Engineering Report.

Task 2.3 Community Involvement

Under this task, CDM Smith will provide support to the City and Program Manager in obtaining preliminary community acceptance prior to the start of detailed design and in reviewing the project with other City departments at the conclusion of design. CDM Smith's scope for this task includes the following:

- Preparation of renderings to demonstrate what the final construction will look like.
- Participation in up to two meetings with the City's Land Disturbance Office (LDO) and Economic Community Development (ECD) group to discuss the project and review the renderings and design drawings.



- Participation in one public meeting.

Task 2 Assumptions

The following assumptions are applicable to Task 2:

- Sewer system modeling necessary to support final sizing of the pump station, configuration of the diversion structure, and the development of other design criteria will be performed by the Program Manager.
- Capacities for the new wet-weather pump station and replacement interceptor line will be provided by and/or confirmed by the Program Manager.
- One round of review and revision for the Preliminary Engineering Report.
- A site visit will be conducted by CDM Smith's lead architectural engineer during preliminary design to take photographs and observe the surrounding area to support rendering development.
- The Program Manager will lead and coordinate the meetings with the City LDO, ECD, and public. CDM Smith will attend, answer technical questions, and prepare necessary handouts and discussion materials.

The following assumptions are applicable to the estimated level of effort both Task 2 and Task 3:

- Major decisions regarding design criteria and desired features will be made prior to the start of Task 3.
- A National Fire Protection Agency (NFPA) 820 analysis along with heating, ventilation, and air conditioning (HVAC) upgrades will be necessary for the existing pump station.
- No other improvements beyond adding a fourth pump and potential HVAC upgrades are necessary for the existing DuPont Pump Station.
- One circular, prestressed and covered concrete tank. The base of this tank will be above the 100-year flood elevation.
- The exterior of the tank will be painted to allow it to better blend in with the surrounding environment.
- The site plan will identify a location for the potential future 6.5 MG tank, and piping will be sized to accommodate a future tank. However, no tank design, provisions for filling, etc. will be performed for the potential future tank.
- The new wet-weather pump station will be a conventional submersible pump station designed and constructed with a wet well sized for ultimate system capacity with empty slots for future pumps. CDM Smith will visit one of the City's newer pump stations prior to detailed design to confirm expectations.
- The new wet-weather pump station will need to be flood proofed up to one foot above the 100-year flood elevation.



- The new diversion structure will feature a combed type bypass screen, similar to the City's existing CSO facilities. Provision of a new screen for the existing pump station and any associated building, screenings collection system, etc. are not included.
- An electrical building sized for ultimate system capacity. This building will feature a split-face Concrete Masonry Unit (CMU) with pitched metal roof, similar to the City's existing Combined Sewer Overflow (CSO) facilities.
- The hydraulic profile will allow gravity draining of the storage tank.
- Odor control (carbon scrubber) for the storage tank.
- A tank ventilation system.
- A generator in a weather enclosure with a separate, above ground fuel storage tank.
- No interior platforms or walkways for the storage tank.
- No treatment (e.g., mixing or aeration of tank contents) of wastewater will be necessary because heavy solids will be removed via the combed screen, a large portion of the tank contents will be storm water, and storage time will be short (less than 48 hours). However, the tank will be designed with the ability to retrofit in the future if needed.
- No deep foundation piles required.
- No fire protection necessary.
- An emergency eyewash / shower will be provided.
- No mechanical tank cleaning system. Yard hydrants with protected water will be provided at manways in the tank wall.
- Adequate water pressure is available on site for the hydrants.
- The site will include a security fence but no special landscaping or site screen walls will be included except those for odor control vessels.
- The site does not have any environmental, archeological, or other site issues.
- OPCCs will be prepared by CDM Smith Construction Cost Estimators who are certified by the American Association of Cost Engineers.

Task 3: Design Drawings and Specifications

CDM Smith will prepare complete and coordinated sets of design drawings and technical specifications with an adequate level of detail to allow bidding and construction by a construction contractor. The drawings will be segregated by major engineering disciplines and will follow Consent Decree Program Drawing Standards. A preliminary list of anticipated design drawings is provided in **Table 1**.

Technical specifications will be prepared in the 2011 Construction Specifications Institute (CSI) Spec-Text format and in accordance with Consent Decree Program Standards. A preliminary list of



anticipated technical specifications is provided in **Table 2**. CDM Smith will utilize the Consent Decree Program standardized Front End Specifications (Division 0 and 1) and will revise as necessary to complete the contract documents.

CDM Smith will prepare a 60% design submittal for City and Program Manager review. CDM Smith will then facilitate a review meeting workshop to present the 60% design and receive comments from the City and Program Manager. CDM Smith will also prepare a 90% submittal for City and Program Manager review and facilitate a final design review meeting workshop. Final comments and details will be provided in a final set of plans and specifications.

CDM Smith's level of effort for this task also includes preparing bid documents and a bid schedule. The OPCC will be updated at the 90% submittal. Once the design is finalized, it will be submitted to the Tennessee Department of Environment and Conservation (TDEC) and SRFLP for review and approval. Any TDEC and SRFLP comments will be incorporated into the plans and specifications issued for bid.

Task 3 Assumptions

- The entire project will be delivered as a single, conventional design-bid-build project with one construction contract.
- Up to three hard copy sets of full-size drawings and specifications along with a CD-ROM of pdf files will be delivered to the City for each submittal. Files will also be uploaded to the Consent Decree Program SharePoint site.
- The Program Manager will assist with the SRFLP submittal, including provision of templates that have been used for other Consent Decree projects.
- One round of review comments for both the 60% and 90% design submittals.
- Additional drawings and specifications not shown in Table 1 and Table 2 will be provided, as needed, for the contract documents at no additional cost to the City provided that the scope of the project has not changed.

Task 4: Bid Phase Services

CDM Smith will assist the City and PM in bidding the project and executing a contract with the selected contractor. CDM Smith's scope of services for this task includes:

- Preparing an Advertisement for Bids
- Providing bid documents electronically on up to 20 thumb drives
- Answering contractor questions and preparing addenda as required
- Participating in the Bid Opening
- Preparing a certified Bid Tabulation
- Evaluating bids and making a recommendation of award
- Assisting in submitting Minority Business Enterprise (MBE) / Woman Business Enterprise (WBE) documentation to SRFLP and obtaining an approval to award



- Participating in the authority to award process
- Preparing conformed design documents
- Preparing contract documents for execution
- Printing and delivering up to 11 sets of conformed documents

Task 4 Assumptions

- The City will maintain the Plan Holders List.
- The Program Manager will assist with the SRFLP submittal, including provision of templates that have been used for other Consent Decree projects.

Task 5: Construction Phase Services

Task 5.1 Construction Administration and Coordination

This subtask covers general construction administration, inclusive of monitoring construction progress, reviewing and processing contractor pay requests, and document management. Signed pay requests will be delivered to the Program Manager.

Task 5.2 Shop Drawing Reviews and RFIs

CDM Smith will review and approve shop drawings, and will maintain a shop drawing log. CDM Smith will also respond to contractor requests for information (RFIs). As necessary, CDM Smith will prepare supplemental drawings, specifications, and/or instructions to interpret the contract plans and documents and to resolve changes brought about by actual field conditions observed. This subtask also includes reviewing contractor change orders and providing the City and Program Manager with recommendations regarding change orders.

Task 5.3 Meetings, Inspections, and Site Visits

At least one representative from CDM Smith will participate in the following:

- Pre-construction kickoff meeting
- Monthly progress meetings during construction
- Site visits during construction for engineering interpretations and clarifications (conducted in conjunction with monthly progress meetings)
- A factory witness test for the control system
- Substantial completion inspection
- Final inspection

This task does not include construction inspections outside of the substantial completion and final completion inspections. Inspection services are provided under supplemental services Task 8.

Task 5.4 Operation and Maintenance Manual

CDM Smith will prepare and submit an Operations and Maintenance (O&M) Manual containing operating, maintenance, and repair information from manufacturer's submittals. The O&M Manual



will incorporate the final narrative description of the operation of the proposed facilities and a complete description of startup and shutdown procedures. An initial draft of the O&M Manual will be submitted for City and Program Manager review. After comments are incorporated, CDM Smith will finalize and submit hard copy (up to three copies) and/or an electronic copy in the format (e.g., CAD, pdf, etc.) requested by the City and Program Manager.

Task 5.5 Record Drawings and Project Closeout

CDM Smith will prepare and submit hard copy (up to three copies) and/or electronic record drawings in the format (e.g., CAD, pdf, etc.) requested by the City and Program Manager. CDM Smith will also prepare project closeout documentation in accordance with Consent Decree Program Requirements and SRFLP requirements.

Task 5 Assumptions

- CDM Smith's budget for this task is based on a construction duration of 18 months to reach substantial completion and an additional two months to reach final completion.
- Up to 12 site visits during construction are included in CDM Smith's budget beyond the 18 monthly construction meetings.
- The Contractor will be responsible for sediment and erosion control inspections and reporting.
- The Contractor will provide record documents including annotated drawings, final submittals, and final O&M manuals.



Table 1
Preliminary List of Anticipated Drawings

- G-0 Cover and Index of Sheets
- G-1 General Notes and Abbreviations

Civil

- C-1 Existing Site Plan
- C-2 Demolition Plan
- C-3 Site Layout and Grading Plan
- C-4 Erosion Prevention and Sediment Control Plan
- C-5 Yard Piping Plan
- C-6 Yard Profiles
- C-7 Interceptor Replacement – Plan
- C-8 Interceptor Replacement – Sections
- C-9 Paving and Drainage
- CD-1 Civil Details
- CD-2 Civil Details
- CD-3 Civil Details
- CD-4 Erosion and Sediment Control Details

Architectural

- A-1 Abbreviations, Symbols, General Notes, and Building Code Key Determinations
- A-2 Electrical Building Floor and Roof Plan
- A-3 Electrical Building Exterior Elevations
- A-4 Electrical Building Building and Wall Sections
- A-5 Existing Pump Station Modifications
- AD-1 Schedules and Details

Structural

- S-1 Structural Notes
- S-2 Pump Station Plans
- S-3 Pump Station Sections and Details
- S-4 Electrical Building Slab and Roof Plans
- S-5 Electrical Building Sections and Details
- S-6 Electrical Building Elevations
- S-7 Odor Control and Generator Foundation Plans
- S-8 Diversion Structure Foundation Plan
- S-9 Diversion Structure Top Plan
- S-10 Diversion Structure Sections
- S-11 Flow Return Control Valve Vault Plan and Sections
- S-12 Miscellaneous Vaults and Jib Crane Foundation Plans and Sections
- S-13 Existing Pump Station Modifications – Plan
- S-14 Existing Pump Station Modifications – Sections
- SD-1 Structural Details
- SD-2 Structural Details
- SD-3 Special Inspections
- SD-4 Special Inspections



Mechanical

- M-1 Mechanical Abbreviations, Symbols, and General Notes
- M-2 Hydraulic Profile
- M-3 Existing Pump Station Modifications – Plan
- M-4 Existing Pump Station Modifications – Sections
- M-5 Wet-Weather Pump Station Plan
- M-6 Wet-Weather Pump Station Sections I
- M-7 Wet-Weather Pump Station Sections II
- M-8 Storage Tank Plan
- M-9 Storage Tank Sections I
- M-10 Storage Tank Sections II
- M-11 Outlet Control Vault
- M-12 Diversion Structure
- M-13 Odor Control
- MD-1 Miscellaneous Details
- MD-2 Miscellaneous Details
- MD-3 Pipe Support Details

HVAC

- H-1 HVAC Symbols and Abbreviations
- H-2 Electrical Building HVAC Plan
- H-3 Wet Weather Storage Tank HVAC Plan
- H-4 Odor Control Ductwork Plan
- H-5 Existing Pump Station HVAC Demolition Plan
- H-6 Existing Pump Station HVAC Modification Plan
- H-7 HVAC Sections
- HD-1 HVAC Schedules
- HD-2 HVAC and Odor Control Details

Plumbing

- P-1 Plumbing Symbols and Abbreviations
- P-2 Generator Fuel System Plan
- P-3 Fuel System Riser Diagrams and Fuel System Details
- P-4 Existing Pump Station Plumbing Plan

Electrical

- E-1 Electrical Symbols and Abbreviations I
- E-2 Electrical Symbols and Abbreviations II
- E-3 Site Plan
- E-4 One Line Power Diagram
- E-5 Control and Instrumentation Riser Diagram
- E-6 Pump Station Power, Control and Grounding Plan
- E-7 Electrical Building Power, Control and Grounding Plan
- E-8 Electrical Building Lighting Plan
- E-9 Generator Power, Control and Grounding Plan
- E-10 Odor Control System Power, Control and Grounding Plan
- E-11 Existing Pump Station Electrical Modification Plan
- E-12 Panelboard and Lighting Fixture Schedules



E-13 Electrical Details

Instrumentation

- I-1 Instrumentation Symbols
- I-2 Instrumentation Legend
- I-3 System Architecture Drawing
- I-4 Pump Station P&ID
- I-5 Storage P&ID
- I-6 Instrumentation Details



Table 2
Preliminary List of Anticipated Technical Specifications

Division 2 – Site Work

- 02050 Demolition and Modifications
- 02080 Controlled Blasting
- 02100 Site Preparation
- 02140 Dewatering and Drainage
- 02200 Earthwork
- 02213 Rock and Boulder Excavation
- 02221 Trenching, Backfilling, and Compaction
- 02230 Granular Material
- 02260 Finish Grading
- 02270 Erosion and Sedimentation Control
- 02311 Excavation Support and Protection
- 02486 Seeding and Mulching
- 02576 Pavement, Pavement Repair, and Resurfacing
- 02605 Precast Concrete Manholes and Structures
- 02616 Ductile Iron Pipe and Fittings (Wastewater)
- 02617 Ductile Iron Pipe and Fittings and Valves (Water)
- 02622 Polyvinyl Chloride (PVC) Pipe and Fittings
- 02659 Temporary Bypass Pumping Systems
- 02668 Connection to and Work on the Existing System

Division 3 – Concrete

- 03100 Formwork
- 03200 Reinforcing
- 03250 Joints and Accessories
- 03300 Cast in Place Concrete
- 03350 Concrete Finishes
- 03390 Under Slab Vapor Retarder
- 03600 Grout

Division 4 – Masonry

- 04200 Masonry

Division 5 – Metals

- 05210 Roof Deck
- 05311 Metal Trusses
- 05500 Miscellaneous Metals

Division 6 – Wood, Plastic, and Composites

- 06100 Rough Carpentry

Division 7 – Moisture Protection

- 07115 Bituminous Dampproofing
- 07140 Cold Fluid-Applied Waterproofing
- 07210 Thermal Insulation
- 07412 Standing Seam Metal Roof Panels



07900 Joint Sealants

Division 8 - Doors and Windows

- 08110 Hollow Metal Doors and Frames
- 08710 Door Hardware
- 08800 Glazing

Division 9 - Finishes

- 09901 Surface Preparation and Shop Prime Painting
- 09902 Finish Painting

Division 10 - Specialties

- 10400 Signage
- 10522 Fire Extinguishers

Division 11 - Equipment

- 11282 Slide Gates and Weir Gates
- 11307 Submersible Wastewater Pumps
- 11801 Water Cannons and Appurtenances

Division 12 - Furnishings

- 12690 Floor Mats

Division 13 - Special Construction

- 13123 Prestressed Wire Wrapped Tank
- 13300 Process Instrumentation and Controls - General Provisions
- 13301 Control Loop Descriptions
- 13305 Application Engineering Services
- 13310 Programmable Logic Controller and Digital Equipment
- 13315 Field Instrumentation
- 13325 Control Panels
- 13521 Odor Control System
- 13XXX Diversion Structure

Division 14 - Conveying Equipment

- 14650 Davit Cranes / Jib Cranes

Division 15 - Mechanical

- 15051 Piping General Requirements
- 15052 Pipe Testing General Requirements
- 15064 Plastic Pipe and Fittings
- 15072 Ductile Iron Pipe and Fittings (Wastewater)
- 15100 Valves
- 15120 Piping Specialties
- 15140 Pipe Hangers and Supports
- 15250 Thermal Insulation
- 15400 Plumbing
- 15410 Plumbing Piping
- 15450 Plumbing Equipment
- 15500 HVAC



- 15600 Fuel System
- 15860 Fans
- 15891 FRP Ductwork
- 15990 Testing, Adjusting, and Balancing

Division 16 - Electrical

- 16000 General Electrical Requirements
- 16110 Raceways, Conduit, Fittings and Supports
- 16120 Low Voltage Wire
- 16150 Motors
- 16191 Miscellaneous Electrical Equipment
- 16216 Diesel Engine Driven Generator
- 16370 Variable Frequency Drives
- 16470 Panelboards
- 16480 Motor Control Centers
- 16500 Lighting System
- 16502 Lightning Protection System
- 16600 Underground System
- 16660 Grounding System
- 16900 Concrete Encased Ductbanks

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:

Task 6: Site Investigations

CDM Smith, or one its subcontractors, will collect survey and geotechnical data necessary to support detailed design. The site survey will include a detailed topographic survey with 1-foot contours in the area of the planned facilities. Utilities will be identified and inventoried along with FEMA delineated boundaries for the floodplain and floodway.

The geotechnical scope of work will include drilling up to six borings to refusal (i.e., top of bedrock). Split-spoon sampling will be performed at each boring location to determine soil classification and properties necessary to support design. Boring logs will be prepared by the geotechnical engineer along with a Geotechnical Design Report. This report will summarize the work conducted and laboratory results, and will present foundation recommendations and design criteria, such as allowable soil bearing and contract pressures, estimates of settlement, lateral earth pressures, and backfill requirements. All borings will be abandoned using grout.

Task 6 Assumptions

- The City will provide access to the site for the survey and geotechnical investigations. CDM Smith assistance with property acquisition is not required.
- Minor clearing will be necessary to access boring locations.



- Cuttings generated from the geotechnical drilling investigation can be spread on site.
- The depth to bedrock / refusal will be less than 50 feet.
- Rock cores will not be necessary.

Task 7: Permitting

This task covers obtaining necessary permits. The permits anticipated for this project are Plans Review by TDEC, a Land Disturbance Permit (LDP) from the City, a General National Pollutant Discharge Elimination System (NPDES) Permit for Stormwater Discharges from Construction Activities, and two air permits (one for construction and one for operation) for the generator. The General NPDES Permit is anticipated since the limits of disturbance are likely to exceed one acre. This permit will also require preparation of a Stormwater Pollution Prevention Plan (SWPPP). CDM Smith's budget for this task includes preparation of the TDEC Plans Review transmittal, LDP application for the City, Notice of Intent for the General NPDES permit, SWPPP, and air permit application.

Task 7 Assumptions

- The City will pay the permit application fees.
- CDM Smith has confirmed that the City does not have a floodplain development permit. Assuming that the City will own the land outright without a lender, a Letter of Map Revision (LOMR) is not anticipated either. Should fill be necessary to bring the base of the storage tank above the 100-year Base Flood Elevation (BFE), a LOMR-F may be required. CDM Smith has assumed that this will not be needed. As noted under the Task 2 / 3 assumptions, the new wet-weather pump station will need to be flood proofed to a level of 1 foot above the BFE per City code.
- Obtaining any permanent easements will not be required.

Task 8: Resident Project Representative (RPR)

This task comprises providing RPR services throughout the construction phase, including pre-construction planning and coordination through substantial completion and post-construction follow-up inspections. Costs under this task will be specific to the RPR. CDM Smith has assumed the following to develop the cost for this task:

- RPR billing rate at \$90/hour
- One week pre-construction planning and preparation
- 18 months of construction inspection and oversight through substantial completion at 40 hours per week
- Two months of final construction inspection and oversight at 16 hours per week
- Two weeks for project completion closeout and documentation
- Up to 80 hours of post-construction follow-up inspections after substantial completion
- The RPR will be local to Chattanooga or CDM Smith will not bill for travel related expenses.



Task 9: Additional Services

This task has been established to cover additional services that may arise and are not otherwise covered by the scope of work detailed in Tasks 1 through 8. Examples of additional services include design for items later added to the scope of work, unexpected permit requirements, and extended construction durations. CDM Smith will not bill any costs against this task without first documenting the need for additional services and obtaining approval from the City.

3. REIMBURSABLE EXPENSES:

Project specific reimbursable expenses and charges shall include the following:

Travel to / from non-local offices, supplies related to project execution, equipment rental, prints (including full-size hard copy drawings), and subcontractors. Auto mileage will be billed in accordance with current U.S. Internal Revenue Service rates.



ATTACHMENT B

Owner: City of Chattanooga, Tennessee

Engineer: **CDM Smith Inc.**
 Project Number & Name: **W-12-026-102**
DuPont Pump Station and Basin Improvements – Phase 2

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, **for a cost not to exceed \$1,167,100, billed in accordance with the hourly rates shown in Attachment F.** 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 | \$67,100 |
| Task 2: Preliminary Engineering Report | \$129,900 |
| Task 3: Design Drawings and Specifications | \$579,600 |
| Task 4: Bid Phase Services | \$39,100 |
| Task 5: Construction Phase Services | \$351,400 |
| Subtotal | <u>\$1,167,100</u> |

- 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 6: Site Investigations | \$43,800 |
| Task 7: Permitting | \$32,400 |
| Task 8: Resident Project Representative | \$312,300 |
| Task 9: Additional Services | \$40,000 |
| Subtotal | <u>\$428,500</u> |

Grand Total **\$1,595,600**

- 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 **5% for subcontractors and 0% for all other reimbursable charges.** 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.



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5. The entire amount of each statement shall be due and payable 30 days after receipt by the Owner.
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.



ATTACHMENT C

Owner: City of Chattanooga, Tennessee

Engineer: CDM Smith Inc.

Project Number & Name: W-12-026-102

DuPont Pump Station and Basin Improvements – Phase 2

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 as required. The Owner will prepare and mail invitations for public information meetings as required.



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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: CDM Smith Inc.

Project Number & Name: W-12-026-102

DuPont Pump Station and Basin Improvements – Phase 2

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; 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.

No supplemental terms



ATTACHMENT E

Owner: Owner of Chattanooga, Tennessee

Engineer: **CDM Smith Inc.**
Project Number & Name: **W-12-026-102**
DuPont Pump Station and Basin Improvements – Phase 2

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.

| Task | Scheduled Completion |
|--|--|
| 1 – Data Gathering and Project Management | Project Management Plan and Data Gathering within one month of notice-to-proceed (NTP) Project Management throughout the life of the project |
| 2 – Preliminary Engineering Report | Final report delivery within five months of NTP |
| 3 – Design Drawings and Specifications | 60% design submittal within three months of finalization of the Preliminary Engineering Report 90% design submittal within three months after completion of the 60% design review meeting Final design documents within one month after completion of the final design review meeting Finalized SRFLP submittal one month after completion of the final design review meeting |
| 4 – Bid Phase Services | Estimated to last four months including City procurement, evaluation of bids, and contracting with the selected bidder |
| 5 – Construction Phase Services | Substantial completion within 18 months after execution of the construction contract Final completion within 2 months after substantial completion |



| | |
|----------------|---|
| 6 – Permitting | Will be performed in conjunction with City procurement with permit approvals obtained prior to execution of the construction contract |
|----------------|---|

Notes and Assumptions:

- Durations are calendar months
- City and Program Manager reviews will be completed within four weeks
- Meetings with the City and Program Manager can be scheduled at the conclusion of City and Program Manager reviews (i.e., four weeks from submittal of draft documents)
- Permit approvals will be obtained from regulatory agencies within five weeks of submittal of a permit application



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ATTACHMENT F

Owner: Owner of Chattanooga, Tennessee

Engineer: CDM Smith Inc.
Project Number & Name: W-12-026-102
DuPont Pump Station and Basin Improvements – Phase 2

RATE SCHEDULE

| <i>Labor Category</i> | <i>Rate</i> |
|---|--------------------|
| Vice President or Technical Advisor (Grade 9, 10) | \$200 |
| Associate | \$185 |
| Principal | \$165 |
| Senior Professional | |
| Grade 8 | \$175 |
| Grade 7 | \$160 |
| Grade 6 | \$150 |
| Grade 5 | \$140 |
| Grade 4 | \$130 |
| Junior Professional | |
| Grade 3 | \$115 |
| Grade 2 | \$100 |
| Resident Project Representative | \$90 |
| Technician | \$75 |
| CAD | \$90 |
| Clerical | \$75 |
| Contract Administrator | \$80 |



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ATTACHMENT G

STANDARD INVOICE

 Indicates MANDATORY Item

Consultant Header or Logo

Company Name
Company Street Address 1
Company Street Address 2
City, State Zip
Ph: 000.000.0000 Fax: 000.000.0000

Invoice Date: 00-AAA-00
Invoice No:
Must be Sequential Number

ATTN: City Project Manager
RE: Project Name
CODE: Consultant Project Number
CN: City Project Number (ie. W-00-000-000)

City Project Manager
City Project Manager Title
City of Chattanooga
C/O Jacobs Engineering
4510 Turntable Road
Suite 201
Chattanooga, TN 37421

Provided by City

Invoice must show Billing Period.

For Professional Services from through

This breakdown must list each item of the Contract.

| Task no. | Description | Fee | Fee Basis | % Complete To Date | Amount Billed To Date | Previously Billed | This Invoice Amount |
|------------------------------|---------------------------------------|-------------|-----------|--------------------|-----------------------|-------------------|---------------------|
| Task 1 | Data Gathering and Project Management | \$ 1,000.00 | CPM | 00.00% | \$ 600.00 | \$ 500.00 | \$ 100.00 |
| Task 2 | Design | | CPM | #DIV/0! | \$ - | | |
| Task 3 | Bid | | CPM | #DIV/0! | \$ - | | |
| Task 4 | Construction Administration | | CPM | #DIV/0! | \$ - | | |
| Task 5 | Survey | | CPM | #DIV/0! | \$ - | | |
| Task 6 | Permitting/Easement | | CPM | #DIV/0! | \$ - | | |
| Task 7 | RPR | | CPM | #DIV/0! | \$ - | | |
| Task 8 | Additional Services | | CPM | #DIV/0! | \$ - | | |
| Total Contract Amount | | \$ 1,000.00 | | 00.00% | \$ 600.00 | \$ 500.00 | |
| TOTAL THIS INVOICE | | | | | | | \$ 100.00 |

Must Match Contract Amount

| | |
|--------------------|-----------|
| Prior Invoices | \$ 500.00 |
| This Invoice | \$ 100.00 |
| Payments | \$ - |
| Balance on Account | \$ 600.00 |

NOTE:

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

| | |
|--|------|
| Project Manager, Your Company | Date |
| Mike Marino P.E., Program Manager, Jacobs | Date |
| City Project Manager, City Project Manager Title | Date |