



CITY OF COLUMBIA
AGENDA MEMORANDUM

MEETING DATE: June 7, 2016

DEPARTMENT: Utilities and Engineering

FROM: *Joey Jaco, Director of Utilities and Engineering*

SUBJECT: American Engineering 6 Pump Stations SS7060

FINANCIAL IMPACT: Funding 5529999-SS7060-658650 (FY15/16 CIP Sheet attached)

ORIGINAL BUDGET: \$372,000.00 (FY15/16 CIP Sheet Attached)

BUSINESS PROGRAM: Subcontracting Outreach Program

CLEAN WATER 2020?: Yes

FEMA DR-SC4241?: No

STRATEGIC GOALS: Invest in Infrastructure

The Contract Amendment will allow American Engineering to provide engineering services for the refurbishment of the wastewater collection system for 6 Pump Stations: Clearwater, Meadowland, Prescott Manor, Shady Lane, Swandale and Yacht Cove. American Engineering will incorporate new pump station standards under development into the project, requiring redesign of several components of each pump station. This modification to the scope would provide the City with pump stations that meet the new standards, and therefore provide a better design and easier to maintain system.

Staff has negotiated a fee totaling One Hundred and Eight Thousand Nine Hundred Sixty Five Dollars and No/100 (\$108,965.00) for the specified needs above with American Engineering, a Non-DBE firm with an office in Cayce, SC. Funding for this Amendment was budgeted from the Capital Outlay Projects Budget (5529999-SS7060-658650).

Original Contract Amount: \$372,000.00
Contract Amendments #1 & #2 added \$8,775.00
Contract Amendment #3 added \$108,965.00
New Agreement total: \$489,740.00

Sub consulting services:

\$15,000.00 (13.77% of the total contract value) awarded to Howard Engineering for electrical engineering services.

\$7,000.00 (6.4% of the total contract value) awarded to Case Consulting, Inc. for structural Engineering Services.

Services to be performed will impact all City Council Districts.

The Legal Department has reviewed the Agreement and the Director of Utilities and Engineering recommends its approval and ACM for Operations recommends its approval.

Agreement for Engineering Services For
Wastewater Collection System Pump Stations Rehabilitation
Project Funding: 5529999-SS7060-658650

American Engineering Consultants (AEC) and City of Columbia, SC

Contract Amendment #3

February 17, 2016

Description of Change: Request change in Agreement for Engineering Services between the City of Columbia (City) and American Engineering Consultants (Engineer) dated February 7, 2012 (Agreement), amended by Contract Amendment #1 dated May, 29, 2013, Contract Amendment #2 dated April 9, 2015 and further amended by this Amendment for additional services to the wastewater collection system for Clearwater, Meadowland, Prescott Manor, Shady Lane, Swandale and Yacht Cove Pump Station more fully described in Exhibit A attached hereto.

All other provisions of the Agreement, except as herein modified or changed, remain in full force and effect.

Proposed Change and Basis for Payment:

Original Contract Price:	\$372,000.00
Previous Change Orders:	\$ 8,775.00
This Change (addition/deletion):	\$108,965.00
Revised Contract Price:	\$489,740.00

Additional funds are to be provided in the following manner: 5529999-SS7060-658650

This Change is Acceptable:

By: Will H. Bingham American Engineering Consultants
Title: President

Recommended for Approval: Joseph D. Jaco Director of Utilities and Engineering
Joseph D. Jaco, P.E.

Recommended for Approval _____ Assistant City Manager for Operations
Melissa Gentry, P.E.

Approval of Change: _____ City Manager
Teresa Wilson

AEC.2015.SS7060.MWWTP.PumpStationRehab.CA3.kr

APPROVED AS TO FORM

James Lisowski
Legal Department City of Columbia, SC



ENGINEERING CONSULTANTS, INC.

1300 12th Street • P.O. Box 2299 • Cayce, SC 29171 • (803) 791-1400 • FAX: (803) 791-8110

COST CHANGE AMENDMENT

November 11, 2015

John Riggs, P.E.
Assistant Wastewater Engineer
City of Columbia
Utilities and Engineering
1136 Washington Street
Columbia, South Carolina 29201

Subject: **PROJECT NAME: Wastewater Collection System Improvements for the Clearwater, Meadowland, Prescott Manor, Shady Lane, Swandale, and Yacht Cove Pump Stations**
CIP NUMBER: SS706001

Dear Mr Riggs,

Under a previously executed City of Columbia contract for SS706001, American Engineering provided engineering services for the refurbishment of 6 pump stations. The initial scope for this project was for the refurbishment of the 6 pump stations. At the 30% design review stage, the City requested that American Engineering incorporate new pump station standards under development into the project, requiring redesign to several components of each pump station. These resulted in larger sites, new equipment or upgrades to existing equipment that were not previously included and additional efforts required to meet these standards. This modification to the scope would provide the City with pump stations that meet the new standards, and therefore provide a better design and easier to maintain system. Furthermore, American Engineer Consultants was required by the City to provide additional services in order to meet the ongoing Clean Water 2020 program that needed to be included in the new scope of work.

American Engineering has proceeded with the revised design of the pump stations; however, due to the change in scope, additional design fees are required. Noted on the following pages are the Scope addition/deletion, Compensation, and Schedule adjustments necessary for this change.

I. SCOPE ADDITION/DELETION

The incorporation of the new pump station standards into the existing project required additional time and effort for additional coordination meetings, project management, geotechnical investigation, utility coordination, modifications to the evaluation report and design criteria analysis, additional field survey, revised and additional permitting, and additional time and effort for construction services relating to the increased duration of construction and additional modifications to the sites and equipment being installed on each pump station site.

II COMPENSATION

Task Number	Task Title	Original Contract	Previous Amendment(s)	Current Amendment(s)	New Contract Value
Original Agreement	Master Agreement	\$372,000	\$0	\$0	\$372,000
Amendment #1	Professional Surveying for Easement Plats	\$0	\$8,775	\$0	\$8,775
Task 100	Coordination Meetings	\$0	\$0	\$10,500	\$10,500
Task 110	Project Management	\$0	\$0	\$6,000	\$6,000
Task 120	Geotechnical Investigation	\$0	\$0	\$1,500	\$1,500
Task 130	Utility Coordination	\$0	\$0	\$2,000	\$2,000
Task 200	Evaluation Report & Design Criteria	\$0	\$0	\$37,270	\$37,270
Task 210	Field Survey	\$0	\$0	\$5,745	\$5,745
Task 220	Regulatory Agencies & Permits	\$0	\$0	\$5,600	\$5,600
Task 230	Engineering/Administration Services during Construction	\$0	\$0	\$10,600	\$10,600
Task 240	Construction Observation	\$0	\$0	\$29,750	\$29,750
Total Fee		\$372,000	\$8,775	\$108,965	\$489,740

Amendment #2 was a time extension only amendment and does not impact agreement amount and is not listed above.

Cost Change Amendment
November 11, 2015
Page 3

SCHEDULE

Amendment #2 for time extension to June 30, 2017 was requested and approved by the City. This amendment does not include any additional time extensions.

American Engineering appreciates the opportunity to provide this highly technical modification to the City of Columbia for the SS706001 project. If you have any questions please feel free to contact me.

Sincerely,

Sincerely,

American Engineering Consultants, Inc.


William H. Bingham, Jr., P.E.
President

Enclosures

cc: Emilia Floyd, PE, Clean Water 2020 Project Manager

**CONTRACT AMENDMENT #3
TO AGREEMENT FOR ENGINEERING SERVICES TO CIP SS7060**

**EXHIBIT A
SCOPE OF SERVICES FOR UPDATE TO AMENDMENT #3 FOR SS706001
ADDITIONAL ENGINEERING SERVICES**

The services performed as a part of this Scope of Services include providing additional professional surveying and engineering services.

The following are new tasks requested in the new scope of work that were not included in the original scope of work; and implemented beginning September, 2012 and do not include items before this date:

Task 100 – Coordination Meetings

The consultant has and continues to maintain regular contact with the City's staff by means of periodic progress meetings and or progress reports. During the coordination meeting, findings, project progress, project goals, deliverables, and schedule are discussed and reviewed. Engineer shall prepare progress reports after set meetings. In addition to the periodic progress meetings, three (3) design review meetings were held at 30%, 60% and 90% design completion.

Task 110 – Project Management

The consultant has and continues to communicate with the City through a single point of contact, consultant's Project Manager and utilize the SharePoint provided by the City to share and file documentation of project progress, data, decisions, deliverables, progress reports/meetings, schedule updates, permits, drawings and design and management of the project.

Task 120 – Geotechnical Investigation

Consultant coordinated with the City and the City's Geotechnical Consultant which conducted the geotechnical investigation to provide subsurface information at each of the six pump stations, and incorporated findings into the design.

Task 130 – Utility Coordination

Consultant contacted and evaluated with SCE&G officials availability of gas service for all six pump stations, to provide maps depicting the general location of the gas services associated with each of the pump stations, and to provide preliminary gas line construction budget cost.

The following are revised tasks from the original scope:

Task 200 – Evaluation Report and Design Criteria

The original scope of work was based on the refurbishing of six (6) existing pump stations; Clearwater, Meadowland, Prescott Manor, Shady Lane, Swandale and Yacht Cove. The consultant was requested to revise the scope of work to redesign all six (6) stations in order to incorporate the new City's standards being developed during the 30% stage (Evaluation Report) of the project. The following are items associated with the re-design of the pump stations:

- Incorporate in the development of the Evaluation Report the new City standards regarding pump station new design.
- Coordinate with the City to obtain existing utility mapping in the project area.
- Obtain county tax map records for identifying property potentially affected by the project.
- Obtain SCDOT, Railroad and City maps for road and street right-of-way information.
- Contact other utilities in the area that can be determined from field observation for mapping and location information that may impact the re-design of the pump stations.
- Re-design all six pump stations in accordance with new City standards.
- Provide the City copies of plans and specifications for the Project for review and approval at the sixty (60%) percent and ninety (90%) completion milestones.

The City has also requested the consultant to assist the City with the development of the new City standard documents by providing input and electronic drawings for City use and modification.

Task 210 – Field Survey

Consultant provided survey services required to accommodate the redesign of all 6 pump stations additional to the work required for the refurbishing of the pump stations. Additional field survey work includes:

- Complete field surveying to locate both horizontally and vertically features within and around each pump station property and using new standard datum requirements.
- All underground utilities as identified and marked in the field by the local utility locating service.
- All State and County ROWs and any existing obvious and apparent utility easements within the each of the pump station project limits shall be researched through the appropriate entity and identified by the consultant for use during the survey and for re-design purposes.

Task 220 – Regulatory Agencies and Permits

Consultant is to Coordinate and meet with all necessary City, County, State and Federal regulatory agencies to determine additional requirements and permits associated with the re-design of all six pump stations, i.e. zoning, encroachment permits, landscaping, construction,

etc. not required when just refurbishing of the stations. In addition, the Consultant is to coordinate with Richland County and City officials regarding the requirements associated with the purchasing the site of two of the pump stations (Meadowland and Swandale).

Task 230 – Engineering/administration Services During Construction

- Consultant is to provide additional services to accommodate additional construction effort associated with the re-design instead of the refurbishing of all six pump stations. Engineering/Contract administration includes but it is not limited to:
 - Shop drawings review and approval.
 - Pay request applications review and approval.
 - Respond to Contractor's RFI as they relate to the contract requirements
 - Attend monthly progress meetings during the project's construction period.
 - Change orders preparation if necessary.
 - Review testing results of test required by contractor for contract compliance.
- Consultant to utilize the Sharepoint document control system provided by the City. Consultant to maintain a complete document file for the project. Documents to be maintained include, but are not limited to: correspondence, quality control procedures, quality control testing; site inspection records, shop drawing schedule, change orders, scheduling, project meetings, cost and disbursement data, progress reports and all other documents pertaining to the construction contract.
- Consultant will hold a pre-construction meeting and monthly progress meetings that will address critical schedule requirements, payment procedures, emergency procedures, schedule updates, coordination issues, change orders, quality assurance testing approvals, and any other issues related to completion of the project. Construction Time is estimated at twelve (12) months. One (1) pre-construction meeting and twelve (12) monthly construction progress meetings have been budgeted. Consultant will submit meeting minutes of all meetings to the City.

Upon completion of the work, prepare and submit for final SCDHEC permit to operate on behalf of the City, and develop and organize operation and maintenance manuals for all six pump stations.

Construction stage of the project was estimated to be 9 months and now is 12 months.

Task 240 – Construction Observation

Additional site visits to be performed by the Engineer or its Construction Observation Representative to accommodate new scope of work. Site visits will be increased from two times per week to three times per week per each site. Construction Time is estimated at twelve (12) months: however, actual full time construction observation is only anticipated for nine (9) months due to times involved with project start up, substantial completion, and etc.

Construction stage of the project was estimated to be 9 months and now is 12 months.

At this point, this amendment is based on the assumption that the work on all six pump stations will be done as a single project. Therefore, any deviation from this assumption will require an amendment to authorize additional changes.

**EXHIBIT B
COMPENSATION**

**City of Columbia
UPDATE TO AMENDMENT #3 FOR SS706001
ADDITIONAL ENGINEERING SERVICES**

Compensation for services provided as outlined in Exhibit A, Amendment to Scope of Services, will be for the ~~lump~~ sum of \$108,965.00. The new total fee for the agreement is \$489,740.00. *KR*

Task 100 – Coordination Meetings	\$10,500.00
Task 110 – Project Management	\$6,000.00
Task 120 – Geotechnical Investigation	\$1,500.00
Task 130 – Utility Coordination	\$2,000.00
Task 200 – Evaluation Report & Design Criteria	\$37,270.00
Task 210 – Field Survey	\$5,745.00
Task 220 – Regulatory Agencies and Permits	\$5,600.00
Task 230 – Engineering/Administration Services during Construction	\$10,600.00
Task 240 – Construction Observation	\$29,750.00

EXHIBIT B
COMPENSATION
TABLE 1

City of Columbia
UPDATE TO AMENDMENT #3 FOR SS706001
ADDITIONAL ENGINEERING SERVICES
SCHEDULE OF HOURLY BILLING RATES
January 1, 2015-December 31, 2015

AMERICAN ENGINEERING CONSULTANTS, INC.

RATE SCHEDULE

2015

PRINCIPAL ENGINEER	\$170.00	PER HOUR
PROJECT ENGINEER	\$125.00	PER HOUR
REGISTERED LAND SURVEYOR	\$115.00	PER HOUR
DESIGN ENGINEER	\$110.00	PER HOUR
SURVEY MANAGER	\$85.00	PER HOUR
DESIGN TECHNICIAN	\$80.00	PER HOUR
SENIOR CAD TECHNICIAN	\$75.00	PER HOUR
CAD TECHNICIAN	\$65.00	PER HOUR
SENIOR FIELD TECHNICIAN (const. observation)	\$75.00	PER HOUR
FIELD TECHNICIAN	\$65.00	PER HOUR
CLERICAL	\$50.00	PER HOUR
SURVEY CREW – 2 MAN	\$150.00	PER HOUR
SURVEY CREW – 3 MAN	\$225.00	PER HOUR
COPIES (24" x 36")	\$1.25	PER EACH
COPIES (30" x 42")	\$1.75	PER EACH
COPIES (8 ½ x 11)	\$0.30	PER EACH
COPIES (8 ½ x 14 or 11 x 17)	\$0.50	PER EACH
COLOR PLOTS (24" x 36")	\$15.00	PER EACH
COLOR PLOTS (30" x 42")	\$20.00	PER EACH
MYLAR PLOTS (24" x 36")	\$20.00	PER EACH
MYLAR PLOTS (30" x 42")	\$30.00	PER EACH
MILEAGE	\$0.58	PER MILE
DIRECT EXPENSES		COST PLUS 15 %

SPECIAL SERVICES: The above Hourly Rates shall be increased by a factor of 1.5 for courtroom appearances (including preparation) and for overtime hours.

CONDITIONS: The above Rate Schedule shall be in effect through December 31, 2015. Rates are subject to change upon notification. Any revision shall be included in Documents of which this schedule is a part.

EXHIBIT C
SCHEDULE

City of Columbia
UPDATE TO AMENDMENT #3 FOR SS706001
ADDITIONAL ENGINEERING SERVICES

The estimated schedule to complete the project is as follows: June 30, 2017. Please refer to Contract Amendment #2.

<u>Activity</u>	<u>Proposed Schedule Completion Dates</u>
SCDHEC/County/City Permitting (Subject to SCDHEC/City/County review and processing times)	August, 2015
Bid Opening	February, 2016
Contract Award (Subject to City review and processing times)	April, 2016
Construction Phase	May, 2016
Close-out/Final permits to operate	June, 2017

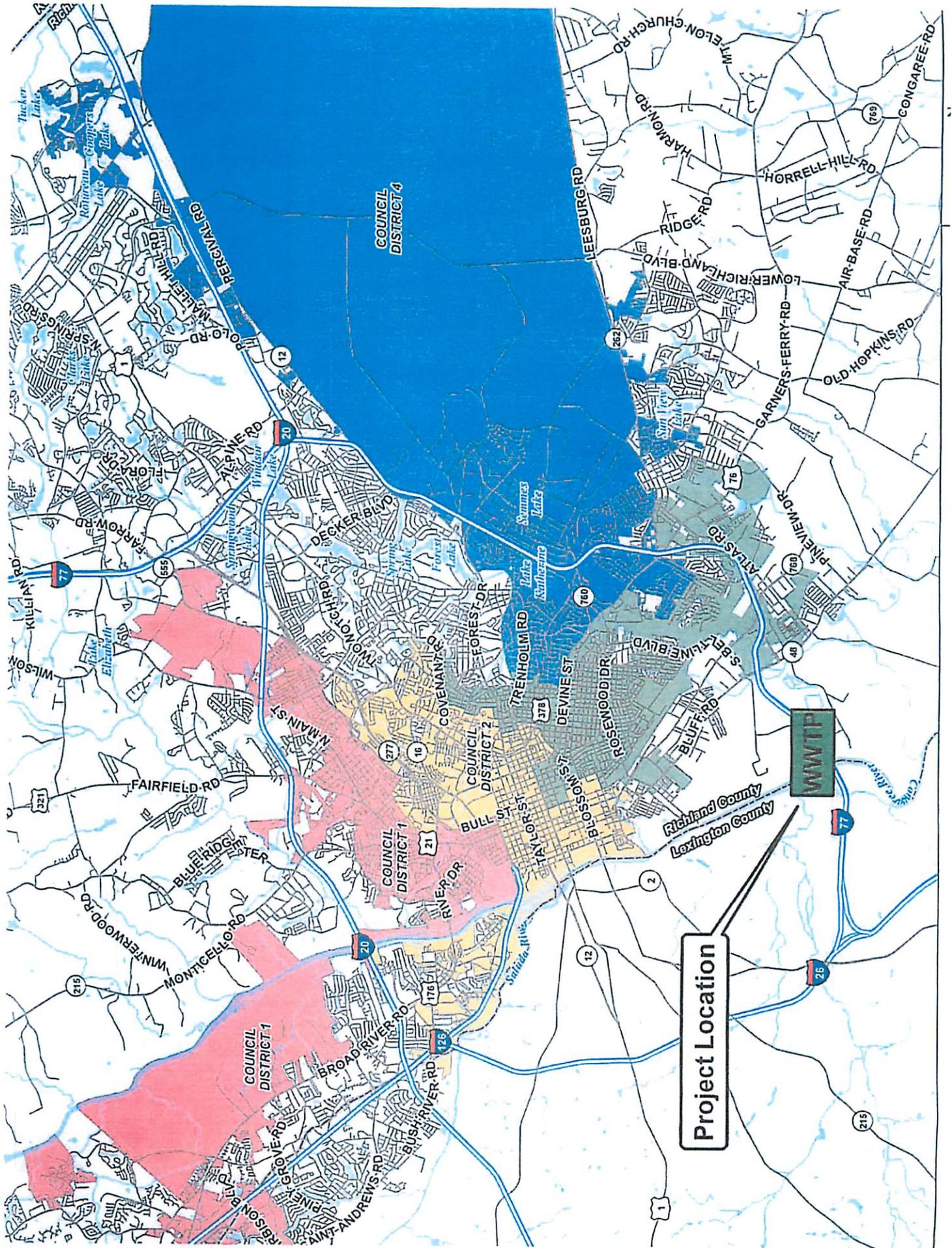
EXHIBIT D
SUBCONSULTANT FIRM INFORMATION RECORDS

City of Columbia
UPDATE TO AMENDMENT #3 FOR SS706001
ADDITIONAL ENGINEERING SERVICES

The Engineer shall list all firms, including minority and female owned firms, providing subconsulting services under this Agreement. The list shall be submitted in the format provided below. Any proposed changes must be submitted in writing to the City, including the reason(s) for the proposed changes, prior to initiation of any action by the Engineer. Any invoices submitted for payment under this Agreement must include the dollar amount to be paid to each firm listed below for the invoice period.

Firm Name and Address	Contact Name and Telephone Number	Group (MBE, FBE, SBE, Non M/F/SBE)	Services to be Provided	Dollar Value of Services
Howard Engineering PO Box 237 Marietta, SC 29661	Amy Howard (864) 836-0440	WBE	Electrical Engineering Services	\$15,000.00*
Case Consulting, Inc. 2500 Devine Street Suite H Columbia, SC 29205	Calvin Wise (803) 929-3734	MBE	Structural Engineering Services	\$7,000.00*

*Estimated fee. Fee may vary based on actual services provided. Amounts have not changed from originals



Project Location

WWTP

COUNCIL DISTRICT 4

COUNCIL DISTRICT 1

COUNCIL DISTRICT 2

Richmond County
Lexington County

FUND BRANCH GOV'T DEPT. / BU DIVISION	CODE	TITLE DESCRIPTION
	EW1	Sewer Improvements
	11	Sewer Projects
	UESKIB	Sewer CIP
		Sewer Improvements

GENERAL INFORMATION
 Location: Various
 Est. Completion Date: FY16
 Anticipated Lifespan: 10 years

- TYPE OF IMPROVEMENT
- Land
 - Structures
 - Prof. Services
 - Mach/Funish/Equip
 - Major Maintenance

DESCRIPTION
 Replacement and Upgrades to 6 existing pump stations- Clearwater, Yacht Cove, Meadowlands, Prescott Manor, Shady Lane, and Swandale Pump Stations. Improvements include new wet wells, pumping, electrical and SCADA equipment, generator, larger easements or property, and other general site improvements.

- DESIGN BY
- City Engineer
 - Private Consultant
- CONSTRUCTION BY
- City Forces
 - Contract

CITY OF COLUMBIA
 CAPITAL IMPROVEMENTS PROGRAM
 BUDGET REQUEST

CIP No. **SS706016**

- Capital
- Maintenance

Description: Pump Station Improvements at 6 Sites
 Dept. Priority: Ranking:

JUSTIFICATION
 Replacement and upgrades to prevent failure of equipment, which can result in SSOs, increased maintenance time and costs, and restrict/inhibit future developments.

- COUNCIL DISTRICT
- 1
 - 2
 - 3
 - 4
- Inside City
 - Expansion
 - Operational
 - Fire Protection
 - Outside City
 - Improvement
 - Upgrade

ORIGINATION DATE:
 PROJECT MANAGER: EMILIA FLOYD (CLEANWATER 2020)

RELATIONSHIP TO FUTURE IMPROVEMENTS
 Construction and construction services related to the design previously completed for these pump stations.

CONSEQUENCES / IMPACT OF NOT FUNDING
 Failure of equipment, which can result in Sanitary Sewer Overflows, increased maintenance time and costs, and restrict/inhibit future developments to be allowed to connect to the existing sewer system.

PROPOSED FUNDING
 Construction: FY15-16 CIP SS706016 Original Budgeted Line Item(Year 1)

TYPE EXPENDITURES		YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL	FUTURE EXPEND.
Land								
Structure	City Forces							
	Contract	\$2,865,000					\$2,865,000	
	Pay Diff.							
	H/Way Relocation							
PROFESSIONAL SERVICES								
Mach/Funish/Equip	City Forces							
	Contract							
Major Maint.	City Forces							
	Contract							
Advertizing / Printing Ect.		\$10,000					\$10,000	
TOTAL		\$2,875,000					\$2,875,000	