

**AGENDA ITEM EXECUTIVE SUMMARY**

Agenda Item number: *IQ

Title:

Recommendation to approve a Resolution to approve Engineering Services Agreement for Basin SCO5 Phase 1 Flow Monitoring with Engineering Enterprises, Inc. in an amount not to exceed \$87,533

Presenter:

Tim Wilson

Meeting: City Council

Date: April 27, 2020

Proposed Cost: \$87,533

Budgeted Amount: \$88,000

Not Budgeted: **Executive Summary** *(if not budgeted please explain):*

The approach of the EPA approved Capacity, Management, Operations, and Maintenance (CMOM) Program was to divide the sewer collection system into 12 sub-basins. Each sub-basin was divided into three phases, each phase lasting one year. The first year for this sub-basin consists of infiltration and inflow sewer flow monitoring; the second year of the project would include a sewer system evaluation survey; the final year of the sub-basin would include rehabilitation.

As detailed in the CMOM Plan, City Staff is requesting to continue the Flow Monitoring Program in Basin SCO5 (see map). Basin SCO5 was selected as the area this year due to the age of the infrastructure. Along with the CMOM goal of reducing infiltration and inflow, the Flow Monitoring Program this year will also be evaluating the local trunk sewer main to determine capacity.

The basin is generally located between Timber Trails Subdivision to the north, Fox River to the east, Main Street to the south, and Randall Rd to the west. Flow monitoring will include 14 flow monitors for an eight week period of time while local weather data is collected. At the completion of Phase I (flow monitoring), recommendations will be made for Phase II, which is the Sewer System Evaluation Survey.




Attachments *(please list):*

* SCO5 Area Map * EEI Agreement for Consulting Engineering Services * Resolution

Recommendation/Suggested Action *(briefly explain):*

Recommendation to award Agreement for Engineering Services for Basin SCO5 Phase 1 Flow Monitoring to Engineering Enterprises Inc. for a not to exceed amount of \$87,533.




Legend

-  RAIN GAUGE
-  FlowMonitors
-  MANHOLE

Sanitary Mains

Diameter - Inches

Abandoned Mains

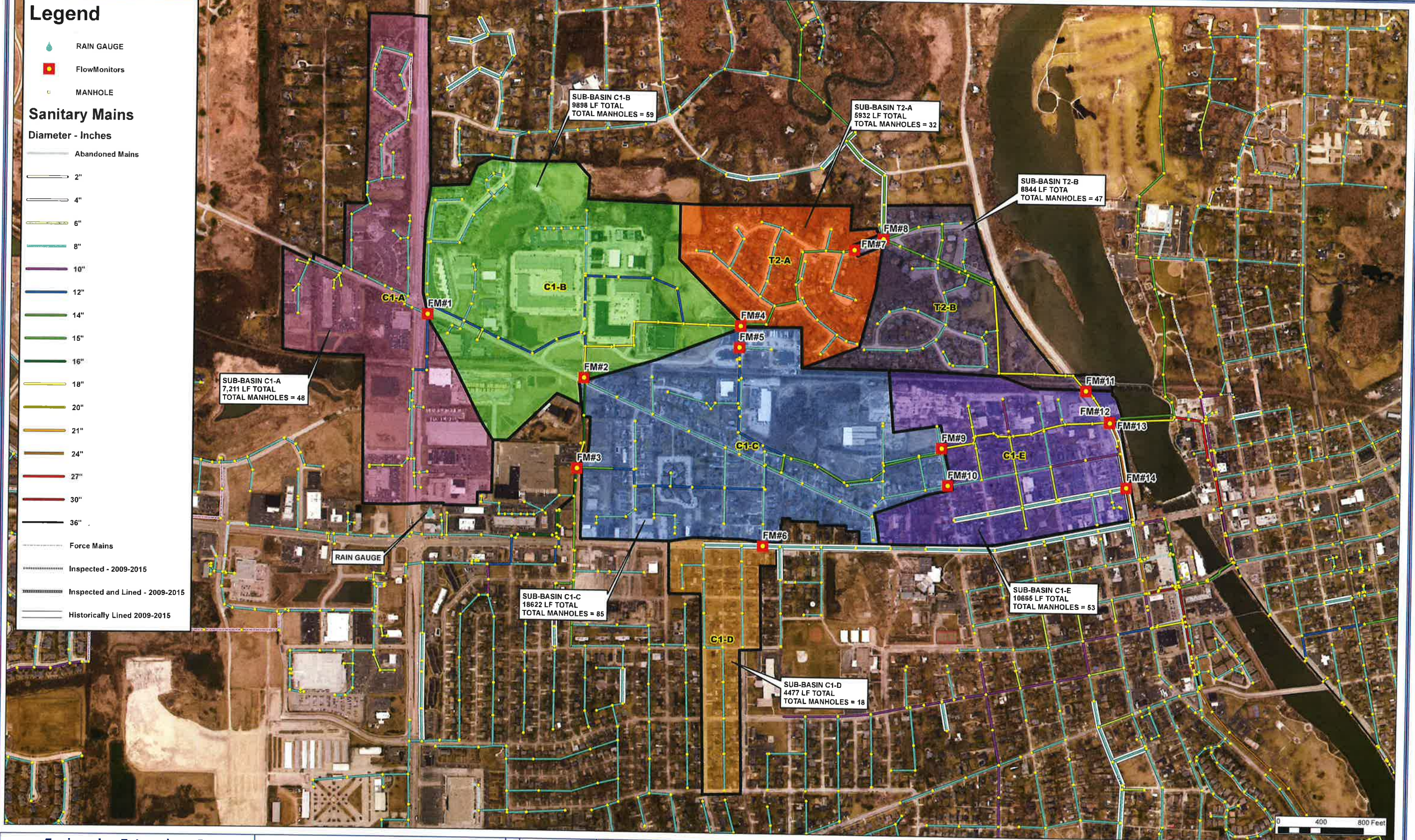
-  2"
-  4"
-  6"
-  8"
-  10"
-  12"
-  14"
-  15"
-  16"
-  18"
-  20"
-  21"
-  24"
-  27"
-  30"
-  36"

Force Mains

Inspected - 2009-2015

Inspected and Lined - 2009-2015

Historically Lined 2009-2015



Engineering Enterprises, Inc.
 52 Wheeler Road
 Sugar Grove, Illinois 60554
 (630) 466-6700
 www.eeiweb.com

City of St. Charles
 2 East Main Street
 St. Charles, IL 60174
 (630) 377-4400

DATE:	1/2/2020
PROJECT NO.:	SR1914
BY:	MJT
PATH:	H:\GIS\PAW\St. Charles\2019\SR1914\SR1914_Exhibit A_SCO5T2 Subbasin Flow Monitor.mxd
FILE:	SR1914_ Exhibit A_ SC05T2 Subbasin Flow Monitor

I&I Reduction Program

**Exhibit A
 Basin SC05_T2 & SC05_C1
 Proposed Flow Monitoring Plan**





April 10, 2020

Mr. Tim Wilson
Public Works Manager - Environmental Services
City of St. Charles
Two East Main Street
St. Charles, IL 60174

**Re: SCO5-T2 & C1 Flow Monitoring (Phase 1)
City of St. Charles, Kane & DuPage Cos., IL**

Dear Mr. Wilson:

In accordance with your request, enclosed for your review and consideration are two copies of our proposed agreement for the Subbasin SCO5-T2 & C1 Flow Monitoring within the City's sanitary sewer network. Flow monitoring of the SCO5-T2 & C1 Subbasin is part of the City's overall Inflow and Infiltration Reduction Program. Inflow & Infiltration (I/I) investigations are meant to delineate problematic areas of the system that are prime candidates for further sewer system evaluation work and appropriate rehabilitation.

The attached agreement includes a detailed scope of services, estimate of level of effort and associated cost, and schedule for the project. We are proposing to provide our professional engineering services on a time and materials basis for a not-to-exceed cost of \$87,533. Our proposed schedule is to conduct flow monitoring from mid-May through mid-July. We will complete the data analysis through the end of summer and complete the report in the fall.

The flow monitoring for the SCO5-T2 & C1 Subbasin was recommended for the City as part of the Capacity, Management, Operations, and Maintenance (CMOM) Plan written for the City in February 2016. Additional sewer system evaluation work and actual rehabilitation of the SCO5-T2 & C1 sewer system is scheduled for calendar years 2021 and 2022, respectively. The scope and cost of the rest of the 15-year long, multiphase I/I reduction program can be found in Table No. 3-3 of the February 2016 CMOM plan.

We look forward to continuing our outstanding partnership with the City and look forward to working with you and members of your staff on this project. If you have any questions or require any additional information, please do not hesitate to contact me.

Respectfully submitted,

ENGINEERING ENTERPRISES, INC.

A handwritten signature in blue ink that reads "Jeffrey W. Freeman".

Jeffrey W. Freeman, P.E., CFM, LEED AP
Chief Executive Officer

JWF/anu
Enclosures

pc: Matt Wilson – Public Works Division Manager (Via E-mail)
Dave Todd – Environmental Services Assistant Division Manager (Via E-mail)
STD, ANU, DMT & ARS – EEI (Via E-mail)

G:\Public\St. Charles\2019\SR1914 Basin SC05-T2 & C1 Phase 1 Flow Monitoring\PSALWilson.doc

**AGREEMENT FOR CONSULTING ENGINEERING SERVICES FOR
SUBBASIN SCO5-T2 & C1 FLOW MONITORING**

This Agreement made this _____ day of _____, 2020 by and between the City of St. Charles, Kane and DuPage Counties, Illinois, a municipal corporation of the State of Illinois (hereinafter referred to as the "CITY") and Engineering Enterprises, Inc. of 52 Wheeler Road, Sugar Grove, Illinois, 60554 (hereinafter referred to as the "ENGINEER").

In consideration of the mutual covenants and agreements contained in this Agreement, the CITY and the ENGINEER agree, covenant and bind themselves as follows:

1. Services: ENGINEER agrees to perform for the CITY the Services defined within Attachment A.
2. Direction: The Public Works Manager - Environmental Services, or his written designee, shall act as the CITY'S representative with respect to the Services to be provided by the ENGINEER under this Agreement and shall transmit instructions and receive information with respect to the Consulting Engineering Services.
3. Compensation: The work items, estimated staff time, and projected fees for each work item are summarized within Attachment B. Based on this computation, the CITY agrees to pay the ENGINEER for providing the Services set forth herein on a time and materials basis not-to-exceed an amount of \$87,533.
4. Term: The term of this Agreement shall be active through December 31, 2020 unless otherwise extended through written confirmation by both parties. The work items and phases shall be completed in accordance with the schedule defined within Attachment C.
5. Payment: Engineer shall invoice the CITY on a monthly basis for Services performed and any costs and expenses incurred during the previous thirty (30) day period. The CITY shall pay the ENGINEER within thirty (30) days of receipt of said invoice.
6. Termination: This Agreement may be terminated upon fourteen (14) days written notice of either party. In the event of termination, the ENGINEER shall prepare a final invoice and be due compensation calculated as described in paragraph 3 for all costs incurred through the date of termination.
7. Documents: All related writings, notes, documents, information, files, etc., created, compiled, prepared and/or obtained by the ENGINEER on behalf of the CITY for the Services provided herein shall be used solely for the intended project.
8. Notices: All notices given pursuant to this Agreement shall be sent Certified Mail, postage prepaid, to the parties at the following addresses:

The CITY:

City of St. Charles
Two East Main Street
St. Charles, IL 60174
Attn: Tim Wilson
Public Works Manager -
Environmental Services

The ENGINEER:

Engineering Enterprises, Inc.
52 Wheeler Road
Sugar Grove, IL 60554
Attn: Jeffrey W. Freeman, P.E. CFM, LEED AP
Chief Executive Officer

9. Waiver: The failure of either party hereto, at any time, to insist upon performance or observation of any term, covenant, agreement or condition contained herein shall not in any manner be constructed as a waiver of any right to enforce any term, covenant, agreement or condition hereto contained.
10. Amendment: No purported oral amendment, change or alteration hereto shall be allowed. Any amendment hereto shall be in writing by the governing body of the CITY and signed by the ENGINEER.
11. Succession: This Agreement shall ensure to the benefit of the parties hereto, their heirs, successors and assigns.

IN WITNESS WHEREOF, we have hereunto signed our names the day and year first above written.

CITY OF ST. CHARLES

ENGINEERING ENTERPRISES, INC.:



Mayor

Chief Executive Officer

ATTEST:

ATTEST:



Title: _____

Administrative Assistant

ATTACHMENT A – SCOPE OF SERVICES
SUBBASIN SCO5-T2 & C1 FLOW MONITORING (PHASE 1)
INFLOW AND INFILTRATION REDUCTION PROGRAM
City of St. Charles, Kane and DuPage Cos., IL

Introduction

The Subbasin SCO5-T2 & C1 flow monitoring phase will help delineate inflow and infiltration severity throughout the subbasin. The I/I Investigation for Subbasin SCO5-T2 & C1 is part of a 15-year, multiphase plan to complete flow monitoring, sewer system evaluation surveys, and rehabilitation as necessary for all mains within the St. Charles sanitary sewer system. The scope and cost of the Subbasin SCO5-T2 & C1 flow monitoring phase only covers the first portion of the flow monitoring study for SCO5-T2 & C1. The estimated scope and cost of the entire 15-year St. Charles Sanitary Basin Evaluation and Rehabilitation Plan can be found in Table No. 3-3 of the February 2016 CMOM plan.

As part of the Subbasin SCO5-T2 & C1 flow monitoring phase, the subbasin will be divided into seven (7) subbasins in order that the sanitary sewer flows and the correlating I/I can be further defined within the subbasin. The proposal includes flow monitoring at fourteen (14) locations for eight (8) weeks. The attached Exhibit A shows the locations of fourteen proposed flow monitoring locations and provides additional detail for all locations. All cost and schedule decisions were based off EEI's best knowledge of the SCO5-T2 & C1 Subbasin to-date. The proposed flow monitoring locations have been reviewed with City staff in order to ensure accessibility to all flow monitor monitors, as well as the appropriate placement of each flow monitor.

The base proposal also includes the installation of a recording rain gauge in a secure location to measure rainfall during the monitoring period. The quality of the flow monitoring results will be increased with an increased number of precipitation events. A minimum of two 1.0-inch or greater rain events over a 24-hour period is needed to make reasonable conclusions. The City will have the opportunity to increase the flow monitoring period at the end of the eight-week period should a sufficient rain event not occur or if they would wish to obtain additional data. Once sufficient flow monitoring data is obtained, the data will be provided to St. Charles for review.

The proposed work items for this project are as follows:

PROJECT FACILITATION & MEETINGS:

- 0.1 Project Administration
- 0.2 Project Initiation & Progress Meeting (2 Total Meetings)

FLOW MONITORING:

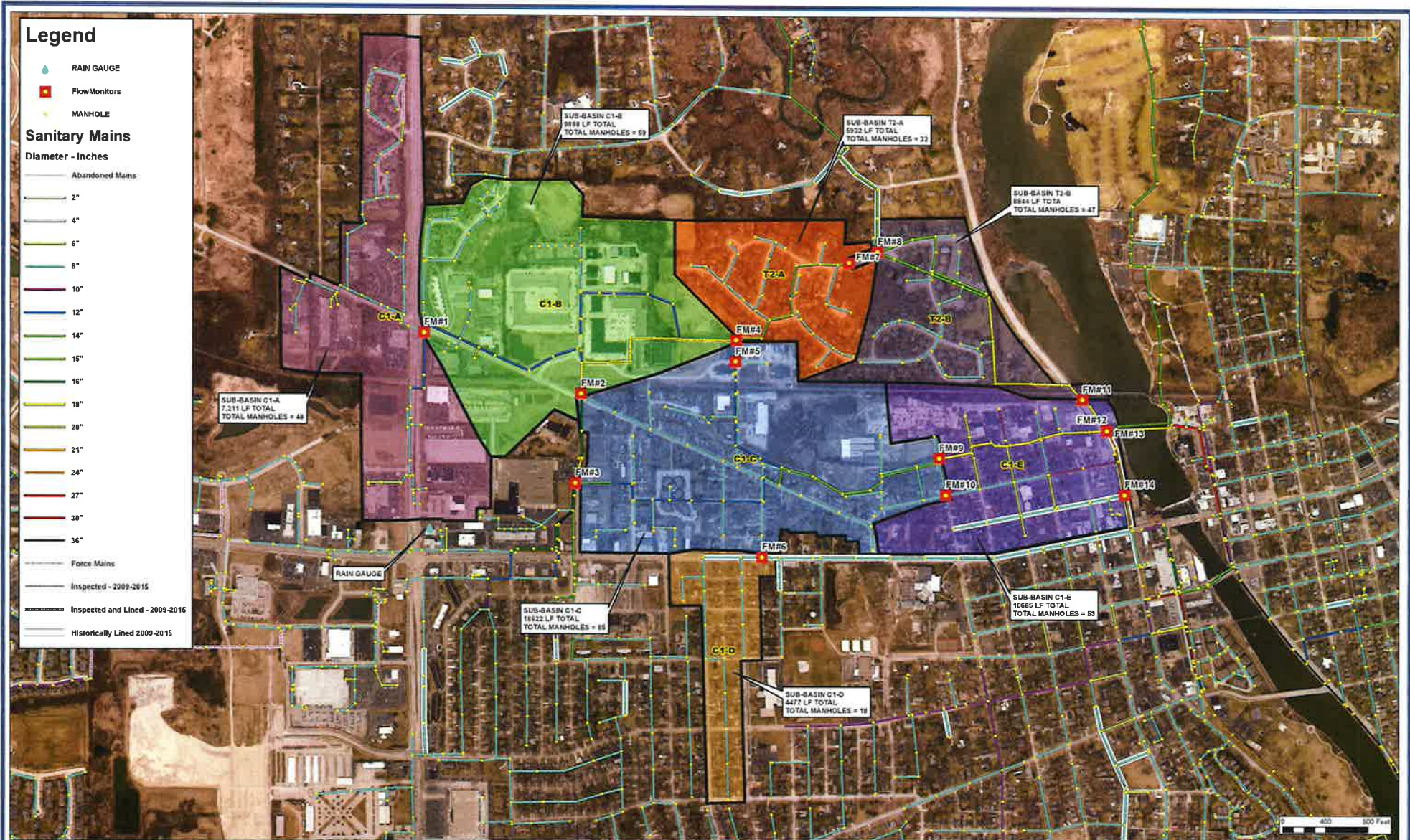
- 1.1 Divide Subbasin SCO5-T2 & C1 Into Sub-Subbasins
- 1.2 Monitor Flows (Assumes 14 Locations) Within Subbasin For 8 Weeks
- 1.3 Monitor Rainfall (Assumes 1 Location) Within Subbasin For 8 Weeks
- 1.4 Analyze Flows & Determine I/I by Sub-Subbasin

REPORT:

2.1 Prepare Flow Monitoring Report

Additional Services

The above scope summarizes the work items that will be completed for this contract. Additional work items, including additional meetings beyond the project initiation meeting defined in the above scope, shall be considered outside the scope of the base contract and will be billed in accordance with the Standard Schedule of Charges.



<p>Engineering Enterprises, Inc. 30 Wilshire Road Sugar Grove, Illinois 60554 (630) 416-8700 www.entrprises.com</p>	<p>City of St. Charles 2 East Main Street St. Charles, IL 60174 (630) 377-4400</p>	<table border="1"> <tr><td>DATE</td><td>1/2/2020</td></tr> <tr><td>PROJECT NO.</td><td>SR1914</td></tr> <tr><td>BY</td><td>MJT</td></tr> <tr><td>PATH</td><td>\\s:\projects\2019\SR1914\Subbasin Flow Monitor</td></tr> <tr><td>FILE</td><td>SR1914 Exhibit A SC05T2 Subbasin Flow Monitor</td></tr> </table>	DATE	1/2/2020	PROJECT NO.	SR1914	BY	MJT	PATH	\\s:\projects\2019\SR1914\Subbasin Flow Monitor	FILE	SR1914 Exhibit A SC05T2 Subbasin Flow Monitor	<p>I&I Reduction Program</p>	<p>Exhibit A Basin SC05_T2 & SC05_C1 Proposed Flow Monitoring Plan</p>
DATE	1/2/2020													
PROJECT NO.	SR1914													
BY	MJT													
PATH	\\s:\projects\2019\SR1914\Subbasin Flow Monitor													
FILE	SR1914 Exhibit A SC05T2 Subbasin Flow Monitor													

Attachment B:
ESTIMATE OF LEVEL OF EFFORT AND ASSOCIATED COST FOR PROFESSIONAL ENGINEERING SERVICES
BASIN SC05-T2 & C1 PHASE 1 (FLOW MONITORING) STUDY
INFLOW AND INFILTRATION REDUCTION PROGRAM
CITY OF ST. CHARLES, KANE AND DUPAGE COS., IL

WORK ITEM NO.	WORK ITEM	ENTITY:		EEI							SUB-CONSULTANT	WORK ITEM HOUR SUMM.	COST PER ITEM
		PROJECT ROLE:	SENIOR PRINCIPAL	SENIOR PROJECT MANAGER	PROJECT ENGINEER	SENIOR PROJECT TECHN. I	PROJECT TECHN.	SURVEYING MANAGER	SENIOR PROJECT TECHN. II	ADMIN.			
		HOURLY RATE:	\$209	\$203	\$145	\$145	\$133	\$183	\$158	\$70			
PROJECT FACILITATION & MEETINGS													
0.1	Project Administration		1	4								5	\$1,021
0.2	Project Initiation & Progress Meeting (2 Total Meetings)		4	8	6						2	20	\$3,470
Project Facilitation Subtotal:			5	12	6	-	-	-	-	2	0	25	\$4,491
FLOW & RAINFALL MONITORING													
1.1	Divide Subbasins SC05-T2 & C1 Into Sub-Subbasins		1	4	8	8						21	\$3,341
1.2	Monitor Flows (Assumes 14 Locations) Within Subbasin For 8 Weeks		1	4	8					\$58,000		13	\$60,181
1.3	Monitor Rainfall (Assumes 1 Location) Within Subbasin For 8 Weeks		1	2	4					\$1,200		7	\$2,395
1.4	Analyze Flows & Determine VI Severity By Subbasin		1	8	40							49	\$7,633
Flow & Rainfall Monitoring Subtotal:			4	18	60	8	-	-	-	-	\$59,200	90	\$73,550
REPORT													
2.1	Prepare Flow Monitoring Report		2	8	32	16					2	60	\$9,142
Report Subtotal:			2	8	32	16	-	-	-	2	0	60	\$9,142
PROJECT TOTAL:			11	38	98	24	-	-	-	4	\$59,200	175	\$87,183

DIRECT EXPENSES	
Printing =	\$250
Mileage =	\$100
DIRECT EXPENSES =	\$350

LABOR EXPENSES	
Engineering Expenses =	\$24,223
Drafting Expenses =	\$3,480
Surveying Expenses =	\$0
Administrative Expenses =	\$280
Subconsultant Expenses =	\$59,200
TOTAL LABOR EXPENSES =	\$87,183

TOTAL CONTRACT COSTS = \$87,533



Standard Schedule of Charges

January 1, 2020

EMPLOYEE DESIGNATION	CLASSIFICATION	HOURLY RATE
Senior Principal	E-4	\$214.00
Principal	E-3	\$209.00
Senior Project Manager	E-2	\$203.00
Project Manager	E-1	\$183.00
Senior Project Engineer/Planner/Surveyor II	P-6	\$172.00
Senior Project Engineer/Planner/Surveyor I	P-5	\$160.00
Project Engineer/Planner/Surveyor	P-4	\$145.00
Senior Engineer/Planner/Surveyor	P-3	\$133.00
Engineer/Planner/Surveyor	P-2	\$121.00
Associate Engineer/Planner/Surveyor	P-1	\$109.00
Senior Project Technician II	T-6	\$158.00
Senior Project Technician I	T-5	\$145.00
Project Technician	T-4	\$133.00
Senior Technician	T-3	\$121.00
Technician	T-2	\$109.00
Associate Technician	T-1	\$ 96.00
GIS Technician	G-1	\$ 90.00
Engineering/Land Surveying Intern	I-1	\$ 79.00
Administrative Assistant	A-3	\$ 70.00

VEHICLES, REPROGRAPHICS, DIRECT COSTS, DRONE AND EXPERT TESTIMONY

Vehicle for Construction Observation		\$ 15.00
In-House Scanning and Reproduction	\$0.25/Sq. Ft. (Black & White)	
	\$1.00/Sq. Ft. (Color)	
Reimbursable Expenses (Direct Costs)	Cost	
Services by Others (Direct Costs)	Cost + 10%	
Unmanned Aircraft System / Unmanned Aerial Vehicle / Drone		\$ 200.00
Expert Testimony		\$ 250.00

City of St. Charles, Illinois
Resolution No. _____

**A Resolution to approve Engineering Services Agreement for Basin SC05
Phase 1 Flow Monitoring with Engineering Enterprises, Inc. in an
amount not to exceed \$87,533**

**Presented & Passed by the
City Council on _____, 2020**

WHEREAS, this study will be a continuation of services already established with Engineering Enterprises Inc. (EEI) and the work they have already completed in relation to capacity and CMOM studies;

THEREFORE, BE IT RESOLVED by the Mayor and City Council of the City of St. Charles, Kane and DuPage Counties, Illinois, that the Engineering Services Agreement for Basin SC05 Phase 1 Flow Monitoring be awarded to Engineering Enterprises Inc. in the amount of \$87,533.

PRESENTED to the City Council of the City of St. Charles, Illinois, this__day of April, 2020

PASSED by the City Council of the City of St. Charles, Illinois, this__day of April, 2020

APPROVED by the Mayor of the City of St. Charles, Illinois, this__day of April, 2020

Raymond P. Rogina, Mayor

ATTEST:

City Clerk

COUNCIL VOTE:

Ayes:

Nays:

Absent:

Abstain: