


AGENDA ITEM SUMMARY

Meeting Date:	OCTOBER 3, 2018
Agenda Category:	CONSENT BUSINESS
Agenda Item Number:	10 D
Subject:	PARK AVENUE SEPTIC-TO-SEWER EVALUATION AND DESIGN, TETRA TECH (WASTEWATER TREATMENT DEPARTMENT)
Attachments:	Memorandum; proposal from Tetra Tech
Staff Contact:	Wastewater Treatment Director Elmore
Background:	In an effort to reduce the discharge from failing septic systems into the Indian River Lagoon, the Wastewater Treatment Department is seeking to engage in additional septic-to-sewer conversion projects. As such, Tetra Tech has submitted a proposal for Park Avenue Septic-to-Sewer Evaluation and Design in the amount of \$114,000.00, which has been budget for this fiscal year.
Reference:	
Suggested Action:	Approve the proposal from Tetra Tech for Park Avenue Septic-to-Sewer Evaluation and Design in the amount of \$114,000.00

MEMORANDUM

TO: Dr. Brenda Fettrow, City Manager
FROM: Brian R. Smith, Asst. Director WWT 
DATE: September 24, 2018
SUBJECT: Park Ave. Sanitary Sewer Design

*approved to
go to Council
& budgeted
for in the
2019 budget
Dr. Fettrow
9/26/2018*

As part of the City of Rockledge's commitment to lessen the discharge of possible ill performing septic systems to the Indian River Lagoon, the Wastewater Treatment Department would like to continue to replace more septic systems with other viable solutions.

I am recommending moving forward with implementation of the proposed Park Avenue Septic to Sewer Evaluation & Design as proposed by our contract engineering firm, Tetra Tech, at a cost of \$114,000 allocated from account No. 400-0035-535.3111.

Submitted for council approval.



May 17, 2018

Mr. James Elmore, Director
Wastewater Treatment &
Water Reclamation Facility
City of Rockledge
Wastewater Treatment and Water Reclamation
1700 Jack Oates Blvd.
Rockledge, FL 32955

**Subject: City of Rockledge – Park Avenue Septic to Sewer System Evaluation & Design
Purchase Order No. – To Be Determined**

Tt # 200BP Rockledge

Dear Mr. Elmore:

Tetra Tech (Tt) is pleased to submit this Task Authorization No. 18-0X under the master professional services agreement signed on January 18, 2017 for Park Avenue Septic to Alternative Sewer System Evaluation & Design for the City of Rockledge (City) for serving properties along the Park Avenue from Rockledge Blvd to Rockledge Drive.

A. PROJECT DESCRIPTION

The City owns and operates a wastewater collection system that serves homes connected to the City's wastewater reclamation facility. There have been areas within the City that are served by septic systems. The City continues to embark on projects to replace septic systems in the service area with central wastewater service, such as the recently converted Breeze Swept subdivision.

This project is the next step towards converting about 35 properties along Park Ave to the central sewer system. Park Avenue is located immediately south of the Breeze Swept subdivision. The City wants to evaluate type of alternative sewer collection system along Park Avenue to expand the Breeze Swept subdivision pump station collection area. As learned from the Breeze Swept subdivision project, due to presence of Coquina rocks, a conventional gravity sewer collection system could be cost prohibitive. The City requests Tetra Tech (Tt) perform a present worth cost evaluation of up to three (3) wastewater collection systems such as pressure, gravity, and small diameter gravity sewer collection systems. Once, a collection system is selected by the City, Tt will proceed with the final design of that system under this project. The goal is the get this project "shovel ready (at least 60% design)" project by the end of 2018.

B. SCOPE OF WORK

Task 1 - Preliminary Design

1. **Kick-off Meeting:** Tt will prepare for and attend a kick-off meeting with City staff to discuss the project design criteria, points of contact, schedule, and data needs. Tt will prepare the agenda and summary of the kick-off meeting for distribution.

2. **Data Collection and Review:** Tt will develop and submit a data request outlining the data needs for the study. Tt will collect, assemble, review, and analyze available data. In areas where data are missing or otherwise unavailable, Tt will work with the City to develop reasonable estimates and assumptions for the study.
3. **Field Work:** Tt will perform minimal topographic survey to supplement LIDAR contours to improve quality, and will perform minimal soil conditions geotechnical investigation (up to two [2] borings using a sub-consultant) for the purpose of this evaluation.
4. **Conceptual Design of up to Three (3) Sewer Collection Systems:** Using the field collected data, project design criteria, and EPA's Manual on Alternative Wastewater Collection Systems (October 1991) as a guide, Tt will conceptually design (plan view layout only) up to three (3) alternative sewer collection systems. Tt will use the conceptual layouts to develop preliminary quantities for performing a capital and O&M cost comparison for the 30-year present worth cost evaluation of each system. Tt will also develop a "non-cost factors" matrix, which may affect Tt's overall recommendation for the proposed sewer collection system.
5. **Grant Funding Water Quality Improvements Concepts:** Similar to the Breeze Swept subdivision septic to sewer conversion project, the City is going to apply for SJWRMD and FDEP cost-share grants. Tt will review SJWRMD/FDEP grant guidelines for the water quality improvement projects and develop concepts. Tt will include information such as relationship to nutrient TMDLs, as well as information on the TMDLs and BMAP status; benefit area descriptions or delineation for the water quality improvement; project acreage; and methodology and estimates for the pre-project and post-project conditions for nutrient (TN and TP) loading using models such as STEPL (or equivalent). Tt will meet with the City to discuss and then incorporate the selected concepts in the Technical Memorandum for future phases of this project.
6. **Draft Technical Memorandum (TM):** Tt will prepare a draft TM summarizing the analysis and conclusions of Tasks 1 through 5 and provide three (3) hard copies and one (1) electronic copy of the draft report for City review.
7. **Meeting:** Tt will meet with the City to discuss and review City comments on the TM.
8. **Final TM:** Tt will incorporate the City's review comments on the draft TM and provide five (5) hard copies and one (1) electronic copy of the final TM to the City.

Task 1 - Final Design

Upon completion of the conceptual design phase, Tetra Tech will proceed with the following final design services:

- Final design will result in preparation of engineering drawings and technical specifications, which will be submitted to the City for review at 60 - and 100-percent completion levels. The 100-

percent submittal will generally include: drawings showing the plan and profile of the sewer collection system and associated mechanical, electrical and Instrumentation (if another pump station is needed) drawings. A bid submittal will be prepared incorporating the comments received from the City on the 100-percent submittal. The design drawings and specifications will be prepared using AutoCAD version 2011 and MSWord software, respectively. Approximate final design sheet count is as follows:

SHEET NO.	SHEET TITLE
GENERAL (3 DRAWINGS)	
--	COVER
G-001	GENERAL NOTES AND DRAWING INDEX
G-002	ABBREVIATIONS AND LEGEND
CIVIL (8 DRAWINGS)	
C-101	PARK AVE & BERKLEY SQUARE PLAN & PROFILE
C-102	PARK AVE & MADISON CIRCLE PLAN & PROFILE
C-103	PARK AVE & PARK PLACE PLAN & PROFILE
C-104	PARK AVE & CITY OWNED PARCEL PLAN & PROFILE
C-015	PUMP STATION PLAN AND PROFILE
C-501	CIVIL DETAILS
C-502	CIVIL DETAILS
C-503	CIVIL DETAILS
MECHANICAL (2 DRAWINGS)	
D-101	NEW LIFT STATION PLAN AND SECTION
D-501	MECHANICAL DETAILS
ELECTRICAL (7 DRAWINGS)	
E-001	LEGEND & NOTES
E-002	NEW LIFT STATION ELECTRICAL PLAN
E-003	ELECTRICAL RISER DIAGRAM
E-004	CONTROL PANEL LAYOUT
E-005	CONTROL PANEL WIRING DIAGRAM
E-006	ELECTRICAL DETAILS
E-007	ELECTRICAL DETAILS

- Attend the design review meeting with the City following the 60 percent design submittal.
- Tt will apply for FDEP permit for the designed collection system and respond to 1 RAI.
- Probable opinion of Construction Costs.
- Three (3) sets drawings and specifications will be provided for each review in both hard and electronic format. The drawings will be provided in 24" x 36" and PDF formats.

C. SCHEDULE

Work will commence upon receipt of the City's notice-to-proceed (NTP). A tentative schedule for major milestones in the project is presented on the following page:

Activity	Months from NTP
Notice to Proceed	0 (July 1, 2018)
Data Collection & Field Work	1
Conceptual Design of Alternative Systems	2
Water Quality Improvement Concepts	3
Draft TM	3.5
Draft TM Review Meeting	4
Final TM	5
60% Design	6 (December 2018)
District Grant Application Due date	January 31, 2019
100% Design	9

D. COMPENSATION

The total Lump Sum cost for all services described above will not exceed \$114,000 as summarized in Attachment A.

If you should have any questions, please do not hesitate to contact us.

Very truly yours,

Tetra Tech



Jon D. Fox, P.E.
 Vice President

JDF/ab/Park_Ave_Septic_to_Sewer/Scope_201805

C: Rasesh Shah, P.E., Tetra Tech



Park Ave Septic to Sewer Evaluation & Design

City of Rockledge (Attn: Mr. James Elmore)

Contract Type: LS

Labor Plan

11 Resource

Project Phases / Tasks	Proj Area	Operations Manager	Project Manager	Project Engineer	CAD Designer	Sr. Water Resource Est.	Electrical Engineer	Electrical Designer	Administration	Survey	Survey	Survey	Labor	Subs	Travel	ODCs	Task Pricing Totals	
																	Specify Add'l Fees on Setup	Technology Use Fee
Pricing by Resource																		
Total Labor Hrs													Labor	Subs	Travel	ODCs	Totals	
886													109,324	3,080	1,100	495	114,000	
351													45,734	3,080	1,100	495	50,410	
5													779				1,055	
7													808				808	
108													17,195		1,100		18,295	
108													12,268	3,080			15,348	
30													3,367				3,367	
30													3,367				3,367	
30													3,367				3,367	
10													1,256				1,256	
8													2,503				2,503	
16													8,333				8,333	
77													3,885				4,270	
11													2,163				2,163	
19													63,590				63,590	
555													960				960	
8													20,853				20,853	
196													4,637				4,637	
40													18,794				18,794	
132													9,697				9,697	
85													3,210				3,210	
27													3,210				3,210	
27													3,210				3,210	
19													2,231				2,231	
886													109,324	3,080	1,100	495	114,000	