

## AGENDA ITEM SUMMARY

<b>Meeting Date:</b>	APRIL 17, 2019
<b>Agenda Category:</b>	NEW BUSINESS
<b>Agenda Item Number:</b>	11 A
<b>Subject:</b>	SCOPE AND FEE PROPOSAL, PROFESSIONAL ENGINEERING SERVICES, STORMWATER FLOODING ASSESSMENTS, JACOBS ENGINEERING (PUBLIC WORKS DEPARTMENT)

<b>Attachments:</b>	Memorandum; scope and fee proposal
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<b>Staff Contact:</b>	Public Works Director Poole
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<b>Background:</b>	Because flooding of certain streets occurs in the vicinities of Martin Road and Fiske Boulevard, and Huntington Lane in Barton Park Manor, staff is requesting that stormwater flooding assessments be conducted in these two areas. Jacobs Engineering has submitted a scope and fee proposal in the amount of \$33,760.00 for an evaluation of both areas, which will include an analysis of the existing system and recommendations for improvements.
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<b>Reference:</b>	Stormwater Services Budget; Continuing Services Agreements
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<b>Suggested Action:</b>	Approve the scope and fee proposal from Jacobs Engineering in the amount of \$33,760.00 to conduct stormwater flooding assessments of Martin Road and Fiske Boulevard, and Huntington Lane in Barton Park Manor
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# MEMO

*approved to  
go to Council.  
Dr. Fettrow  
4/9/2019*

**To:** Dr. Brenda Fettrow, City Manager

**From:** C. Kenneth Poole, Public Works Director



**RE:** Stormwater Flooding Assessment – Jacobs Engineering

- Martin Road and Fiske Blvd
- Huntington Lane in Barton Park Manor

**Date:** April 8, 2019

The city has some street flooding that occurs during significant rain events. In an effort to analyze the existing stormwater system, the City asked Jacobs to compile a scope of work for two (2) locations (to start).

Attached are the Rockledge Small Area Stormwater Assessment Scope and Fee Proposal by Jacobs for the two areas that have a history of frequent street flooding during accumulative rainfall events.

Martin Road is a Brevard County roadway and Fiske Blvd. is a FDOT roadway with the Knights of Columbus abutting both roadways within the City's jurisdiction. This area has experienced flooding in recent storm events.

Huntington Lane in Barton Park Manor Subdivision accumulates stormwater from both north and south surface water flows resulting in street flooding in the subdivision.

I am respectfully requesting approval in the amount of \$33,760.00 to have Jacobs Engineering make an assessment of both areas to analyze the performance of the existing system and provide recommended improvements. If approved, this work would be paid for out of account 315-0041-541.4667.

March 5, 2019

Dr. Brenda Fettrow  
City Manager  
City of Rockledge  
1600 Huntington Lane  
Rockledge, FL 32955

**Subject: Rockledge Small Areas Stormwater Assessment  
Scope and Fee Proposal**

Dear Dr. Fettrow:

Services proposed by Jacobs Engineering Group, Inc (Jacobs) in this scope will be performed in accordance with the contract terms of the Agreement for Professional Services for the City of Rockledge (agreement approved by the City of Rockledge on November 7, 2018).

On December 10, 2018, Jacobs met with the City of Rockledge Public Works to discuss and visit several areas subject to flooding. As discussed on February 19, 2019, two of the areas are proposed for evaluation at this time:

1. Martin Road and Fiske Boulevard
2. Huntington Lane

The city proposes to analyze each of the areas to determine under what rainfall events city standards are not being met and identify any recommended solutions needed to meet standards.

As requested during the meetings, Jacobs has prepared a scope and fee proposal herein to perform professional engineering services for the City of Rockledge for the referenced project. We welcome and value this opportunity to work alongside and build a professional relationship with the City of Rockledge. Our project understanding, suggested scope of services, and proposed schedule and fee follow for your review and consideration.

## **1. UNDERSTANDING**

The City of Rockledge would like to analyze the performance of existing stormwater systems at the following two locations.

### **1. Martin Road and Fiske Boulevard**

The Knights of Columbus property is located at the intersection of Martin Road and Fiske Boulevard. This property is located within a flood zone and is noted by City

Staff as a historic flooding problem. This area is within the Tucker development area which eventually outfalls to the St. Johns River and is controlled by a 36" pump along the I-95 ditch. Adjacent to the Knights of Columbus property, there are several developments planned and under construction.

## **2. Huntington Lane**

The north end of Huntington Lane is located within the Barton Park Manor subdivision. In this area, runoff from Huntington Lane is collected by a series of storm drains that discharge into a canal that connects to a large stormwater pond to the east. The pond outfalls to the east towards North Gus Hipp canal via an 18" recovery pipe and a concrete spillway. During Hurricane Irma, roadway flooding was experienced along Huntington Lane.

The following scope of services was developed with this knowledge and our understanding of the project area and goals.

## **2. SCOPE OF SERVICES - PHASE 1 TASKS**

Jacobs proposes to complete the tasks of the stormwater assessment of each listed location in multiple phases initiating with a hydraulic assessment of the existing conveyance systems and a solutions analysis to identify any recommendations. Following acceptance of the Phase 1 findings and recommendation by the city, Jacobs will prepare a separate scope and fee for the detailed design of the associated improvements comprising Phase 2. Our anticipated scope of services for Phase 1 is provided following.

### **A. Data Collection and Records Review**

Jacobs will gather background information to be used for the project, both electronic form (if available) and hard copy form. We will conduct a review of existing data and reports as part of this task. This shall include gathering all pertinent permits, record plan drawings, construction plans of the existing systems, topographic maps, and any other pertinent data and reports. Additional collection system and land use data may be obtained from the city's geographical information system (GIS) database where available. It is assumed that no field survey is required.

### **B. Existing Conditions Assessment**

Jacobs will perform a hydrologic and hydraulic assessment of each area by developing a hydraulic model using boundary condition information from the city's existing hydraulic model and/or calculations for each existing system provided in SJRWMD permitting documents using the same design software as the permitted systems. For areas with concerns associated with stormwater collection, an evaluation of conveyance capacity for features such as inlets, pipes, curb & gutter, and ditches will be provided as applicable.

Jacobs will provide a hydrologic and hydraulic assessment for up to four different design storm events for each area expected to comprise:

1. 10 year 24 hour
2. 25 year 96 hour
3. 100 year 24 hour

#### 4. Hurricane Irma

Approximate extents of the existing hydraulic model and/or conveyance capacity analysis proposed for this scope of work are described for each location below:

##### 1. **Martin Road and Fiske Boulevard**

- a. Analysis of existing onsite conditions, using available topographic information and best available boundary condition information for outfall area(s) immediately adjacent to the property.

##### 2. **Huntington Lane**

- a. Analysis of existing stormwater pond. Downstream extent of model will be the downstream end of the pond outfall pipe.
- b. Analysis of existing ditch capacity of ditches running parallel to and east of Huntington Lane

Note, a condition assessment is not included in this scope. It is assumed pipe systems are in good working order.

It is expected that the city will be the owner of the electronic data and final electronic output file. and all electronic data will be submitted to the city.

#### **C. Solutions Analysis**

Jacobs will develop up to three different scenarios for each area expected to comprise:

1. Operational improvements
2. Conveyance improvements
3. Storage improvements

The hydraulic model will be utilized to confirm resulting improvements for each scenario.

A Class 5 Cost Estimate for conveyance and storage improvements will be developed for each location.

#### **D. Technical Memorandum**

Jacobs will prepare a technical memorandum summarizing our findings for the existing conditions at each location. We will present recommendations in the technical memorandum for each of the solution approaches.

Jacobs will submit an electronic copy in .pdf format and three 8.5" x 11" hard copies of the draft technical memorandum for the city's review prior to scheduling a review meeting. During the Technical Memorandum Review Meeting, we will review the draft technical memorandum and provide guidance to the city on how the hydraulic model was prepared and how the model may be changed, manipulated, or edited for future use. We will incorporate city comments for the draft technical memorandum and provide three hard copies and one electronic copy of the final technical memorandum.

Following submission of the final technical memorandum, our team will prepare a scope and fee proposal for Phase 2 - Detailed design based on the accepted recommendations from Phase 1.

During this phase Jacobs will include surveying, geotechnical, and utility locating services as needed to support the final design of the recommended solutions

Jacobs will prepare a PowerPoint presentation for the City Council to present the findings of the technical memorandum. This will include one Jacobs staff for attending and presenting at the City Council meeting.

### 3. CITY'S COMMITMENT

The following shall be provided by the City of Rockledge to assist in the completion of the tasks described above:

- Reasonable access to operations, maintenance, and engineering staff.
- Electronic hydraulic model files.
- Copies of available record drawings.
- Copies of available design and construction documents.
- Existing GIS system and shape files.
- Copies of available operating reports and maintenance records.
- Collection of conveyance feature size, dimensions, and elevations if unavailable from other sources.

### 4. PHASE 1 SCHEDULE

Task Description	Calendar Days from NTP
Complete Data Collection and Review	14
Submit Draft Technical Memorandum	56
Technical Memorandum Review Meeting	63
Submit Final Technical Memorandum	70

### 5. BASIS OF PAYMENT

For the Rockledge Small Areas Stormwater Assessment, Phase 1, we propose a time and materials contract with a not to exceed amount. Contract shall be based on labor billing rates with monthly billings determined by the actual work hours completed for the period and expenses reimbursed as occurred with no additional markup. Our proposed level of effort and billing rates for the scope of services described herein is provided in the table below:

Title/Role	Billing Rate	Hours	Price
Project Manager	\$181.00	80	\$14,480
Project Engineer	\$99.00	160	\$15,840
Senior Administrative	\$90.00	16	\$1,440
Principal	\$225.00	8	\$1,800
Expenses	\$200.00	N/A	\$200
<b>Total</b>		264	<b>\$33,760</b>

## 6. CONCLUSION

We want to thank the City of Rockledge for the opportunity to provide professional engineering services to accomplish this City's purposes of meeting stormwater standards at each of the listed locations. Our team is truly excited about establishing a trusted relationship with the City of Rockledge. We would be happy to discuss with you in further detail any questions you may have with our scope and fee proposal.

Sincerely,



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