MOCK • ROOS
CONSULTING ENGINEERS

September 28, 2021

Mr. Jonathan Reinsvold
Village of Wellington
12300 Forest Hill Blvd.
Wellington, FL 33414

Ref. No.: WE004.00
Subject: Village of Wellington Surface Water Management System
ICPR4 Computer Model and Water Control Plan Update

Dear Jonathan:

Attached is the updated *Proposal to Provide Professional Engineering Services for the Village of Wellington's Surface Water Management System ICPR4 Computer Model and Water Control Plan Update*. Please review the proposal and return one signed copy to our office as our authorization to proceed with the Scope of Services outlined in the proposal.

We will provide the Scope of Services for a lump sum fee of $223,490.

If you have any questions, please contact me at 683-3113, extension 293. Thank you for considering Mock•Roos for this project. We look forward to working with you.

Sincerely,

MOCK, ROOS & ASSOCIATES, INC.

Garry G. Gruber, P.E.
Senior Vice President

GGG:tsm
Enclosure
Copies: Bookkeeping

EXHIBIT A

Proposal to Provide Professional Engineering Services for Village of Wellington Stormwater Management System ICPR4 Computer Model and Water Control Plan Update

Services to be provided by: Mock•Roos

Services provided to: Village of Wellington (Village)

Proposal Date: September 28, 2021

Proposal Terms

A. Project Description:

The Village of Wellington has requested this proposal to provide the engineering consulting services necessary to migrate its surface water management system (SWMS) model from ICPR ver. 3 to ICPR4. The ICPR4 computer model is the current version of this widely used software and includes a number of significant enhancements since ICPR ver. 3 was last updated.

The migration to ICPR4 is not a direct conversion, and to take full advantage of the capabilities of the new computer model software, it is beneficial to include more extensive input information, which is geospatially referenced.

In addition, the Village has indicated that there are updates required to the model to represent changes that have occurred within the physical system, and new Light Detection and Ranging (LiDAR) data from 2016-2017 is now available as another update to information that is used by the model.

The Village has also requested that Mock•Roos provide a historical timeline outlining the changes to the Village system over the years.

Mock•Roos is pleased to provide the requested services to the Village, as outlined below in the **Scope of Services**.

B. Scope of Services:

Task 1 – Computer Model Migration/Development

1. Select the appropriate ICPR ver. 3 computer model file to migrate – Review the most recent model versions prepared for the Village to determine the best fit to the existing condition.
2. Migrate ICPR ver. 3 computer model to ICPR4 – Perform the necessary steps to migrate the information from the ICPR ver. 3 model into the ICPR4 software.

3. Develop Model data element GIS layers – Using the element information in the ICPR ver. 3 model, create or generate GIS layers of the various system component types (basins, control structures, pump stations, canals, etc.)
4. Develop 2016-2017 LiDAR surface for Village system extents – Use the most recent LiDAR data obtained by Palm Beach County to develop a digital elevation model that covers the extent of the Village system contributing area. This data will be used to generate the sub-basin/node stage-storage relationships for the model.
5. Research and update permitted projects within the Village since the previous model was completed.
6. Update model elements as provided by the Village – Perform updates of system components, as identified by Village staff, that have occurred since the last model update was performed.
7. Perform field visits for data acquisition and verification – Make field observation of system components to verify and/or obtain information that is lacking in the existing model.
8. Review model assumptions with Village staff – Meet with Village staff to review assumptions that are proposed to be used in the model.
9. Test model function – Run test simulations to ensure the computer model is running properly and that component information has migrated or been entered correctly.

Task 2 – Computer Model Simulation & Verification

1. Simulate up to 3 rainfall events – Village to select 3 rainfall events for simulations.
2. Compare simulation results to recorded data and/or to previous model results – The results of the 3 rainfall event simulations will be compared to measured data, if available, and/or to results from the previous model (ICPR ver. 3) simulations.
3. Generate simulation summary information – Produce simulation results in a format for discussion with the Village.
4. Meet with Village staff to review simulation results – Prepare for and present model simulation results for discussion with Village staff. Receive comments and suggestions from staff on possible anomalies in the model results and information that may require updating.

Task 3 – Finalize Model Development

1. Revise model based on meeting discussion and comments – Update the model as a result of the review meeting with Village staff.
2. Re-simulate rainfall events – Run simulations using revised/finalized model.
3. Evaluate simulation results – The results from the model simulations will be evaluated to identify system components that appear to be causing restrictions within the SWMS.

Task 4 – Model Documentation

1. Document model input sources – Identification and documentation of the source of model input data and assumptions will be done within the ICPR4 model.
2. Prepare model validation narrative – A brief description of the methodology used to evaluate the model's validity will be prepared and provided to the Village.
3. Prepare simulation results – The model simulation results will be exported in table format (MS Excel, .csv, or other) for viewing, printing, or linking to the Village SWMS GIS.
4. Summarize SWMS evaluation – A brief summary of the system evaluation completed in Task 3 will be prepared and will identify any system components that may be causing the SWMS to function below its intended or desired capacity.
5. Prepare model documentation report – Develop and deliver a final model documentation report incorporating items 1. through 4. above. Report will be signed/sealed by a professional engineer. Two hard copies and one PDF file format version of the report will be provided to the Village. One CD will be included with each hard copy report that will contain all the associated computer files that represent the Village's SWMS ICPR4 computer model.

Task 5 – Village SWMS Historical Timeline

1. Prepare and submit a draft historical timeline outlining the Village's SWMS development and milestone modification over the years.
2. Receive comments from Village staff and finalize and submit the SWMS timeline.

Task 6 – Updated Water Control Plan

1. Prepare and Obtain from Wellington staff and review the following:
   a. The last approved Water Control Plan (2016).
   b. Revisions needed to the last approved Water Control Plan or Amended Plan.
   c. ACME Annual Assessments since the last approved Water Control Plan or Amended Plan.
   d. ACME Annual breakdown of expense (maintenance, capital, administrative) since the last approved Water Control Plan or Amended Plan.
   e. ACME projected expenses and assessments for the next five years.
   f. Updated information of any facilities (utilities, roadways, parks, recreational, stormwater management, and water quality programs) added since the 2016 Water Control Plan.
   g. Description and map of any areas added to ACME's boundary since the 2016 Water Control Plan including Units of Developments.
   h. Descriptions of areas served outside ACME boundary since 2016.
   i. Description of any land use changes since 2016.

j. Detailed descriptions of facilities and services including costs that the Amended Water Control Plan will provide within the next 5 years.

2. Prepare of an Amended Water Control Plan

   a. Draft Plan

   b. Final Draft Plan

C. Additional Services:

1. Any services not included in the Scope of Services will be considered Additional Services.
2. Any design changes, schedule changes, drawing changes, or other project changes requested by the Village will be considered Additional Services.
3. Additional Services can be provided upon Mock•Roos receiving signed authorization from the Village.

D. Deliverables:

Deliverables are anticipated to include the following items and durations:

	Task Completion (from NTP)
Task 1 – Meeting materials for preliminary review	210
Task 2 – Preliminary model simulation results	270
Task 3 – none	315
Task 4 – Model documentation report & computer files	360
Task 5 – SWMS historical narrative	90
Task 6 – Update Water Control Plan	150

E. Fees and Rates:

1. Mock•Roos will complete the Scope of Services for the lump sum fee of $223,490.
2. Mock•Roos will not provide services in excess of the anticipated fee without signed authorization from the Village.
3. Mock•Roos can provide Additional Services at the Mock•Roos rates in effect at that time, plus reimbursable expenses or for an agreed upon lump sum fee.

F. Conditions:

1. This proposal serves as a supplement to the general agreement between Mock•Roos and Wellington currently in effect as the date of authorization to proceed with the Scope of Services outlined above. In case of discrepancies, the terms of this proposal supersede those of previous agreements. This authorization becomes valid upon Mock•Roos receiving a notice to proceed/Purchase Order (PO).

MOCK•ROOS

Signed: _____

Name: Garry G. Gruber, P.E.

Title: Senior Vice President

Date: 9/28/21

Village of Wellington Surface Water Management System - ICPR4 Computer Model Development

	Labor Classification				
	Senior Project Manager	Senior Project Engineer	Project Engineer I	Admin. Assistant	Total
Labor Hourly Billing Rate	$200.00	$185.00	$115.00	$60.00	
Total Hours	152	676	470	28	
Task Description					
Task 1 - Computer Model Migration/Development					**$ 117,790**
Select ICPR ver. 3 model file to migrate		8			
Migrate ICPR ver. 3 computer model to ICPR4	4	120	80		
Develop model data element GIS layers	4	120	80		
Develop 2017 LiDAR surface for Village system extents	4	20	20		
Research & update model to include recent permitted development		60	30		
Update model elements as provided by Village	4	40	24		
Perform field visits for data acquisition and verification		40	40		
Review model assumptions with Village staff	4	4	4		
Test model function	4	16	16		
Task 2 - Computer Model Simulation & Verification					**$ 26,780**
Simulate up to 3 rainfall events (selected by Village)		16	16		
Compare simulation results (to recorded data a/o previous model)	20	40	16		
Generate simulation summary information		16	16		
Meet with Village staff to review simulation results	4	12	8		
Task 3 - Finalize Model Development					**$ 22,180**
Revise model based on meeting discussion & comments from Village		28	28		
Re-simulate rainfall events		8	16		
Evaluate sim results to identify possible system restrictions	20	20	24		
Task 4 - Model Documentation					**$ 30,420**
Document model input sources	4	40	20	8	
Prepare model validation narrative	4	8	8		
Prepare simulation results	4	8	16		
Summarize SWMS evaluation	8	8	8		
Prepare model documentation report	16	24		8	
Task 5 - Village SWMS Historical Timeline					**$ 14,020**
Prepare/submit draft timeline	40	16		8	
Receive comments/finalize/submit timeline	8	4		4	
Task 6 - Update Water Control Plan					**$ 12,300**
Update Water Control Plan	40	20		10	

Total Labor	**$ 223,490**
Reimbursables	$ -
Project Total	**$ 223,490**

The spreadsheet is a fee cost estimate based on specific labor classifications as noted.