

WORK ORDER No.7 FOR PROFESSIONAL SERVICES

TO: A.D.A. Engineering, Inc.
8550 NW 33 Street, Suite 202
Doral, FL 33122
Phone: (305) 551-4608

DATE: May 14, 2019

The City of Doral authorizes the firm of A.D.A. Engineering, Inc. to provide professional engineering services to perform a Stormwater Vulnerability Assessment for the City of Doral stormwater drainage infrastructure. The scope of services includes, but is not limited to, data collection and evaluation, groundwater rise risk analyses, and the development of a written Doral Stormwater Vulnerability Assessment Report. The work should be performed in accordance with the contract provisions contained in the Continuing Professional Services Final Agreement between ADA Engineering, and the City of Doral dated January 30, 2018, and the attached Proposal dated April 4, 2019 and submitted by your firm for the above referenced project.

SCOPE OF SERVICES AND SCEHDULE:

The scope of the project will be as described in the attached proposal from A.D.A. Engineering, Inc. The schedule of the work to be provided is five (5) months from NTP. The performance of services associated with this Work Order will be executed on a lump sum basis with a not to exceed amount of \$46,540.00.

You are required by the Continuing Service Agreement to begin work subsequent to the execution of this Work Order, or as directed otherwise. If you fail to begin work subsequent to the execution of this Work Order, the City of Doral will be entitled to disqualify the Proposal, and revoke the award.

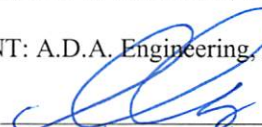
This Work Order incorporates the terms and conditions set forth in the Continuing Services Agreement dated January 30, 2018 between the parties as though fully set forth herein. In the event that any terms or conditions of this Work Order conflict with the Continuing Services Agreement, the provisions of this specific Work Order shall prevail and apply

Work Order is not binding until the City of Doral agrees and approves this Work Order.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day and date first above written, in three (3) counterparts, each of which shall, without proof or accounting for the other counterpart be deemed an original Contract.

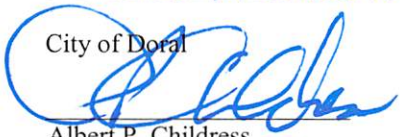
CONSULTANT: A.D.A. Engineering, Inc.


WITNESSES: SEAL:

BY: 
NAME: ALEX VAZQUEZ
TITLE: VICE PRESIDENT

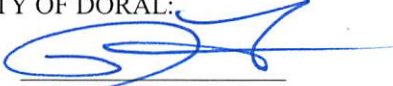
1. 
2. 



OWNER: City of Doral
BY: 
NAME: Albert P. Childress
TITLE: City Manager

AUTHENTICATION:
BY: 
NAME: Connie Diaz
TITLE: City Clerk

APPROVED AS TO FORM AND
LEGAL SUFFICIENCY FOR THE SOLE USE
OF THE CITY OF DORAL:

BY: 
NAME: Luis Figueredo, ESQ.
TITLE: City Attorney

RESOLUTION No. 19-123

A RESOLUTION OF THE MAYOR AND THE CITY COUNCIL OF THE CITY OF DORAL, FLORIDA, APPROVING A WORK ORDER BETWEEN THE CITY OF DORAL AND ADA ENGINEERING, TO PROCEED WITH PROFESSIONAL ENGINEERING SERVICES TO PERFORM A STORMWATER VULNERABILITY ASSESSMENT FOR THE CITY OF DORAL STORMWATER DRAINAGE INFRASTRUCTURE IN AN AMOUNT NOT EXCEED \$46,540.00; RECOGNIZING THAT ADA ENGINEERING IS A CITY OF DORAL PRE-QUALIFIED VENDOR; AUTHORIZING THE CITY MANAGER TO EXECUTE THE WORK ORDER AND EXPEND BUDGETED FUNDS ON BEHALF OF THE CITY; AND PROVIDING FOR AN EFFECTIVE DATE

WHEREAS, the City of Doral Public Works Department (PWD) wishes to secure ADA Engineering to provide professional services to perform a Stormwater Vulnerability Assessment for the City of Doral stormwater drainage infrastructure; and

WHEREAS, the Stormwater Vulnerability Assessment report will help the City to prepare for projected sea level rise (SLR) in South Florida; and

WHEREAS, the Stormwater Vulnerability Assessment report will consist of data collection and evaluation, groundwater rise risk analyses, and the development of a written Doral Stormwater Vulnerability Assessment Report; and

WHEREAS, the PWD will begin budgeting and planning preparations to update the Stormwater Master Plan and the 5-Year Capital Improvement Plan (CIP) in FY 2019-20 to identify new areas within the City that would benefit and require new drainage systems; and

WHEREAS, the updated Stormwater Master Plan will incorporate the impacts of sea level rise which can directly affect groundwater elevation; and

WHEREAS, the Stormwater Vulnerability Assessment Report will provide groundwater rise risk analysis for the City of Doral exfiltration trenches (french drains), drainage swales, and excess stormwater runoff volume from City stormwater sub-basins into drainage infrastructure; and

WHEREAS, for the updated 5-Year CIP, the Stormwater Vulnerability Assessment Report will provide additional data for the 5-Year CIP and benefit the City for future stormwater infrastructure planning due to the projected SLR in South Florida; and

WHEREAS, ADA Engineering, is a prequalified provider of professional engineering services selected in accordance with Consultant Competitive Negotiation Act (CCNA) requirements and approved by the City Council in November 2017; and

WHEREAS, Staff respectfully requests that the Mayor and City Council members approve the Work Order with ADA Engineering, to provide professional services to perform a Stormwater Vulnerability Assessment for the City of Doral stormwater drainage infrastructure; in an amount not to exceed \$46,540.00.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DORAL AS FOLLOWS:

Section 1. Recitals. The above recitals are confirmed, adopted, and incorporated herein and made part hereof by this reference.

Section 2. Approval. The Work Order between the City of Doral and ADA Engineering, to provide professional services to perform a Stormwater Vulnerability

Assessment for the City of Doral stormwater drainage infrastructure, in an amount not to exceed \$46,540.00, a copy which is attached hereto as Exhibit "A", is hereby approved.

Section 3. Authorization. The City Manager is authorized to execute the work order and expend budgeted funds on the behalf of the City.

Section 4. Implementation. The City Manager and the City Attorney are hereby authorized to take such further action as may be necessary to implement the purpose and the provisions of this Resolution.

Section 5. Effective Date. This Resolution shall take effect immediately upon adoption.

The foregoing Resolution was offered by Vice Mayor Mariaca who moved its adoption. The motion was seconded by Councilmember Cabral and upon being put to a vote, the vote was as follows:


Mayor Juan Carlos Bermudez	Yes
Vice Mayor Claudia Mariaca	Yes
Councilwoman Digna Cabral	Yes
Councilman Pete Cabrera	Yes
Councilwoman Christi Fraga	Yes

PASSED AND ADOPTED this 8 day of May, 2019.



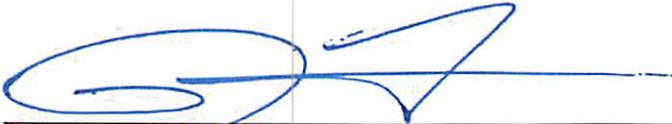
JUAN CARLOS BERMUDEZ, MAYOR

ATTEST:



CONNIE DIAZ, MMC
CITY CLERK

APPROVED AS TO FORM AND LEGAL SUFFICIENCY
FOR THE USE AND RELIANCE OF THE CITY OF DORAL ONLY:



LUIS FIGUEREDO, ESQ.
CITY ATTORNEY



Corporate Office
8550 NW 33rd Street, Suite 202
Doral, Florida 33122
T 305.551.4608
F 305.551.8977
www.adaengineering.com

April 4, 2019

Mr. Carlos Arroyo
Assistant Public Works Director
City of Doral
Public Works Department
8300 NW 53rd Street, Suite 200
Doral, Florida 33166

Reference: Doral Stormwater Vulnerability Assessment Report

Dear Mr. Arroyo:

Per your request, A.D.A. Engineering, Inc. (ADA) is pleased to submit this Service Order proposal for Professional Engineering Services associated with performing a Stormwater Vulnerability Assessment based on the currently potential groundwater rise within the City of Doral (City) due to projected sea level rise (SLR) in South Florida. This Service Order will be an integral part of the General Engineering/Architectural Services (RFQ 2017-21) agreement between the City of Doral (City) and ADA.

The following sections outline the required tasks, scope of work, schedule of work (time performance), and compensation to prepare the Doral Stormwater Vulnerability Assessment Report.

I. SCOPE OF WORK

The Scope of Work is comprised of the following essential tasks:

- Task 1 – Data Collection and Evaluation
- Task 2 – Groundwater Rise Risk Analyses
- Task 3 – Doral Stormwater Vulnerability Assessment Report

Task 1: Data Collection and Evaluation

ADA will attend up to two (2) meetings with the City and one (1) meeting with Miami-Dade County to collect readily available information. It is anticipated that the following data will be collected by ADA from the City, if available:

1. Latest stormwater infrastructure GIS shapefiles including the following information:
 - a. exfiltration trenches
 - b. drainage swales
 - c. available hydraulic conductivity test results
 - d. catch basins and inlets

- e. drainage pipes and conveyance systems
 - f. stormwater control structures
 - g. outfalls
2. Latest high-resolution aerials
 3. Other pertinent GIS data/coverages to support the development of the Doral Stormwater Vulnerability Assessment Report

It is anticipated that the following information will be collected from Miami-Dade County and the United States Geological Services (USGS), with assistance from the City (as needed):

1. 2015, 5-foot bare-earth LIDAR data for all sections within the City
2. GIS shapefiles developed as part of the *Hydrologic Conditions in Urban Miami-Dade County, Florida, and Effect of Groundwater Pumpage and Increased Sea Level in Canal Leakage and Regional Groundwater Flow Report (Version 1.2, July 2016)*, reference hereafter as the USGS Report.

All collected project data will be evaluated for possible inclusion into the Doral Stormwater Vulnerability Assessment Report to be developed under Task 3. A data catalog will be prepared for all collected data and will be submitted to the City for review and comment.

Task 2: Groundwater Rise Risk Analyses

ADA will use the data collected as part of Task 1 to perform the groundwater rise risk analyses. ADA will attend one (1) meeting with the City to discuss the planning horizon and extent of sea level rise to be included in the groundwater rise risk analyses. ADA will then use the Unified Sea Level Rise Projection, Southeast Florida (October 2015, Southeast Florida regional Compact, Sea Level Rise Work Group) to identify the projected SLR for the planning horizon selected. ADA will then use the groundwater rise projections in USGS Report to determine the projected groundwater rise within the City relative to the current average wet season groundwater elevations.

Using the projected groundwater rise within the City for the selected SLR planning horizon, ADA will then perform risk analyses for the following City assets:

1. Exfiltration Trenches
2. Drainage swales
3. Excess stormwater runoff volume from City stormwater sub-basins into drainage infrastructure

The following is a description of the risk analyses to be performed for each of the assets outlined above:

1. Exfiltration Trenches

- a. The exfiltration and percolation rate GIS coverages; 2015, 5-foot bare-earth LIDAR data; and USGS Report data will be used to determine the approximate volume being exfiltrated within the City's stormwater sub-basins during a 5-year, 24-hour design storm event, based on the current average wet season groundwater elevation. Exfiltration volume improves the stormwater infrastructure flood protection level of service.
- b. The exfiltration volume reduction will then be estimated for each of the City's stormwater sub-basins based on the potential reduction of the exfiltration trenches' hydraulic head that will be observed with the projected groundwater rise.

2. Drainage swales

- a. The drainage swale GIS coverage; 2015, 5-foot bare-earth LIDAR data; and USGS Report data will be used to determine the approximate clearance from the current average wet season groundwater elevation. Ideally, drainage swales should maintain a minimum of one-foot clearance from the average wet season groundwater elevation.
- b. The swales will be evaluated to determine the swales that currently meet or not meet the one-foot clearance requirement.
- c. The swales will then be re-evaluated to determine the additional amount of swales that will not meet the one-foot clearance requirement for the projected groundwater rise.

3. Excess stormwater runoff volume from City stormwater sub-basins into drainage infrastructure

- a. The 2014 City Stormwater Master Plan update estimates the amount of stormwater runoff for the 5-year, 24-hour and 100-year, 72-hour design storm events. The 5-year design storm is used to determine the City roads' flood protection level of service, and the 100-year design storm defines the minimum building finish floor elevations. The amount of stormwater runoff is determined based on the amount of soil storage that is available within the pervious areas of each sub-basin, and this soil storage is related to the clearance between the ground surface elevations to the average wet season groundwater elevation.
- b. The 2014 City Stormwater Master Plan update results and data; 2015, 5-foot bare-earth LIDAR data; and USGS Report data will be used to determine the amount of soil storage reduction based on the projected groundwater rise.
- c. The recomputed soil storage will then be used to estimate the amount of stormwater runoff increase within each City sub-basin for the 5-year, 24-hour and 100-year, 72-hour design storm events.

ADA will prepare GIS maps to depict the potential increased impact or risk for each of the four assets outlined above. ADA will attend one (1) meeting with the City to present the risk analyses and results.

Task 3: Doral Stormwater Vulnerability Assessment Report

ADA will incorporate the finding of Tasks 1 and 2 into a draft Doral Stormwater Vulnerability Assessment Report. As part of this task, ADA will attend up to one (1) meeting with the City to present the findings, conclusion and recommendation of the Report. Three (3) copies of the draft Report will be submitted for the City's review. ADA will also provide a copy of the draft Report in electronic format.

ADA will incorporate applicable comments from the City and will prepare a final Doral Stormwater Vulnerability Assessment Report. Three (3) copies of the final Report will be submitted to the City. ADA will also provide a copy of the final Report in electronic format.

II. SCHEDULE OF WORK – TIME OF PERFORMANCE

ADA will submit the Deliverables and perform the Work as depicted in the table below. Completion dates are in months from notice to proceed (NTP):

Schedule of Deliverables		
Task	Project Activity Description and Deliverable	Months from NTP
1	Data Collection Catalog	1
2	Groundwater Rise Risk Analyses Results	3
3	Draft Doral Stormwater Vulnerability Assessment Report	4
3	Final Doral Stormwater Vulnerability Assessment Report	5

III. COMPENSATION

ADA will be compensated \$46,540.00 on a lump sum basis for performing the work detailed in the Scope of Work. ADA will submit to the City monthly invoices for work completed on a percentage basis. The table below outlines the total fee schedule for each task outlined in the Scope of Work. Attachment A includes a detailed breakdown of the man-hour estimate per task.

Summary of Compensation		
Task	Project Activity Description	Fee Amount
1	Data Collection and Evaluation	\$2,265.00
2	Groundwater Rise Risk Analyses	\$32,880.00
3	Doral Stormwater Vulnerability Assessment Report (Draft and Final)	\$11,395.00
TOTAL		\$46,540.00

IV. SUPPORT FROM CITY AND SCOPE OF WORK EXCLUSIONS

To successfully complete the project, the City will provide the following support:

1. Attend progress meetings
2. Assist with collection of pertinent data from Miami-Dade County and USGS on ADA's Behalf
3. Provide available data summarized in Task 1
4. Review draft deliverables – Comments will be prepared for review by City staff, and other interested parties selected by the City, if needed. The City will consolidate all review documents (internal and external to the City) into a single document and transmit to ADA. The City agrees that its review comments will be delivered to ADA within 14 calendar days following receipt of the draft document(s) from ADA.

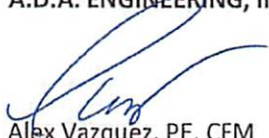
The services outlined below are not included as part of the scope of work, although additional service orders can be executed to assist the City with these services if necessary:

1. Groundwater modeling
2. Hydrologic/hydraulic modeling
3. Risk analysis of septic tank fields or other infrastructure/City assets not outlined in Task 2 of the scope of work
4. Topographic surveys
5. Geotechnical assessments
6. Environmental assessments
7. Prepare a public outreach program
8. Attend public workshops or meetings
9. Attend or present the Doral Stormwater Vulnerability Assessment Report at Commission meeting.

City of Doral
Doral Stormwater Vulnerability Assessment Report
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We look forward to assisting the City on this important project assignment. If you have any questions or need additional information, please do not hesitate to contact Carlos Ortega or me at (305) 551-4608.

Sincerely
A.D.A. ENGINEERING, INC.



Alex Vazquez, PE, CFM
Vice President/Project Manager

Enclosures:
Attachment A – Fee Estimate



ATTACHMENT A
CITY OF DORAL
Doral Stormwater Vulnerability Assessment Report
FEE ESTIMATE

Date Estimated: 4/4/2019

WORK ACTIVITY	ADA Staff by Category							TOTAL HOURS	TOTAL FEE	Comments/Assumptions
	Principal/QC	Project Manager	Sr. Project Engineer	Project Engineer	GIS Specialist	CADD Technician	Clerical			
HOURLY RATE	\$200.00	\$195.00	\$160.00	\$130.00	\$105.00	\$80.00	\$75.00			
Task 1 – Data Collection and Evaluation		3	4	8				15	\$2,265.00	
1.1 Data collection meetings with the City of Doral (2 mtgs)		2		2				4	\$650.00	2 mtg, 2 eng, 2 hours
1.2 Data collection meetings with Miami Dade County (1 mtg)				2				2	\$260.00	1 mtg, 1 eng, 2 hours
1.3 Collect availed data from USGS			2					2	\$320.00	Collect data via internet/emails
1.4 Evaluate available data and prepare data catalog		1	2	4				7	\$1,035.00	
Task 2 – Groundwater Rise Risk Analyses		8	34	128	88			258	\$32,880.00	
2.1 Attend meeting with City			2	2				4	\$580.00	2 mtg, 2 eng, 2 hours
2.2 Perform exfiltration trench risk assessment		2	8	32	16			58	\$7,510.00	
2.3 Perform drainage swale risk assessment		1	4	24	16			45	\$5,635.00	
2.4 Perform sub-basin runoff increase assessment		2	16	60	24			102	\$13,270.00	
2.5 Prepare GIS risk assessment maps		1	4	8	32			45	\$5,235.00	
2.6 Attend meeting with City		2		2				4	\$650.00	2 mtg, 2 eng, 2 hours
Task 3 – Doral Stormwater Vulnerability Assessment Report		5	16	42	20		4	87	\$11,395.00	
3.1 Prepare Draft Doral Stormwater Vulnerability Assessment Report		2	12	32	16		2	64	\$8,300.00	3 copies
3.2 Attend meeting with City		2		2				4	\$650.00	2 mtg, 2 eng, 2 hours
3.3 Prepare Final Doral Stormwater Vulnerability Assessment Report		1	4	8	4		2	19	\$2,445.00	3 copies
Total Hours		16	54	178	108		4			
Total Fee		\$3,120.00	\$8,640.00	\$23,140.00	\$11,340.00		\$300.00	360	\$46,540.00	