


## MEMORANDUM

March 21, 2018

TO: Mark Berman, City Attorney  
Tracy Lyons, Assistant City Attorney

FROM: Horacio Danovich, CIP Manager

RE: Hillsboro Shores Design Services



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Please prepare a Resolution to approve and execute Work Authorization #028 between the City of Pompano Beach ("City") and Keith & Associates, Inc. ("Keith") in the sum of \$160,000.00 as negotiated. Keith is an approved vendor and currently under a Continuing Services contract approved via Ordinance No. 2016-19 dated November 2, 2015. The contract authorized Keith to provide engineering, surveying and utility locating services.

Work Authorization #028 will allow Keith to assist the City with design efforts to improve drainage facilities in and around Hillsboro Shores (see Exhibits "A-B"). This project was identified in the 2013 Stormwater Master Plan List (see "Exhibit "C") and funding for design services is in place.

Keith will conduct surveying services to identify surface features (roads, driveways, sidewalks, etc.), trees (specified by type, size and species), existing utilities (water, sewer, drainage, etc.) and create a basemap. Subsequently, the firm will conduct subsurface exploration to designate utilities and confirm depths. Upon gathering that information, Keith will proceed with design activities leading to the preparation of suitable plans for permitting and construction.

Lastly, Keith will be retained to assist with construction administration whereas the firm will be expected to conduct periodic site visits and inspect facilities to confirm work has been conducted in substantial compliance with the approved plans. The firm will certify the project to all applicable government agencies.



**CITY OF POMPANO BEACH**  
100 W Atlantic Blvd, Pompano Beach, FL 33060

<p><b>WORK AUTHORIZATION NO: 028</b></p>	<p><b>COPBFL Project Manager: Horacio Danovich</b> Phone: 954-786-7834 Email: Horacio.Danovich@copbfl.com <b>COPBFL Contract Specialist: Antonio Pucci</b> Phone: 954-786-5504 Email: Antonio.Pucci@copbfl.com</p>
<p><b>Firm Name: Keith and Associates, Inc.</b> <b>Address: 301 E. Atlantic Blvd</b> <b>City/State/Zip: Pompano Beach, FL 33064</b></p>	<p><b>Firm's Contact Representative: Alex Lazowick</b> <b>Phone: 954-788-3400</b> <b>Email: ALazowick@keith-associates.com</b></p>
<p>In accordance with solicitation number _____, Ordinance number <u>#2016-19</u> dated <u>November 2, 2015</u> for Engineering, Surveying and Utility Locating services the City of Pompano Beach hereby directs the firm to perform the services for the project as detailed in the scope of work, attached hereto and made a part of this Work Authorization for the amount specified below.</p>	
<p><b>Description:</b></p> <p><b>Task 001 Topographic Survey</b></p> <p>The CONSULTANT shall prepare a Topographic Survey of portions of the Hillsboro Shores community. The survey will include all roadways in the area bounded by Dow Street to the south, State Road A1A to the west and north, and the Atlantic Ocean to the east. The survey will extend five (5) feet beyond the existing right-of-way lines. The survey of SR A1A will be from the crown of road to the east right-of-way line. The extreme north end of North Riverside Drive, west of SR A1A, will be included for only the existing drainage structures.</p> <p>The Topographic Survey areas will include all surface features, such as roadways, striping, sidewalks, driveways, surface utilities, signs, mailboxes, etc. Trees will be located and noted by trunk size and common name. Storm and Sanitary Sewer structures will be noted with invert elevation, size, material and direction. Elevations will be noted at an interval of approximately 50 feet, including intermediate changes in grade.</p> <p>A parcel map of the area will be created along with the existing right-of-way lines. Sub-surface utility designations (paint/flags), as provided by the SUE division, will be located and shown on the survey. Up to 20 test holes will be located, elevated and included on the survey.</p> <p>The survey shall be referenced to the Florida State Plane Coordinate System (NAD83/11) and the North American Vertical Datum of 1988 (NAVD88).</p> <p><b>Task 002 Horizontal Designation Services - (Quality Level 'B')</b></p> <p>Conductive utilities will be marked on the surface utilizing active geophysical prospecting techniques in conjunction with electromagnetic equipment utilizing passive radio and audio frequencies. Known non-conductive utilities and/or structures will be marked on the surface utilizing Ground Penetrating Radar (GPR), above ground features, professional judgment, utility plats and/or as-builts. This task does not include identifying drainage, gravity systems, service laterals, irrigation or overhead facilities.</p>	

**Task 003 Location Services - (Quality Level 'A')**  
*(Vacuum Excavations)*

CONSULTANT will perform up to (20) test holes at specific sites requested by the design engineer. Test holes will be utilized to expose utilities to minimize any potential for damage. Test holes performed will be of minimum size (usually 1' by 1'). Backfill of test holes will be performed utilizing the removed material, if suitable. Areas will be restored back as close as possible to their original condition. Installation of an identifiable above ground marker will be performed at each test hole location. Field markers will consist of a nail and disk in asphalt, or an iron rod and cap with survey stake in grassed areas. Test holes performed in the street will be patched using cold patch. The test hole number and utility will be identified on the ground or on the stake, as appropriate. A test hole summary report will be created providing coordinates, depth of cover, type, size and material if applicable.

**Task 004 Kick-Off & Document Review Phase**

The CONSULTANT will first review all existing information the city has available. This will include any existing modeling performed or other reports to determine the current recommended system. All existing information will be highly scrutinized to ensure the ideal and most economical design is proposed. An initial neighborhood involvement meeting will be held to fully understand the current issues throughout the work area.

**Task 005 Preliminary Design Phase**

Once all information is reviewed, the CONSULTANT will perform an internal design meeting with senior engineering staff to roadmap the design intent. 30% Paving, Grading and Drainage (PGD) plans will be prepared. Preliminary phasing plans will also be prepared to show potential construction activities. A meeting with COPB and the neighborhood will be held to identify additional critical input.

**Task 006 Design Development Phase**

The CONSULTANT will update and incorporate all reasonable comments made by the COPB and the neighborhood that fall within this scope. 75% plans, specifications and an engineering construction cost estimate will be prepared. In addition, pipe modeling and sizing will be prepared and completed during this phase. One (1) final design coordination meeting will be held with COPB and the neighborhood to ensure all comments have been addressed. At the end of this Phase and the approval of COPB, engineering permitting will begin.

**Task 007 Engineering Permitting**

The CONSULTANT shall prepare and submit the permit applications for the construction of the improvements designed as defined by this contract and process them through the following regulatory agencies:

Paving, Grading, and Drainage System

City of Pompano Beach

Broward County Environmental Protection and Growth Management Department

It is anticipated a general license will be required as well as a 10-2 self-certification with FDEP.

Signing and Pavement Markings Plan

City of Pompano Beach

Broward County Traffic Engineering Division

The CONSULTANT shall attend (1) pre-application meeting with each agency having jurisdiction over the project to review the proposed design.

If permit processing other than those listed above are required, CONSULTANT shall advise CLIENT and prepare a contract addendum for the associated additional services.

**Task 008 Construction Document Phase**

Based upon the approved design, the Consultant will prepare Final Construction Engineering Plans and calculations. Additional plan updates will be made as the plans go through the required permitting agencies. Outfall improvements are not anticipated as part of this scope. No work is anticipated within FDOT or BC right-of-way. No other utilities are anticipated being relocated under this scope of work. Final 100% plans, specifications, engineering cost estimates and required reports to complete the project will be finalized. All items will be prepared in anticipation of a COPB on-call contractor to perform the work. It is not anticipated this work will be put out to bid. Minor bidding assistance is included in this scope of work.



**Task 009 Construction Administration Services**

The CONSULTANT shall provide construction observation services in order to ensure the integrity of the design intent and certify to the CITY and other jurisdictional agencies that the construction work has been completed in substantial compliance with the approved documents and permits.

Note: It is the contractor's responsibility to coordinate through the CONSULTANT the scheduling of testing. The CONSULTANT shall represent the CITY in performing periodic observation of construction as necessary to confirm construction is in accordance with the approved plans.

This task includes construction observation and certification services for an anticipated construction period of six (6) months.

**Total Work Authorization Amount: \$ ~~177,590.00~~**      **Total Fee: \$160,000.00**  
**Approved Reduction per Dodie Keith**

<p><b>Firm/Contractor Approval:</b></p> <p>Accepted by: <u></u> Firm Representative</p> <p>Title: <u>Executive Vice President</u></p> <p>Date: <u>02/28/2018</u></p>	<p><b>City of Pompano Beach Approval:</b></p> <p>Accepted by: <u></u> Pompano Beach Representative</p> <p>Title: <u>CIP MANAGER</u></p> <p>Date: <u>3/21/2018</u></p>
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**WORK AUTHORIZATION PURSUANT TO THE AGREEMENT FOR  
PROFESSIONAL SERVICES BETWEEN  
THE CITY OF POMPANO BEACH  
AND KEITH AND ASSOCIATES, INC.**

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DATE: February 28, 2018

WORK AUTHORIZATION NO. # 28

PROJECT NO. (CITY) 10020.28 (K&A)

TITLE: Hillsboro Shores Drainage Improvements

This work authorization is pursuant to the Agreement for Professional Services between the City of Pompano Beach and Keith and Associates, Inc., approved by City Ordinance #2016-19, passed and adopted on November 2, 2015.

**PROJECT**

The project involves preparing engineering plans and specification to improve the drainage systems in the Hillsboro Shores area. This project will be based on the City of Pompano Beach Stormwater Master Plan, Figure A-11, "*Bay Drive Neighborhood Recommended Alternative*". Pipe sizing will be confirmed with modeling software to ensure the recommend pipe sizes are correct and no down stream pipes need increasing. Survey and Utility Locates will be done to confirm all crossings and tie in points. The project limits are approximately, SR A1A (to the west and north), Bay Dr (to the east) and Dow St. (to the south). It is anticipated a minor drainage modification will be need and obtained within this scope.

**SCOPE OF SERVICES**

**Survey Services**

**Task 001 Topographic Survey**

The CONSULTANT shall prepare a Topographic Survey of portions of the Hillsboro Shores community. The survey will include all roadways in the area bounded by Dow Street to the south, State Road A1A to the west and north, and the Atlantic Ocean to the east. The survey will extend five (5) feet beyond the existing right-of-way lines. The survey of SR A1A will be from the crown of road to the east right-of-way line. The extreme north end of North Riverside Drive, west of SR A1A, will be included for only the existing drainage structures.

The Topographic Survey areas will include all surface features, such as roadways, striping, sidewalks, driveways, surface utilities, signs, mailboxes, etc. Trees will be located and noted by trunk size and common name. Storm and Sanitary Sewer structures will be noted with invert elevation, size, material and direction. Elevations will be noted at an interval of approximately 50 feet, including intermediate changes in grade.

A parcel map of the area will be created along with the existing right-of-way lines. Sub-surface utility designations (paint/flags), as provided by the SUE division, will be located and shown on the survey. Up to 20 test holes will be located, elevated and included on the survey.

The survey shall be referenced to the Florida State Plane Coordinate System (NAD83/11) and the North American Vertical Datum of 1988 (NAVD88).

The total lump sum fee for Task 001 is.....\$55,500.00

**Subsurface Utility Engineering (SUE) Services**

CONSULTANT is to provide professional services associated with designation, location and mapping of existing subsurface utilities. CONSULTANT shall designate all known tone able and non-tone able utilities along the requested streets within the apparent right of ways:

- N Riverside Dr. from Northfolk St. to N Ocean Blvd.
- Norfolk from N Riverside Dr. to N Ocean Blvd.
- N Ocean Blvd (east edge of pavement to east right of way) from Bay Dr. to Dow St.
- Bay Dr (west edge of pavement to west right of way) from N Ocean Blvd to Dow St.
- Spring St. from the east side of N Ocean Blvd. to the west side of Bay Dr.
- Norfolk St. from the east side of N Ocean Blvd. to the west side of Bay Dr.
- Dover Rd. from the east side of N Ocean Blvd. to the west side of Bay Dr.
- Beacon St. from the east side of N Ocean Blvd. to the west side of Bay Dr.
- Robbins Rd. from the east side of N Ocean Blvd. to the west side of Bay Dr.
- Leigh Rd. from N Ocean Blvd. to Bay Dr.
- Barton Rd. from the east side of N Ocean Blvd. to the west side of Bay Dr.
- Dow St. from the east side of N Ocean Blvd. to the west side of Bay Dr.

**Task 002 Horizontal Designation Services - (Quality Level 'B')**

Conductive utilities will be marked on the surface utilizing active geophysical prospecting techniques in conjunction with electromagnetic equipment utilizing passive radio and audio frequencies. Known non-conductive utilities and/or structures will be marked on the surface utilizing Ground Penetrating Radar (GPR), above ground features, professional judgment, utility plats and/or as-builts. This task does not include identifying drainage, gravity systems, service laterals, irrigation or overhead facilities.

The total lump sum fee for Task 002 is ..... \$25,500.00

**Task 003 Location Services - (Quality Level 'A')**  
*(Vacuum Excavations)*

CONSULTANT will perform up to (20) test holes at specific sites requested by the design engineer. Test holes will be utilized to expose utilities to minimize any potential for damage. Test holes performed will be of minimum size (usually 1' by 1'). Backfill of test holes will be performed utilizing the removed material, if suitable. Areas will be restored back as close as possible to their original condition. Installation of an identifiable above ground marker will be performed at each test hole location. Field markers will consist of a nail and disk in asphalt, or an iron rod and cap with survey stake in grassed areas. Test holes performed in the street will be patched using cold patch. The test hole number and utility will be identified on the ground or on the stake, as appropriate. A test hole summary report will be created providing coordinates, depth of cover, type, size and material if applicable.

The lump sum Labor Cost for this task is..... \$6,000.00  
The lump sum Test Holes (20) Cost for this task is..... \$9,000.00

The total lump sum fee for Task 003 is.....\$15,000.00

**Technical Limitations -**

*Services will be provided with due diligence and in a manner consistent with standards of the subsurface utility locating industry. Every reasonable effort will be made to locate all utility systems of interest whether indicated on record plans available to us or not. However, no guarantee can be made that all existing utility systems can be detected, located or exposed. It may not be possible to detect utilities without prior knowledge, such as systems that are not depicted on record prints available to us. Typically, the horizontal location effort will include electromagnetic induction, power source detection, and ground penetrating radar (GPR). Electromagnetic induction is a method in which a transmitted signal is applied to a metallic target. If the target is metallic and unbroken, the target can be traced and a receiver at the surface is used to detect the transmitted signal. If the signal cannot be applied directly to the target, induction may be produced from the surface. In this scenario bleed-off of the transmitted signal to an adjacent facility is possible, sometimes resulting in erroneous information. PVC, HDPE, concrete pipe and other non-metallic facilities cannot be located by electromagnetic methods. Power source detection is a technique used to locate naturally occurring magnetic fields that exist around cables while generating a signal (electric, telephone, CATV for example). Ground penetrating radar (GPR) is available to assist in locating non-metallic utilities and other facilities that are unidentifiable using traditional electromagnetic techniques. The accuracy of these techniques is subject to the limitation of the available technology and certain factors and field conditions beyond our control, such as the size, depth and conductivity of the target, the site conditions and access, soil conditions, depth to water table and the existence of adjacent buried materials and debris. The targeting of subsurface utilities, although highly reliable, is expressly understood to represent an approximate location of the facility marked on the ground surface. Facilities located from the surface are usually found within two feet of the surface mark. Once a possible facility has been located from the surface, vacuum excavation services should be used to visually verify and to provide the accurate horizontal location and vertical measurements (a test hole). Vacuum excavation techniques are used to provide a cost-effective service that causes minimal disturbance to the site, the utility, vehicle traffic, and is acceptable to the permitting agencies. The size of the test hole excavation is kept to a minimum, in most cases the nominal size of a test hole is 8" x 8". This service represents the best available data on subsurface utilities given a cost-effective investigation using air/vacuum excavation. Visual verification in the test hole below the water table is*

*not possible. An air lance probe can be used in these instances to a reasonable depth of approximately 6 feet, although results to greater depths may be possible. The bottom of the utility pipe and conduit is sometimes not directly available and, in most cases, can be derived from the crown of the pipe and the pipe diameter. Pipes with a diameter of 16" or less can usually be determined by exposing a portion or the entire pipe as needed. If pipe diameter is critical on pipe facilities greater than 16", additional test holes may be required to obtain both edges. The bottom depth of multiple conduit and encased duct banks is determined by excavating down one edge of the utility. Additional test holes are needed to accurately document edges, configuration and top and bottom depths. Conditions under multiple or encased duct bank facilities cannot be excavated and therefore the existence of another facility cannot be confirmed. It is important to remember that the bottom edge of the facility may not represent its lowest point, and the shape or configuration of the facility may not be the same on both sides. Locating underground utilities is not an exact science. The reporting of a negative result (no facility found) should not be used as a positive determination that the subject area is clear of all facilities or that the facility does not exist. CLIENT shall hold harmless and indemnify Keith and Associates, Inc. (K&A) against any losses as a result of limitations within the equipment, but not against negligence on the part of K&A. Use of this service does not relieve interested parties from their responsibility to make required notification prior to excavation, nor does it relieve utility owners of their responsibility to mark the location of their facilities. K&A will not be responsible for damage caused by others. K&A will not be responsible for utilities that cannot be located with the equipment and techniques provided, or those located underneath other utilities. If records research is not part of the scope of services, the utility owner's marks will be used to identify the utility. K&A will not be responsible for correcting mistakes made by other locators. Where vacuum excavation services are used, and no utility is found at the mark provided by the utility at a depth of 5 feet, the excavation will be backfilled, referenced and invoiced as one test hole.*

#### **Subsurface Utility Engineering Conditions and Understandings -**

The utility markings are for design purposes only. The Florida One Call must be notified forty-eight (48) hours in advance of any excavation.

CONSULTANT will not access confined spaces. If confined spaces need to be accessed for locating purposes than the client will be notified, and further arrangements will be made for said access. Additional fees may be applicable.

If due to traffic conditions additional MOT is required and beyond the capability of CONSULTANTS standard MOT operations, CONSULTANT will notify the client and request additional fees.

Additional requests outside the scope of services, when requested by client and/or client's representative, will be invoiced on an hourly basis.

This proposal assumes site access is available and work can be performed between the hours of 7:30 AM and 5:00 PM Monday through Friday.

#### **Engineering Services**

##### **Task 004 Kick-Off & Document Review Phase**

The CONSULTANT will first review all existing information the city has available. This will include any existing modeling performed or other reports to determine the current recommended system. All existing information will be highly scrutinized to ensure the ideal and most economical design is proposed. An initial neighborhood involvement



meeting will be held to fully understand the current issues throughout the work area.

The total lump sum fee for Task 004 is ..... \$3,800.00

**Task 005 Preliminary Design Phase**

Once all information is reviewed, the CONSULTANT will perform an internal design meeting with senior engineering staff to roadmap the design intent. 30% Paving, Grading and Drainage (PGD) plans will be prepared. Preliminary phasing plans will also be prepared to show potential construction activities. A meeting with COPB and the neighborhood will be held to identify additional critical input.

The total lump sum fee for Task 005 is ..... \$16,280.00

**Task 006 Design Development Phase**

The CONSULTANT will update and incorporate all reasonable comments made by the COPB and the neighborhood that fall within this scope. 75% plans, specifications and an engineering construction cost estimate will be prepared. In addition, pipe modeling and sizing will be prepared and completed during this phase. One (1) final design coordination meeting will be held with COPB and the neighborhood to ensure all comments have been addressed. At the end of this Phase and the approval of COPB, engineering permitting will begin.

The total lump sum fee for Task 006 is ..... \$18,040.00

**Task 007 Engineering Permitting**

The CONSULTANT shall prepare and submit the permit applications for the construction of the improvements designed as defined by this contract and process them through the following regulatory agencies:

Paving, Grading, and Drainage System

City of Pompano Beach  
Broward County Environmental Protection and Growth Management Department  
It is anticipated a general license will be required as well as a 10-2 self-certification with FDEP.

Signing and Pavement Markings Plan

City of Pompano Beach  
Broward County Traffic Engineering Division

The CONSULTANT shall attend (1) pre-application meeting with each agency having jurisdiction over the project to review the proposed design.

If permit processing other than those listed above are required, CONSULTANT shall advise CLIENT and prepare a contract addendum for the associated additional

services.

The total lump sum fee for Task 007 is ..... \$8,150.00

**Task 008 Construction Document Phase**

Based upon the approved design, the Consultant will prepare Final Construction Engineering Plans and calculations. Additional plan updates will be made as the plans go through the required permitting agencies. Outfall improvements are not anticipated as part of this scope. No work is anticipated within FDOT or BC right-of-way. No other utilities are anticipated being relocated under this scope of work. Final 100% plans, specifications, engineering cost estimates and required reports to complete the project will be finalized. All items will be prepared in anticipation of a COPB on-call contractor to perform the work. It is not anticipated this work will be put out to bid. Minor bidding assistance is included in this scope of work.

The total lump sum fee for Task 008 is ..... \$8,640.00

**Task 009 Construction Administration Services**

The CONSULTANT shall provide construction observation services in order to ensure the integrity of the design intent and certify to the CITY and other jurisdictional agencies that the construction work has been completed in substantial compliance with the approved documents and permits. Services included in this task are described as follows:

1. Shop Drawings: The CONSULTANT shall review shop drawings, samples and calculations, which the selected contractor is required to submit for review. This review will only be for conformance with the design concept of the project and compliance with the information provided on the design drawings and specifications. Such review will not extend to methods, means, techniques, construction sequence(s) or procedures, or to safety precautions and related programs. CONSULTANT shall also determine the acceptability, subject to CITY approval, of substitute materials and equipment proposed by contractors.
2. Periodic Site Visits and Construction Observation: The CONSULTANT shall visit the Project at intervals appropriate to the various stages of construction, as the CONSULTANT deems necessary to observe as an experienced and qualified design professional to review the progress and quality of the various aspects of the contractor's work. The CONSULTANT shall coordinate and attend one (1) Pre-construction Meetings. This task includes construction observation services for an anticipated construction period of four (4) months. These services will be invoiced on a time and material basis in accordance with our Professional Service Fee schedule (attached).
3. Inspection Testing: CONSULTANT shall observe the utility testing required for site utilities to certify to the responsible utility entity (the actual testing will be

by others) that the utilities meet minimum testing requirements. Minimum observation shall include pipeline installation, LBR Test, Density Tests, Lamping Test, Asphalt Mix and placement.

4. Issue Clarifications: CONSULTANT shall Issue all instructions of the CITY to contractor(s); issue necessary interpretations and clarifications of the contract documents; have authority, as the CITY's representative, to require special inspection or testing of the work; act as initial interpreter of the requirements of the contract documents and judge of the acceptability of the work thereunder, and make decisions on all claims of the CITY and contractor(s) relating to the acceptability of the work or the interpretation of the requirements of the contract documents pertaining to the execution and progress of the work. CONSULTANT shall render all interpretations or decisions in good faith and in accordance with the requirements of the contract documents.
5. As-builts Review: CONSULTANT will review the record drawings (as-builts) to ensure substantial conformance to the approved plans. The CONSULTANT will only review and reject any particular as-built set a maximum of two (2) times, any additional review will be considered additional services. The contractor will be expected to have the as-builts revised in accordance with all comments.
6. Final Inspections: CONSULTANT shall participate, with the CITY's representative, in a semi-final inspection for the purpose of determining if the project is substantially complete and participate in the preparation of a written "Punch List" of all incomplete, defective or deficient items. Upon notice from the CITY, participate in a final inspection together with CITY and contractor representatives to assure that all "Punch List" items are completed, and the work is indeed completed in accordance with all contract documents. Upon completion of the final inspection, certify, in writing, that the work in-place is acceptable, subject to any conditions therein expressed.
7. Final Certification: CONSULTANT will prepare final certification to all appropriate permitting agencies utilizing record drawings for the design from the survey information supplied by the contractor, or by other means agreed to by both CONSULTANT and CITY.

Note: It is the contractor's responsibility to coordinate through the CONSULTANT the scheduling of testing. The CONSULTANT shall represent the CITY in performing periodic observation of construction as necessary to confirm construction is in accordance with the approved plans.

This task includes construction observation and certification services for an anticipated construction period of six (6) months.

The Estimated Not to Exceed (NTE) Fee for Task 009 is:.....\$26,680.00

**Schedule**

Subsequent to the execution of this Agreement, the Consultant shall commence work on the project following the below preliminary schedule.

Activity or Task		Duration
	Notice to Proceed	TBD
Task 001	Topographic Survey	7 weeks following NTP
Task 002	Horizontal Designation Services	5 weeks from NTP
Task 004	Kick-Off & Document Review Phase	5 weeks from NTP
	COPB Review and Public Outreach (1)	2 weeks follow Task 004
Task 005	Preliminary Design Phase	3 weeks following Approval (1)
	COPB Review and Public Outreach (2)	2 weeks follow Task 005
Task 003	Location Services	2 weeks following Approval (2)
Task 006	Design Development Phase	3 weeks following Task 003
	COPB Review and Public Outreach (3)	2 weeks following Task 006
Task 007	Engineering Permitting	6 weeks following Approval (3)
Task 008	Construction Document Phase	6 weeks following Approval (3)
	Total Design Phase	25 weeks following NTP
Task 009	Construction Administration Services	24 weeks from groundbreaking

**City's Responsibility**

The City shall assist Consultant with the following items in order to expedite the completion of the project in an effective manner.

- A. Designate a representative(s) who shall have the authority to transmit instruction, receive information and enunciate policies and decisions.
- B. Provide access to and obtain permission for Consultant to enter upon public lands as required at no additional cost to perform surveys, observations, or other necessary services under this Agreement.
- C. Assist in obtaining required approvals, permits, or consents from governmental or regulatory bodies or others necessary for the completion of the work, with Consultant being primarily responsible for preparation of permit applications and supporting documentation.
- D. Make available to Consultant all of its existing information which may in any way be pertinent to the project.

- E. Attend meetings with regulatory agencies.
- F. Review contract documents and provide comments in a timely manner.

**Additional Services**

Consultant shall not perform any additional services without the written consent of the City. Services performed beyond the Scope of Services described above shall be considered additional services and will be presented to the City as an Addendum to this Agreement prior to initiating the work. Additional services shall be invoiced on a time and material basis in accordance with our current Professional Service Fee Schedule or on a lump sum basis if a scope of service can be defined.

**Compensation**

Consultant shall invoice the City for services rendered under this Agreement on a lump sum/time and material basis and in accordance with the terms and conditions of the Agreement for Professional Services between the City of Pompano Beach and Keith and Associates, Inc., dated November 2, 2015 and approved by City Ordinance #2016-19.

Budget Estimate of Engineering Services (Exhibit A)

TASK	FEE
Task 001 – Topographic Survey	\$55,500.00
Task 002 – Horizontal Designation Services	\$25,500.00
Task 003 – Location Services	\$15,000.00
Task 004 – Kick-Off & Document Review Phase	\$3,800.00
Task 005 – Preliminary Design Phase	\$16,280.00
Task 006 – Design Development Phase	\$18,040.00
Task 007 – Engineering Permitting	\$8,150.00
Task 008 – Construction Document Phase	\$8,640.00
Task 009 – Construction Administration Services	\$26,680.00
<b>TOTAL FEE</b>	<del>\$177,580.00</del>

Total Fee: \$160,000.00  
 Approved Reduction per Dodie Keith

"CITY":

Witnesses:

**CITY OF POMPANO BEACH**

\_\_\_\_\_

By: \_\_\_\_\_  
LAMAR FISHER, MAYOR

\_\_\_\_\_

By: \_\_\_\_\_  
GREG HARRISON, CITY MANAGER

Attest:

(SEAL)

\_\_\_\_\_  
ASCELETA HAMMOND, CITY CLERK

Approved As To Form:

\_\_\_\_\_  
MARK E. BERMAN, CITY ATTORNEY

STATE OF FLORIDA  
COUNTY OF BROWARD

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_ by LAMAR FISHER, as Mayor, GREG HARRISON as City Manager and ASCELETA HAMMOND, as City Clerk of the City of Pompano Beach, Florida, a municipal corporation, on behalf of the municipal corporation, who are personally known to me.

NOTARY'S SEAL:

\_\_\_\_\_  
NOTARY PUBLIC, STATE OF FLORIDA

\_\_\_\_\_  
(Name of Acknowledger Typed, Printed or Stamped)

\_\_\_\_\_  
Commission Number

CONSULTANT:

Witnesses:

KEITH AND ASSOCIATES, INC.

\_\_\_\_\_  
  
\_\_\_\_\_

By: \_\_\_\_\_  
A. Dodie Keith-Lazowick  
President  
301 East Atlantic Blvd.  
Pompano Beach, FL 33060

STATE OF FLORIDA  
COUNTY OF BROWARD

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_ by A. DODIE KEITH-LAZOWICK President of Keith and Associates, Inc., a Florida corporation, on behalf of the corporation and who is personally known to me.

NOTARY'S SEAL:

\_\_\_\_\_  
NOTARY PUBLIC STATE OF FLORIDA  
(Signature of Notary Taking Acknowledgement)

\_\_\_\_\_  
(Name of Acknowledger Typed, Printed or Stamped)

\_\_\_\_\_  
Commission Number

**PROPOSAL FEES**

Our Project/Proposal Number		Personnel and Hourly Rates												Task Subtotal
Proposal Date		B0	B2	B4	B5	B1	B7	B9	B2	B2	B3	B6	B6	
Tasks		Project Engineer	Professional Engineer (PE)	Air Field Inspector	Project Manager	Senior Project Manager	Project Surveyor	Professional Surveyor & Mapper (P&M)	Survey Party (3) Person	Utility Project Manager	Utility Project Engineer	Utility Coordinator	Utility Designating/GPR (2) Person	
No.	Description	\$100.00	\$125.00	\$80.00	\$125.00	\$160.00	\$85.00	\$125.00	\$130.00	\$100.00	\$130.00	\$120.00	\$200.00	
001	Topographic Survey				4		120	60	280					\$ 55,500.00
002	Horizontal Designation Services				4					10	10	15	100	\$ 25,500.00
003	Location Services				4					20	10	15		\$ 6,000.00
004	Kick-Off & Document Review Phase	8			24									\$ 3,800.00
005	Preliminary Design Phase	80			40	8								\$ 18,380.00
006	Design Development Phase	64	24		64	4								\$ 9,150.00
007	Engineering Permitting	24	8		40									\$ 8,840.00
008	Construction Document Phase	40	8		24	4								\$ 26,680.00
009	Construction Administration Services	24	16	182	40									\$ 168,560.00
Personnel Hours		244	70	182	244	16	120	60	280	39	20	30	100	\$ 168,560.00
Personnel Cost		\$64,400.00	\$ 8,750.00	\$ 17,280.00	\$ 30,500.00	\$ 2,560.00	\$ 11,400.00	\$ 7,200.00	\$ 36,400.00	\$ 3,900.00	\$ 2,600.00	\$ 3,600.00	\$ 20,000.00	
Personnel Subtotal														\$ 168,560.00
(80) Test Holes - Impervious (\$440.00/each)														20
Test Holes Subtotal														\$ 8,800.00
<b>GRAND TOTAL</b>														<b>\$ 177,360.00</b>

Total Fee: \$160,000.00  
 Approved Reduction per Dodie Keith



**EXHIBIT A  
 PROFESSIONAL SERVICE FEE SCHEDULE**

	Hourly Rate
01 Administrative Assistant .....	\$50.00
11 Technician .....	\$80.00
15 Senior Technician .....	\$90.00
30 Associate Planner .....	\$90.00
32 Senior Planner (AICP).....	\$125.00
33 Landscape Designer .....	\$90.00
34 Senior Landscape Designer .....	\$100.00
35 Landscape Architect (RLA) .....	\$125.00
36 ISA Certified Arborist.....	\$125.00
37 Lead Designer.....	\$125.00
40 Senior Traffic Engineer (PE) .....	\$160.00
50 Project Engineer .....	\$100.00
51 Senior Project Engineer .....	\$115.00
52 Professional Engineer (PE).....	\$125.00
53 Field Representative.....	\$75.00
54 Sr Field Representative.....	\$90.00
60 Project Manager.....	\$125.00
61 Senior Project Manager .....	\$160.00
70 Principal .....	\$225.00
72 Expert Witness Testimony.....	\$250.00
75 Model Specialist.....	\$100.00
76 BIM/CIM Modeler .....	\$150.00
77 GIS Specialist .....	\$100.00
78 Project Surveyor .....	\$95.00
79 Senior Project Surveyor .....	\$110.00
80 Professional Surveyor & Mapper (PSM).....	\$120.00
81 Survey Party (2) Person.....	\$110.00
82 Survey Party (3) Person.....	\$130.00
83 Survey Laser Scanning .....	\$250.00
90 Utility Crew Supervisor.....	\$80.00
91 Utility Technician.....	\$70.00
92 Utility Project Manager .....	\$100.00
93 Utility Project Engineer.....	\$130.00
95 Utility Coordinator.....	\$120.00
96 Utility Designating/GPR .....	\$200.00
97 Vacuum Excavation Test Hole (Pervious Surface).....	\$350.00/Each
98 Vacuum Excavation Test Hole (Impervious Surface).....	\$440.00/Each

Effective 09/11/2017

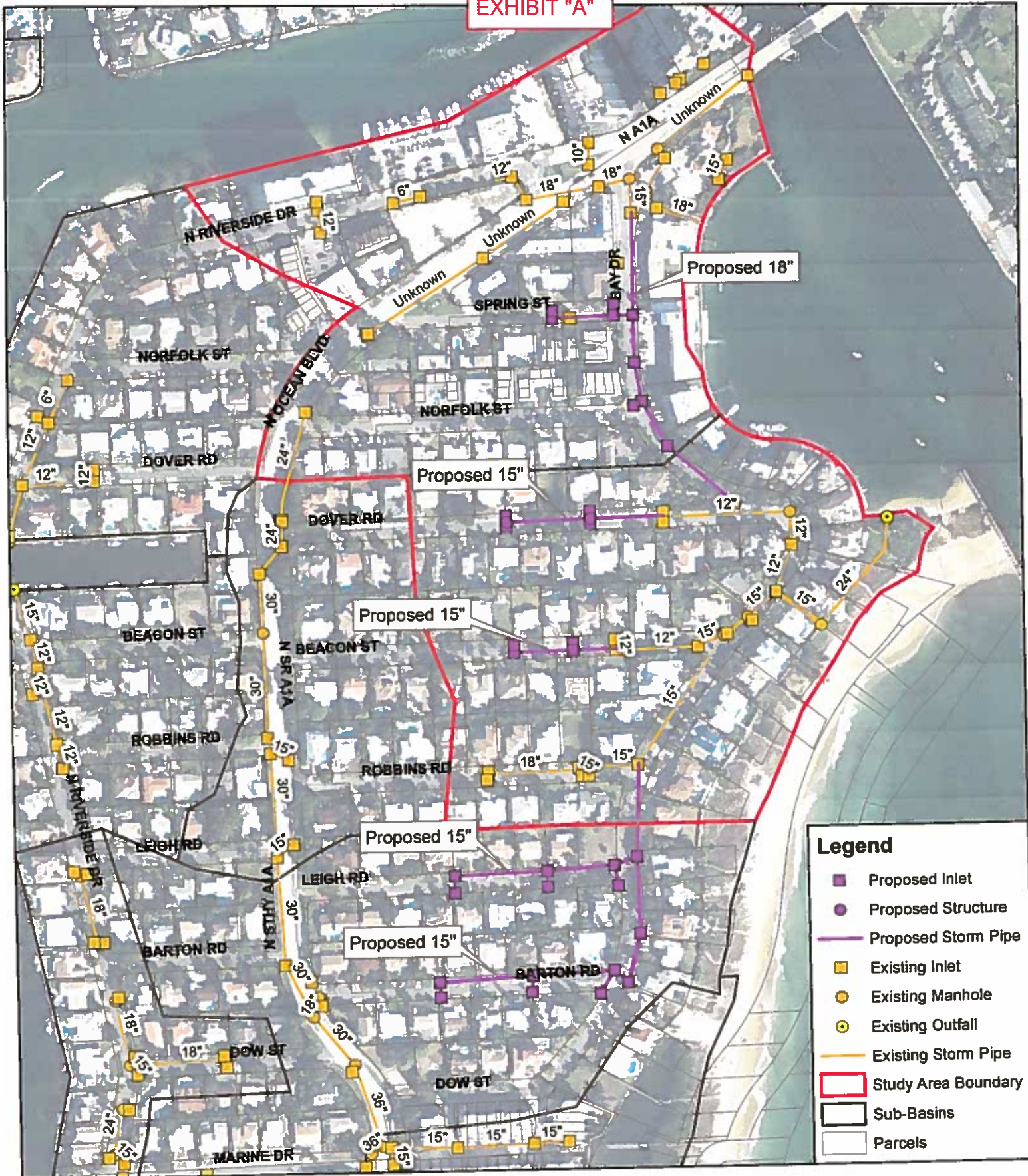
**EXHIBIT B**  
**PROFESSIONAL SERVICE FEE SCHEDULE – Page 2 of 2**

<u>Direct Expenses</u>	<u>Cost per Unit</u>
<b>Photographic Copies</b>	
<b>Color Copies</b>	
a) 8.5" x 11"	\$ 1.00
b) 8.5" x 14 or 11"x 17"	\$ 2.00
c) 24"x 36"	\$18.00
<b>Black &amp; White Copies</b>	
a) Any Size up to 11"x17"	\$ 0.15
b) 24"x 36" Blackline	\$ 2.00
c) 30" x 42" Blackline	\$ 2.00
d) 24"x 36" Mylar	\$15.00
Laminating/Transparency Film Covers	\$ 2.00
<b>Display Boards</b>	
Mounted (Foam) 30"x 40"	\$42.00
Mounted (Foam) 40"x 60" and larger	\$70.00
3 Ring Binders 1"	\$ 1.00
Dividers (Tabs) Set of 10	\$ 0.80
Acco/GBC Binding	\$ 1.50
Facsimiles	\$ 2.00
Overnight Packages	per service
Courier & Delivery Services	per service
Postage: 1 <sup>st</sup> Class	Current US Postal rate
Mileage:	\$ 0.54 / mile

***Any other expenses will be billed at cost plus 10% carrying charge.***

**\*\*NOTE:** Typical other reimbursable expenses include travel, lodging, and meals when traveling on CLIENT'S behalf, identifiable communication expenses, all reproduction costs, and special accounting expenses not applicable to general overhead.

Effective 9/11/17



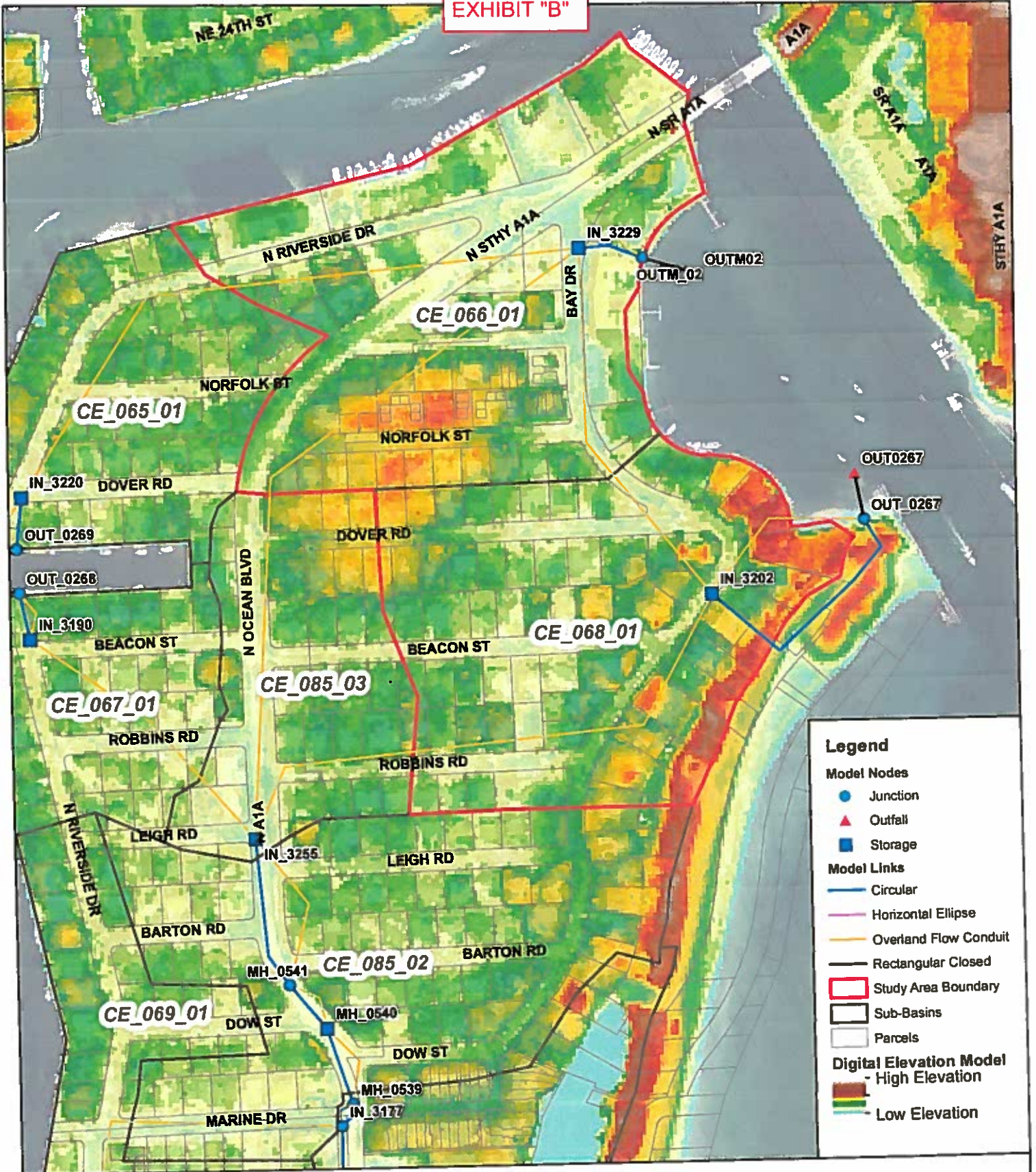
**Legend**

- Proposed Inlet
- Proposed Structure
- Proposed Storm Pipe
- Existing Inlet
- Existing Manhole
- Existing Outfall
- Existing Storm Pipe
- Study Area Boundary
- Sub-Basins
- Parcels

**Figure A-11**  
**Bay Drive Neighborhood**  
**Recommended Alternative**



EXHIBIT "B"



**Legend**

**Model Nodes**

- Junction
- ▲ Outfall
- Storage

**Model Links**

- Circular
- Horizontal Ellipse
- Overland Flow Conduit
- Rectangular Closed

**Digital Elevation Model**

- High Elevation
- Low Elevation

Study Area Boundary  
 Sub-Basins  
 Parcels

Figure 5-11A  
 Bay Drive Neighborhood  
 Existing Topography & Model Schematics



EXHIBIT "C"

<b>Table 6.1 – Recommended Stormwater CIP Cost Summary</b>		
No.	Study Area	Cost
1	Pompano Park Place & Andrews Avenue*	\$396,000
2	Northwest CRA – TOC Area**	\$1,982,000
3	Lyons Park Neighborhood	\$2,434,000
4	Avondale Neighborhood	\$2,488,000
5	Esquire Lake Neighborhood	\$1,656,000
6	Gateway Drive	\$3,524,000
7	Kendall Lake Neighborhood	\$2,720,000
8	US-1 & NE 14th Street Causeway	\$909,000
9	NE 4th Street & NE 3rd Street	\$942,000
10	Dixie Highway & McNab Road	\$52,000
11	Bay Drive Neighborhood	\$1,210,000
12	North Riverside Drive & NE 14th Street Causeway	\$980,000
13	Atlantic Boulevard & South Riverside Drive	\$2,873,000
14	NE 27th Avenue & NE 16th Street	\$2,572,000
15	Powerline Road & NW 33rd Street	\$1,480,000
16	NW 22nd Street	\$349,000
17	SE 28th Avenue South of Atlantic Boulevard	\$585,000
18	NW 22nd Court	\$1,012,000
19	NE 10th Street & Dixie Highway	\$1,348,000
20	US-1 & SE 15th Street	\$1,185,000
21	SE 9th Street	\$377,000
22	NW 16th Lane	\$436,000
23	NE MLK Boulevard & Powerline Road***	\$0
24	NW 7th Terrace	\$93,000
25	SE 15th Avenue	\$394,000
	<b>TOTAL</b>	<b>\$31,997,000</b>

**Stormwater CIP Cost Notes**

- \* Study Area #1 (Pompano Park Place & Andrews Avenue) – As defined in more detail within Section 5.2.1, the estimated costs for this study area are for recommended system improvements which are to alleviate the localized flooding problems in City right of way areas without existing drainage infrastructure. Any comprehensive basin-wide stormwater improvements which would meet level of service criteria throughout this study area are not currently feasible due to the lack of available property for stormwater storage.
- \*\* Study Area #2 (Northwest CRA – TOC Area) – As defined in more detail within Section 5.2.2, the estimated costs for this study area include stormwater improvements that would serve the existing conditions of the TOC area. However, CMA recommends a master stormwater management system which would serve the entire TOC Area under future development conditions defined by the CRA. Since these recommended improvements would not be necessary under the existing conditions and would be funded by the CRA, the future conditions estimated cost is not included in the total Stormwater CIP cost.
- \*\*\* Study Area #23 (NE MLK Boulevard & Powerline Road) – As defined in more detail within Section 5.2.23, system improvements are not recommended for this study area since the bulk of the flooding problems are located on various private properties within the study area and along Powerline Road, which is not the responsibility of the City of Pompano Beach.