PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS

AGENDA ITEM SUMMARY

Meeting Date:	**June 8, 2021**	**Consent [X]** **Public Hearing [ ]**	**Regular [ ]**
Department:	**Water Utilities Department**		

I. EXECUTIVE BRIEF

Motion and Title: Staff recommends motion to approve: Consultant Services Authorization (CSA) No. 3 to the Consulting/Professional Services Utility Distribution & Collection System Engineering Services Contract (Contract) with Keshavarz & Associates, Inc. (Consultant) for the Critical Facilities and Single Feed Community Improvements Phase 1 (Project) for a not to exceed amount of $722,774.22.

Summary: On December 15, 2020, the Board of County Commissioners approved the Palm Beach County Water Utilities Department (PBCWUD) Contract (R2020-1898) with Consultant. CSA No. 3 provides for professional engineering services relating to design and permitting of the Project. These services include, subsurface utility exploration, geotechnical exploration, survey, construction plans, permitting, and outreach support and bid support services for the installation of water mains at critical locations throughout the PBCWUD service area.

This Contract was procured under the requirements of the Equal Business Opportunity Ordinance. On October 2, 2019, the Goal Setting Committee applied an Affirmative Procurement Initiative (API) of a minimum mandatory 20% Small Business Enterprise (SBE) subcontracting goal and an evaluation preference for up to 15 points based upon the relative level of dollar participation by certified SBE firms were the API applied to the Contract. The Contract provides for 85.00% SBE participation, which includes 85.00%, M/WBE participation, 82.00% MBE (A), and 3.00% MBE (B). CSA No. 3 includes 85.99% SBE participation, which includes 85.99% M/WBE participation, 85.99% MBE (A), and 0.00% MBE (B). The cumulative SBE participation including CSA No. 3 is 86.72% SBE, which includes 86.72% M/WBE participation, 86.72% MBE (A), and 0.00% MBE (B). Consultant is a Palm Beach County based company. This project is included in the PBCWUD FY21 Budget. (PBCWUD Project No. 21-041) Countywide (MJ)

Background and Justification: PBCWUD utilized a potable water hydraulic model to identify residential communities and critical facilities that are currently being served by a single water main and lack adequate isolation valves. The Project includes the installation of redundant water mains and isolation valves to reduce emergency repair costs, and minimize the risk of service interruptions to large communities and critical facilities. The Project is needed to increase the efficiency, effectiveness, and reliability of the water distribution system and to help reduce the operation and maintenance workload and associated costs.

Attachments:

1. Two (2) Originals of Consultant Services Authorization No. 3
2. Location Map
3. Certificate of Liability Insurance

Recommended By: Ali Bayat — **Department Director** — 5/11/21 — **Date**

Approved By: — **Assistant County Administrator** — 5/17/21 — **Date**

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2021	2022	2023	2024	2025
Capital Expenditures	$722,775	0	0	0	0
Operating Costs	0	0	0	0	0
External Revenues	0	0	0	0	0
Program Income (County)	0	0	0	0	0
In-Kind Match County	0	0	0	0	0
NET FISCAL IMPACT	$722,775	0	0	0	0
# ADDITIONAL FTE POSITIONS (Cumulative)	0	0	0	0	0

Budget Account No.: **Fund** 4011 **Dept** 721 **Unit** W031 **Object** 6543

Is Item Included in Current Budget? Yes X No ____

Does this item include the use of federal funds? Yes ____ No X

Reporting Category **N/A**

B. Recommended Sources of Funds/Summary of Fiscal Impact:

One (1) time expenditure from user fees, ~~connection fees~~ and balance brought forward.

C. Department Fiscal Review: _____ 6E

III. REVIEW COMMENTS

A. OFMB Fiscal and/or Contract Development and Control Comments:

5h21a
BRS/11 OFMB 5.11.21

Contract Development and Control 5/17/21
5-18-21 TW

B. Legal Sufficiency:

5/18/21
Assistant County Attorney

C. Other Department Review:

_____
Department Director

This summary is not to be used as a basis for payment.

CONSULTANT SERVICES AUTHORIZATION NO. 3

Palm Beach County Water Utilities Department
Contract for Consulting/Professional Services
Utility Distribution & Collection System Engineering Services
Resolution No. R2020-1898 Contract Dated December 15, 2020

Project Title: Critical Facilities and Single Feed Community Improvements Phase 1

PBCWUD Project No.: 21-041

Consultant: Keshavarz & Associates, Inc.

Address: 711 North Dixie Highway, Suite 201, West Palm Beach, FL 33401

Budget Line Item No. 4011-721-W031-6543

District No.: 2, 6, 7

This Consultant Services Authorization provides for: engineering services, including but not limited to, Subsurface Utility Exploration (SUE), geotechnical exploration, community outreach meeting attendance and support, easement request assistance, title search request and review, survey, preparation of construction plans and details, permitting, sketch and legal preparation, and bid assistance services towards the addition of new water mains to loop existing potable water systems serving single feed critical facilities and communities throughout Palm Beach County Water Utilities Department Service Areas Zones 1, 2, 5, and 6.

(See **ATTACHMENT A** for detailed scope of services)

The Contract provides for 85.00 % SBE participation, which includes 85.00 % M/WBE participation, 3.00 % MBE (B) and 82.00 % MBE (A). This Consultant Services Authorization includes 85.99 % overall participation, which includes 85.99 % M/WBE participation, 0.00 % MBE (B) and 85.99 % MBE (A). The cumulative SBE participation, including this authorization is 86.72 % which includes 86.72 % M/WBE participation, 0.00 % MBE (B) and 86.72 % MBE (A).

1. Services completed by the Consultant to date :

   See ATTACHMENT B.

2. Consultant shall begin work upon receipt of Notice to Proceed correspondence.

3. The compensation to be paid to the Consultant for providing the requested services shall be:

   A. Computation of time charges plus expenses, not to exceed $ 722,774.22

   B. Fixed price of $0.00

   C. Total $ 722,774.22

4. This Authorization may be terminated by the County without cause or prior notice. In the event of termination not the fault of the Consultant, the Consultant shall be compensated for all services performed through the date of termination, together with reimbursable expenses (if applicable) then due.

Project Title: Critical Facilities and Single Feed Community Improvements, Phase 1

PBCWUD Project No.: 21-041

5. SBE participation is included in **ATTACHMENT C** under this Authorization. The attached Schedule 1 defines the SBE applied to this Authorization and Schedule 2 establishes the SBE contribution from each Sub-Consultant (Letter of Intent).

6. This Authorization does not amend, change, or modify the Contract dated December 15, 2020 which remains in full force and effect.

7. All Attachments to this Authorization are incorporated herein and made a part of this Consultant Services Authorization.

CONSULTANT SERVICES AUTHORIZATION NO. 3

Palm Beach County Water Utilities Department
Contract for Consulting/Professional Services
Utility Distribution & Collection System Engineering Services
Resolution No. R2020-1898 Contract Dated December 15, 2020

Project Title: Critical Facilities and Single Feed Community Improvements, Phase 1

PBCWUD Project No.: 21-041

IN WITNESS WHEREOF, this Authorization is accepted, subject to the terms, conditions and obligations of the aforementioned Contract.

PALM BEACH COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF FLORIDA

Joseph Abruzzo, Clerk of the Circuit Court & Comptroller, Palm Beach County

ATTEST:

Signed: _____

Typed Name: _____
Deputy Clerk

Palm Beach County, Board of County Commissioners

Signed: _____
Dave Kerner, Mayor

RE A13

_____
(Date)

Approved as to Form and Legal Sufficiency

Signed: _____

Typed Name: Michael W. Jones
County Attorney

CONSULTANT: Keshavarz & Associates, Inc.

_____
(Signature)

Amir Keshavarz, P.E., Senior Project Manager
(Name and Title)

5/5/2021
(Date)

STATE OF FLORIDA

COUNTY OF PALM BEACH

The foregoing instrument was acknowledged before me by means of ☑ physical presence or ☐ online notarization, this 5th day of May, 2021, by Amir J. Keshavarz, P.E. who is ☑ personally known to me or ☐ has produced _____ as identification.

DEBORAH L. FULGENZI
Notary Public – State of Florida
Commission # GG 175704
My Comm. Expires Jan 28, 2022
Bonded through National Notary Assn.

_____
(Signature of Notary Public - State of Florida)

Deborah L. Fulgenzi
(Print, Type, or Stamp Commissioned Name of Notary Public)

KESHAVARZ
—& ASSOCIATES—
CIVIL ENGINEERING | SURVEYING | CONSULTING

October 22nd, 2020

Palm Beach County Water Utilities Department
8100 Forest Hill Boulevard
West Palm Beach, FL 33413

Reference: Utility Distribution & Collection System Engineering Services
WUD 19-082

To whom it may concern,

We are hereby designating Amir Keshavarz, P.E. as an authorized signer associated with the contract for Utility Distribution & Collection System Engineering Services and any associated Consultant Service Authorizations and invoices that may fall under this agreement.

Thank you.

Respectfully,

Mark A. Williams, P.E.
Senior Vice President

711 N Dixie Hwy Suite #201, West Palm Beach, FL 33401 Tel: (561) 689-8600
Keshavarz.com

CONSULTANT SERVICES AUTHORIZATION NO. 3

Palm Beach County Water Utilities Department
Contract for Consulting/Professional Services
Utility Distribution & Collection System Engineering Services
Resolution No. R2020-1898 Contract Dated December 15, 2020

LIST OF ATTACHMENTS

ATTACHMENT A	Scope of Services
ATTACHMENT B	Summary and Status of Consultant Services Authorizations
ATTACHMENT C	OEBO Schedules 1 and 2
ATTACHMENT D	Project Schedule
ATTACHMENT E	Budget Summary
ATTACHMENT F	Summary of SBE-M/WBE Business Tracking
ATTACHMENT G	Location Map

ATTACHMENT A

SCOPE OF SERVICES

WUD Project No.: 21-041

Project Title: Critical Facilities and Single Feed Community Improvements, Phase 1

CONSULTANT shall perform:

BACKGROUND:

Palm Beach County Water Utilities Department (PBCWUD) has conducted various system-wide studies and models to identify various potable water service areas and critical facilities that are at risk of service interruptions due to single points of potable system connectivity.

This potable water system replacement, valving, and looping project is focused on eliminating single points of service, reducing the number of affected customers by a potable water main break or repair, enhancing overall system reliability, replacing segments of aged water mains, and increasing fire protection coverage along proposed looping routes for specific sites/areas throughout PBCWUD Service Zones 1, 2, 5, and 6.

SCOPE OF SERVICES:

Under this Consultant Services Authorization (CSA), Keshavarz & Associates, Inc. (CONSULTANT) shall perform the engineering related services as described herein to explore analyze, and determine acceptable potable water system looping routes for Phase 1 of the critical facilities and single feed communities identified by PBCWUD, then prepare detailed drawings and specifications of the confirmed looping routes for easement acquisition, public outreach, permitting and construction of said proposed water main routes.

The CONSULTANT's services under this CSA include project management, surveying, subsurface utility exploration (SUE), geotechnical exploration, public engagement assistance and meeting attendance, title search coordination and review, easement request assistance, provision of easement sketch and legal descriptions, design, permitting, and bid assistance necessary to construct the confirmed improvements in accordance with PBCWUD's Minimum Engineering and Construction Standards, as well as all applicable permitting agency regulations.

Phase 1 consists of ten (10) single feed sites/areas within PBCWUD service zones 1, 2, 5 and 6; five (5) are critical facility sites served by PBCWUD and five (5) are communities (areas) as identified by PBCWUD and listed in Table "A" below:

TABLE "A": PHASE 1 SITES/AREAS

PBCWUD ID #	SITE / AREA NAME	DESCRIPTION	PBCWUD SERVICE ZONE
1	SARATOGA PINES	SINGLE FAMILY RESIDENTIAL COMMUNITY	5
3	BAY HILL ESTATES	SINGLE FAMILY RESIDENTIAL COMMUNITY	5
9	PINE RIDGE AT HAVERHILL	MULTI-FAMILY RESIDENTIAL COMMUNITY	1
11	FOXWOOD ESTATES	MULTI-FAMILY RESIDENTIAL COMMUNITY	1
12	THE TENNIS CENTER OF PALM BEACH	MULTI-FAMILY RESIDENTIAL COMMUNITY	1
99	GLADES HEALTH CARE CENTER	NURSING HOME	6
167	ARBOR OAKS @ GREENACRES	ASSISTED LIVING FACILITY	2
207	RENAL CARE CENTER - BELLE GLADE	DIALYSIS CENTER	6
661	SOUTH BAY CORRECTIONAL INSTITUTION	DEPT. OF CORRECTIONS FACILITY	6
663	SAGO PALM WORK & RE-ENTRY CENTER	DEPT. OF CORRECTIONS FACILITY	6

The Critical Facilities and Single Feed Community Improvements, Phase 1 project sites/areas must be reviewed in–depth, various proposed looping routes must be developed, analyzed and preliminarily discussed with any applicable affected property and right-of-way (R/W) owners towards confirming a reasonably viable proposed looping route for each Phase 1 site/area with PBCWUD.

This overall preliminary analysis and proposed route confirmation effort must be completed for all ten (10) subject sites/areas prior to engaging in subsequent and resultant specific survey, SUE, geotechnical exploration, design, utility easement recording, permitting and bid assistance services.

The total number of routes, locations, corridors, affected property and R/W owners, total combined linear feet (LF) of proposed water main improvements, and methods of proposed water main installation are currently unknown until after the completion of CSA Task 1: Preliminary Analysis and Consulting Services Phase. Therefore, Tasks 1.1 through 1.10 included in this CSA are specifically related to this Preliminary Analysis and Consulting process for the above-described Phase 1 project sites/areas, and the remaining Task 2.1 through Task 7 are included with described baseline assumptions as anticipated necessary services once each Phase 1 project site/area's proposed routes are confirmed during Task 1.

In general, the services included in this CSA assumes the following at this time:

- Up to ten (10) critical facility sites and single feed community areas are included in Phase 1 of this project.
- Up to eleven (11) proposed routes will be confirmed for the ten (10) subject project sites/areas
- The combined confirmed proposed routes' lengths will be up to 15,800 LF of proposed potable water main improvements and will be subject to change upon completion of Task 1.
- Addition of new valves at select locations that are to be determined within the subject single feed communities to prevent more than 300 customers from being affected by an existing water main break or as requested by PBCWUD.
- Upon the completion of Tasks 1.1 through Task 1.10 and the selection of proposed looping routes for each Phase 1 site/area, additions/adjustment to the services included in this CSA is anticipated. Any necessary adjustments to the included services described under Task 2.1 through Task 7 based on the final confirmed routes and addition of any services not already included in this CSA's assumed baseline scope of services for Task 2.1 through Task 7 will be via supplement to this CSA upon review and approval by PBCWUD.

The following services will be provided by the CONSULTANT:

Task 1. <u>Preliminary Analysis and Consulting Services</u>

1.1. Project Management, Research, Data Exchange and Project Orientation:

The CONSULTANT shall actively manage their personnel together with their sub-consultants towards the proper and successful execution of PBCWUD's objectives in the context of the project scope. CONSULTANT "Project Management" responsibilities range from internal to external methods and approaches affecting the general advancement of the project. Included in this task are the CONSULTANT's continual quality assurance and control efforts on the part of the Senior Project Manager as well as the Project Director/Principal.

The CONSULTANT shall research, review and study record information, Geographic Information System (GIS) database information, and other pertinent information of the existing facilities within the road R/W.

This task includes general correspondence, coordination and data exchange with PBCWUD, including PBCWUD Operations & Maintenance (O&M), as needed throughout the project.

This task also includes efforts required to compile reports, tables, receipts, and back up records in general compliance with applicable invoicing, accounting, and SBE-M/WBE requirements.

1.2. Kick-off, Progress, and Design Review Meetings

The CONSULTANT shall schedule and conduct the following meetings with PBCWUD:

- Project Kick-off meeting
- Regular progress meetings (if requested by PBCWUD, progress meetings may be monthly)
- Design route options review meeting upon the completion of Task 1.10.
- Design review workshops upon the completion of Task 2.6: Preliminary Design Stage, Task 2.7: 60% Design Stage, and Task 2.8: 90% Design Stage

The CONSULTANT shall chair these meetings, provide any requested printed materials for discussion or use during the meeting, generate agendas and provide meeting summaries for each.

1.3. Preliminary Meetings and Coordination with Property/Home Owners Associations and/or Commercial Entities

The CONSULTANT shall preliminarily identify all potentially affected Property/Home Owner Associations (P/HOA) and commercial property owners along a proposed water main looping route to contact regarding their willingness to grant PBCWUD a permanent Utility Easement. The CONSULTANT shall coordinate with and assist PBCWUD's public outreach consultant in attempting to schedule individual teleconference meetings with the specific P/HOA and commercial property owners, and shall attend up to fifteen (15) teleconference meetings with those who agree to the meetings.

Should the contacted P/HOA and/or commercial property owners be unable to meet via teleconference, up to three (3) of the fifteen (15) meetings may be in person.

All attempts at contacting the P/HOA and commercial property owners, coordination and scheduling attempts are assumed to be performed by PBCWUD's public outreach consultant.

The CONSULTANT shall prepare and provide exhibits to PBCWUD's public outreach consultant as necessary and shall review the public outreach consultants' materials upon request.

1.4. Preliminary Meetings and Coordination with Private Property Owners:

The CONSULTANT shall preliminarily identify specific private property owners along a proposed water main looping route to contact regarding their willingness to grant PBCWUD a permanent Utility Easement. The CONSULTANT shall coordinate with and assist PBCWUD's public outreach consultant in attempting to schedule individual teleconference meetings with the specific private property owners, and shall attend up to ten (10) teleconference meetings with private property owners who agree to the meetings.

Should the contacted P/HOA and/or commercial property owners be unable to meet via teleconference, up to two (2) of the ten (10) meetings may be in person.

All attempts at contacting the private property owners, coordination and scheduling attempts are assumed to be performed by PBCWUD's public outreach consultant.

The CONSULTANT shall prepare and provide exhibits to PBCWUD's public outreach consultant as necessary and shall review the public outreach consultants' materials upon request.

1.5. Preliminary Meetings and Coordination with Regulatory Agencies and Right-of-Way Owners:

The CONSULTANT shall coordinate with and if necessary, attend meetings with representatives from various appliable R/W owners and/or Regulatory agencies in order to present the general project intent, project areas and anticipated design timeline.

It is currently anticipated that the Consultant shall meet with representatives from:

- Florida Department of Transportation (FDOT)
- Indian Trails Improvement District (ITID)
- South Florida Conservancy District (SFCD)
- Village of Royal Palm Beach (VoRPB)
- City of West Palm Beach Public Works (WPB)
- Palm Beach County Parks Department
- Palm Beach County Fire Rescue Department
- Florida Department of Health in Palm Beach County
- Palm Beach County Engineering and Public Works Land Development Division
- Palm Beach County Engineering and Public Works Roadway Division
- Palm Beach County Engineering and Public Works Road and Bridge Division

The CONSULTANT shall preliminarily discuss relevant easement requirements, permitting conditions, constraints, and considerations related to installing water mains within the owner or agencies' respective R/W. In addition, details of the permit application process, and timelines for application reviews will be discussed with the respective regulatory agency or R/W owner.

The CONSULTANT shall also specifically coordinate with the above-mentioned entities related to any anticipated improvement projects that may coincide or conflict with this project. The CONSULTANT shall discuss and explore any cost sharing possibilities between PBCWUD and other entities' anticipated or desired projects by means of inter-department collaboration.

The CONSULTANT is not responsible for changes to the regulatory process and construction standards of the governing agencies during the subsequent design and permitting phases of this project. These changes may cause delays in the anticipated permit application review and approval phases of the project.

This task is not inclusive of the CONSULTANT's efforts related to coordination and notice for sub-consultant work within applicable R/W (See Task 2.2).

1.6. Field Visits and Coordination with O&M Staff:

The CONSULTANT shall perform one (1) field visit per Phase 1 site/area to review the project's existing conditions and to identify possible conflicts or constraints visible and/or identifiable through a field visit. The CONSULTANT shall photograph and document these existing conditions for their use during design and coordination. These photographs shall be provided to PBCWUD as a part of the Final Design stage deliverable.

The CONSULTANT shall also contact PBCWUD O&M to solicit any insight on any consistent challenges related to the various project sites/areas existing infrastructure. The CONSULTANT shall perform one (1) field visit per Phase 1 site/area with PBCWUD O&M staff, if necessary, related to this solicitation for input or to review any additional concerns that arise during this project's duration.

This task also includes any other necessary direct coordination and/or exhibit creation efforts with PBCWUD or O&M soliciting input from the field crews, Inflow & Infiltration (I&I) teams, Customer Service.

1.7. Coordination for Title Searches and Review of Results:

Prior to the coordination with private property owners, P/HOA and commercial property owners (See Tasks 1.3 and 1.4), the CONSULTANT shall identify certain properties to performing title search services on, per Phase 1 site/area.

Upon approval by PBCWUD, the CONSULTANT shall coordinate to have title search services performed as a direct expense and invoiced by a Palm Beach County approved Title Agency. The

CONSULTANT shall review the provided title search results for all shown encumbrances that may be beneficial to the proposed water main corridor selection.

All title search results shall be included in the Final Design stage deliverables if requested by PBCWUD staff.

Up to forty-seven (47) title searches are anticipated and included in this CSA. Budget for the anticipated forty-seven (47) title searches by a Palm Beach County approved Title Agency is included in the direct expense budget and projections (See Attachment E).

1.8. Utility Coordination:

The CONSULTANT shall identify all pertinent dry utility providers (electric, gas, phone, CATV, traffic signal systems, etc.) within the project area by means of contacting "Sunshine 811". The CONSULTANT shall then prepare exhibits and distribute requests for existing facility locations/data and proposed improvements to these dry utility providers. The CONSULTANT shall coordinate and track the responses from the utility providers, incorporating the results onto the construction plans in an attempt to minimize unidentified potential conflicts during construction of the proposed improvements. This effort is intended to be preliminary in nature and will require additional verification via various methods as is typical of utility retrofit design practices.

1.9. Confirm Permanent Easement Survey Requirements with Applicable Entities:

For the necessary utility easements along the final proposed routes, the CONSULTANT will contact all appropriate entities to confirm any specific requirements related to preparing a sketch and legal description towards recording the permanent utility easements. The CONSULTANT shall confirm an acceptable sketch and legal description format, as well as the required datum, R/W and/or property line calculations, and ties to existing or platted monumentation with each applicable entity.

The CONSULTANT shall report these requirements to PBCWUD and shall summarize any need for including additional effort in a supplement to provide particular sketch and legal description(s) in an acceptable manner not anticipated or included in this CSA (See Task 5.2).

1.10. Site Analysis, Prepare Exhibits and Present Design Route Options:

The CONSULTANT shall review and analyze the existing potable water systems surrounding the subject project sites/areas in an effort to identify various potential water main looping routes. After collecting and reviewing data related to these potential routes while performing Task 1.1 through Task 1.9 of this CSA, the CONSULTANT shall generate a set of exhibits reflecting the Phase 1 sites/areas with the optional proposed looping routes for the purposes of discussing each route challenges and design considerations.

Exhibits shall include:

- Palm Beach County GIS Parcel and R/W lines.
- The latest available PBCWUD infrastructure GIS linework and data, including 2018 PBCWUD potable water infrastructure risk assessment data.
- General references to relevant data reviewed on provided as-built documents.
- Road R/W owners where not Palm Beach County.
- Multiple proposed looping routes for each Phase 1 site/area.

These Exhibits shall be the product used to confirm each Phase 1 site/area's proposed looping route with PBCWUD.

Task 2. <u>Infrastructure Surveying and Design Services:</u>

Following the confirmation of the proposed potable water looping routes for each Phase 1 site/area upon completion of Task 1, the CONSULTANT shall engage in all necessary field efforts

with sub-consultants, perform survey services, prepare and submit Preliminary, 60%, 90% and 100%/Final design drawings to PBCWUD for the confirmed proposed routes.

This CSA currently assumes:

- The proposed infrastructure replacement design will be depicted in plan view only, unless where required for a proposed Horizontal Directional Drill (HDD) or permitting.
- No sanitary infrastructure improvements or replacements are included.
- No potable water meters or services (public or private services) are intended to be replaced.
- No construction phasing of the proposed improvements. If construction phasing is required upon completion of the Preliminary Design Stage (See Task 2.6), preparation of the construction plans with phasing in mind, including phasing plan sheets and phasing notes will be included in a supplement.
- Any required hydraulic modeling for pipe sizing adjustments, fire flow analysis, or for permitting purposes is not included in this CSA.
- The consolidated review comments generated by PBCWUD shall be submitted to CONSULTANT for the Preliminary design, 60% design and 90% design submittals within two (2) weeks of receipt of submittal from the CONSULTANT in order to maintain the schedule of deliverables requested by PBCWUD.

2.1 Coordination with Subsurface Utility Engineering (SUE) and Geotechnical Engineering Sub-Consultants for Field Investigations:

The CONSULTANT shall coordinate with the SUE Sub-Consultant, InfraMap Corp (InfraMap) and the Geotechnical Sub-Consultant, Tierra South Florida, Inc. (Tierra) on a continual basis to schedule their respective services as needed in a timely manner.

The CONSULTANT shall prepare and provide Utility targeting (scanning) and test hole (soft dig) exhibits to InfraMap to request the required work. InfraMap shall scan the limits of the proposed utility replacement corridors and designated road R/W using Ground Penetrating Radar (GPR) and other methods as indicated in their proposal.

During the design phase it may be determined that additional information is needed for specific utilities to confirm condition, material and location, acquire vertical elevations, confirm tie-in locations, navigate critical crossings, etc. The CONSULTANT shall prepare exhibits to provide to InfraMap depicting the location of the areas needing additional information for design purposes, whether via scanning or soft digs.

Further, the CONSULTANT shall coordinate with Tierra to perform Standard Penetration Test (SPT) soil borings and pavement cores at locations determined by Tierra based on their assessment of the proposed utility replacement corridor's existing conditions and geotechnical characteristics.

The CONSULTANT shall provide both InfraMap and Tierra with all available system information assembled in coordination with PBCWUD and Utility providers at the time of the requested SUE and Geotechnical activities. InfraMap and Tierra shall be individually responsible for performing all necessary activities prior to performing their respective work, such as but not limited to calling "Sunshine 811".

Submittal of necessary applications for sub-consultant's work within the various R/W will be performed by the sub-consultants (See sub-consultant proposals included in Attachment E). While not included in this task, the CONSULTANT shall also coordinate with applicable R/W owners to provide notification of scheduled scanning, soft dig and geotechnical exploration operations prior to those efforts being completed (See Task 2.2).

2.2 Permit Coordination and Right-of-Way Owner Notification for Sub-Consultant Efforts:

Should a R/W owner require a General Access permit or Maintenance-of-Traffic (MOT) Application be submitted for the work by the SUE or Geotechnical sub-consultants within their respective R/W, the CONSULTANT and sub-consultants shall coordinate with the appropriate individuals and/or departments to submit for the required R/W permit(s).

Under this task, the CONSULTANT shall also notify R/W Owners via call or writing of the approximate scheduling for geotechnical and SUE activities within their respective R/W.

The preparation or submittal of signed and sealed MOT plans is not anticipated and is not included in this CSA. If required for any application related to geotechnical or SUE work within any R/W, said signed and sealed MOT plans will be provided under a supplement to this CSA upon review and approval by PBCWUD.

2.3 Field Acquisition of SUE Efforts and Depiction of Results on Construction Plans:

The CONSULTANT's survey field crews shall locate the results of the scanning efforts on the part of InfraMap Corp within the limits of the road R/W. These located results shall be incorporated into the Construction Plans.

The CONSULTANT shall locate each soft dig and shall depict the location and vertical elevation data of the utility on the construction plans. A spreadsheet-based soft dig inventory containing the results of all soft digs associated with the project will be compiled and included with the construction plans. All SUE results will be provided to PBCWUD in the Final Design stage Deliverable.

2.4 Route Survey:

The horizontal survey data will be in state plane coordinate system of North American Datum of 1983, 2007 adjustment (SPCS NAD/83-2007). The vertical datum shall be in the North American Vertical Datum of 1988 (NAVD88) to include a conversion factor to convert the vertical datum to the National Geodetic Vertical Datum of 1929 (NGVD29), unless PBCWUD stipulates otherwise, and shall be used as the basis of design.

Currently included in this CSA as a part of this task:

- The use and depiction of Palm Beach County GIS R/W and parcel/property linework for each Phase 1 site/area.
- Field locate and occupy one (1) published Palm Beach County Vertical Benchmark within one half-mile (0.5 miles) of each Phase 1 site/area.
- Establish field control from the vertical benchmark to the confirmed routes for each Phase 1 site/area, including necessary benchloop up to one half-mile (0.5 miles) in length each.
- Establish field control along the lengths of each confirmed proposed water main looping route for each Phase 1 site/area, up to a total of 15,800 LF, at roughly one field control point per 600 LF. The field control along each confirmed proposed route is necessary to collect topographic data.
- Benchloop and Global Positioning System (GPS) horizontal and vertical data calculations and averaging as necessary to establish the above field control within an acceptable tolerance of accuracy.

The following survey services are not currently included in this CSA, but are anticipated to be necessary and will be included in this task via supplement, once the proposed water main looping routes are confirmed, thus the limits of the proposed corridors are finalized (See Task 1.10):

- A baseline created along the confirmed proposed routes for plan sheet stationing.
- Calculation and depiction of R/W, property lines and existing easements in State Plane Coordinate System based on recorded plats, R/W maps, deeds publicly available and/or title search results, where confirmed to be necessary.

- Developing horizontal control plan sheets depicting established control, construction benchmarks and baseline stationing.

All coordination and drafting/authoring required for proposed utility easement sketch and legal description by the CONSULTANT is included in Task 5.2 of this CSA.

2.5 Topographic Survey:

Topographic survey data acquisition shall be performed based on the confirmed proposed potable water main looping routes (See Task 1.10).

This task assumes the following:

- The total length of the confirmed potable water looping routes that are to be surveyed is no more than 15,800 LF.
- No heavy or dense vegetation will need to be cleared or cut to acquire topographic survey data along the confirmed corridors.
- No canal cross sections are required or included.
- All Phase 1 sites/areas are readily and freely accessible to the CONSULTANT and all sub-consultants. No submittals or applications for specific security clearances to limited access neighborhoods or gated communities is included.
- Topographic survey data has not been requested by PBCWUD where potable water system valves are to be added outside the confirmed proposed looping routes. Should topographic survey data be necessary at these additional valve locations, these services can be provided via supplement upon approval by PBCWUD.
- Any SUE data necessary where additional valving is desired will be acquired via GPS surveying equipment.

Field located and depicted topographic data shall include:

- All existing water valves, fire hydrants, water meters, back flow preventers, double detector check valves, sanitary manholes, sanitary clean outs, storm manholes, catch basins within the relevant project areas and adjacent to the affected project areas, if deemed necessary by the CONSULTANT.
- Location and identification of pavement edges, driveways and turnouts, sidewalks, trees, signs, power poles, guy wire anchors, light poles, aboveground utility boxes, etc., within the proposed corridors.
- If accessible, identifiable, and required for design purposes, pipe sizes, material and inverts of stormwater and sanitary sewer facilities located within or adjacent to the affected project area shall be acquired by means of accessing existing stormwater and sanitary structures.
- Existing vertical grades within the proposed utility replacement corridors at a maximum of 100 feet intervals perpendicular to the centerline of the proposed corridors, extending to approximately 10 feet beyond the proposed corridors as deemed necessary by the CONSULTANT.
- Available information on existing potable water and sanitary sewer systems (where applicable) will be provided by PBCWUD in the form of project Record Drawings for field verification, as applicable and if possible, during topographic data acquisition efforts.
- Dry utility facilities locations (FPL, AT&T, Comcast, etc.) will be acquired where paint markings, as established by others, are encountered during topographic data acquisition efforts and will also be included on the construction plans.

2.6 Preliminary Design Stage:

Upon the completion of Task 1 and confirming the proposed water main looping routes, the CONSULTANT shall prepare Preliminary design stage drawings on 24"x36" plan sheets at a 1:20 scale for each confirmed potable water main looping route.

Preliminary design stage drawings shall include:

- Proposed water main sizes and materials.
- Existing water main sizes and materials based upon information available at that time.
- Proposed water main installation methods other than open cut, with approximate lengths.
- Proposed utility easements along each confirmed route, including utility easement dimensions (lengths and widths, as appliable) that have been requested or coordinated with the property owners at that time.
- Preliminary locations of additional valving within the single feed communities' existing potable water systems with a focus on preventing more than 300 customers from being affected by a water main break or as requested by PBCWUD.
- Preliminary locations of any additional fire hydrants that PBCWUD wishes to add along the proposed water mains, if applicable, to ensure fire protection coverage complies with current Palm Beach County Fire Rescue requirements.

2.7 60% Design Stage:

Construction plans at a completion level of approximately 60% shall be submitted to PBCWUD for review and shall include:

- All data presented on the Preliminary design drawings, updated as necessary per PBCWUD's comments in plan view only.
- All existing utilities as acquired during the topographic survey acquisition phase (See Task 2.5)
- All results of the utility coordination and any as-built record information as provided by PBCWUD at that time.
- Results of the SUE scanning efforts will be depicted where performed at that time.
- Proposed connections to the existing water mains that are to remain and any existing utility replacement/abandonment limits.
- Conflicts, crossings and deflections will be identified on the plans to the best of the CONSULTANT's abilities based on available data at that time.
- A preliminary pothole inventory sheet will be included reflecting known soft dig data at the time of the submittal.
- Proposed grading and restoration details, PBCWUD Standard details and CONSULTANT's draft general details and draft general notes.

2.8 90% Design Stage:

Construction plans at a completion level of approximately 90% shall be submitted to PBCWUD and shall include:

- The 60% design as modified through PBCWUD's review comments and other data as deemed relevant by CONSULTANT.
- Results of SUE soft digs will be depicted on the plans.
- Known or discovered conflicts shall be addressed, deflections will be detailed and crossings calculated.

- Profile Views will be provided with crossings calculated and detailed where required for HDDs and permitting of certain corridors.

Other than where required for Horizontal Directional Drills (HDDs), it is currently assumed that Plan and Profile Views will be only prepared where improvements are within a Palm Beach County thoroughfare road R/W. Alignments of Profile Views will generally be along the centerlines of the proposed water mains, unless specifically required otherwise by the R/W owner

The 90% submittal includes all necessary plans sheets, details and notes for permitting purposes.

2.9 100%/Final Design Stage:

Final construction plans will be prepared and shall include any modification from PBCWUD and/or modification requested by other regulatory agencies and approved by PBCWUD.

2.10 Preparation of Engineer's Opinion of Probable Construction Cost:

Upon completion of the 60% and 90% design submittal, the CONSULTANT shall prepare an engineer's Opinion of Probable Construction Costs (OPCC) for each Phase 1 site/area utilizing the ultimate combined Bid Tab's applicable line items. This set of OPCC estimates will be submitted to PBCWUD within One (1) week from the submittal of the 60% and 90% design. The set of OPCC estimates will be updated to include any modifications during the final phases of the design and will be resubmitted with the 100% design.

If at any point, should PBCWUD choose not to advertise the project as a public Bid and award it to a PBCWUD Pipeline Continuing Contractor, PBCWUD is to inform the CONSULTANT of the designated PBCWUD Pipeline Continuing Construction Contract that will apply to construction of the subject improvements and provide all current related data. All OPCCs provided by the CONSULTANT up to that point will remain and all forthcoming OPCCs will be per the applicable PBCWUD Pipeline Continuing Construction Contract. Should PBCWUD wish to have any previously provided OPCCs restructured to apply to a PBCWUD Pipeline Continuing Construction Contract, the CONSULTANT will provide these restructured and recalculated OPCCs and invoice the efforts under Task 4 upon approval by PBCWUD.

Task 3. <u>Permitting Services with Regulatory Agencies for Proposed Infrastructure Improvements</u>

At the completion of the 90% Design Stage, the CONSULTANT shall prepare applications for plan review/permit approvals from the following agencies:

- Florida Department of Transportation Utility Permit
- City of Pahokee R/W Permit
- Village of Royal Palm Beach R/W Easement Utilization Permit
- Indian Trails Improvement District Special Permit
- South Florida Conservancy District
- Palm Beach County Engineering and Public Works Land Development Division Utility Permit
- Palm Beach County Fire Rescue
- Florida Department of Health in Palm Beach County General Permit for Potable Water Use

The CONSULTANT's services during the permitting phase shall include the following:

- Attend pre-application meetings with the staff of each regulatory agency as required beyond the preliminary meetings.
- Attend meetings with each of the regulatory agencies during review of the final permit applications as required.
- Track and monitor the permitting process, as well as assist PBCWUD in consultations with the appropriate authorities as necessary

- Produce and distribute permitting status sheets throughout the process at milestones or more frequently if requested by PBCWUD. The permitting status sheets will identify the schedule of events as to when applications, comments and responses are submitted and will include the permit number, regulatory contact and expiration date.
- Respond to request(s) for additional information from each regulatory agency.
- Provide PBCWUD with one (1) set of approved permits and plans from each permitting agency in hard and electronic copies, as may be applicable.
- Request permit extensions from regulatory agencies as needed throughout the duration of the project leading up to commencement of construction.
- Associated permit application fees shall be determined by the Regulatory agencies in coordination with the CONSULTANT and will be paid by PBCWUD.

This CSA assumes that separate applications will be submitted for each required Phase 1 site/area's permits, other than Palm Beach County Fire Rescue and Florida Department of Health in Palm Beach County General Permit for Potable Water Use.

Task 4. <u>Bidding Support Services:</u>

Upon completion of the Permitting phase, review and approval of the Bid Set of construction plans as provided by the CONSULTANT, PBCWUD shall draft and provide the front end documents for the Bid Package, including but not limited to, the contract, general conditions, invitation to bid, instructions to bidders, bond requirements, etc. PBCWUD shall advertise, print, sell, and maintain the bidders list related to the Public Bid of the subject potable water system replacement project.

This CSA assumes that all ten (10) Phase 1 sites/areas' proposed potable water main looping routes are to be included in one (1) publicly bid construction package.

Unless otherwise noted, the following Tasks will be performed by PBCWUD and the CONSULTANT, together in a collaborative manner, during the bidding or negotiating phases for the project's construction package.

4.1 Review Front End Documents, Prepare Project Description, Summary of Work, Bid Tabulation, Summary of Pay Items:

Upon notice of securing permit approvals, providing PBCWUD with the Bid Set of construction plans, and notice from PBCWUD that the provided Bid set was satisfactory, PBCWUD and the CONSULTANT shall collectively determine any applicable construction sequencing and restrictions/considerations during construction, including confirmation of the proposed construction phasing shown on the Bid set of construction plans. The CONSULTANT shall review the project's draft Front End Documents and advertisement for Bid as provided by PBCWUD. The CONSULTANT shall not review the Front End Documents for legal sufficiency. The CONSULTANT will provide any feedback and recommended revisions related to the Front End Documents within one (1) week of receipt, to be considered and ultimately decided upon by PBCWUD with the input of any appropriate Palm Beach County Department as required.

The CONSULTANT shall generate a Bid Tabulation (Bid Tab) to be included in the Bid Package. The Bid Tab will be based upon an updated Final OPCC as revised to reflect any modifications resulting from the permitting process and final stages of design. Further, the CONSULTANT shall draft the Summary of Pay Items/Measurement and Payment section to match the provided Bid Tab. Finally, CONSULTANT shall draft the Project Description and Summary of Work specifically for this project's scope.

All drafted sections shall be submitted by the CONSULTANT to PBCWUD in Microsoft Word format for review and approval prior to advertising the Bid. It is assumed that 'Tracked Changes' will be utilized between the CONSULTANT and PBCWUD to facilitate efficient review and revisions.

4.2 Preparation of Technical Specifications:

The CONSULTANT shall review, discuss and modify, as needed, the standard PBCWUD Technical Specifications to be appropriately applied to this project's scope. Supplemental Technical Specifications will be developed if necessary. It is assumed that this will be a collaborative authorship effort, as the Technical Specifications must make many references to PBCWUD standard operating criteria and metrics that are not known by the CONSULTANT, nor the CONSULTANT's charge to dictate.

All drafted Technical Specifications will be submitted by the CONSULTANT to PBCWUD in Microsoft Word format for review and approval prior to advertising the Bid. It is assumed that 'Tracked Changes' will be utilized between the CONSULTANT and PBCWUD to facilitate efficient review and revisions.

4.3 Pre-Bid Meeting Attendance:

The CONSULTANT shall coordinate directly with PBCWUD staff regarding the scheduling of the project's one (1) Pre-Bid meeting and shall make arrangements for the Designing Engineer or Construction Project Representative involved during design to be in attendance. PBCWUD is assumed to conduct the Pre-Bid meeting and is assumed to issue the Pre-Bid meeting minutes, if necessary, in the form of a Bid Addendum. The CONSULTANT shall take notes during the Pre-Bid meeting and will provide any relevant information, answers to any questions posed by the prospective bidders at the meeting and/or assist PBCWUD in drafting the Pre-Bid meeting addendum if requested by PBCWUD.

4.4 Respond to Contractor Requests for Information and Addendum Issuance Assistance to PBCWUD:

The CONSULTANT shall coordinate with PBCWUD as questions from prospective Bidders are received directly by the CONSULTANT and/or PBCWUD. All received Requests for Information and general questions from prospective Bidders will be compiled by PBCWUD and the CONSULTANT towards drafting concise addendum(s) as necessary. The CONSULTANT shall provide additional information or supplemental information as necessary at PBCWUD's request if deemed necessary to effectively respond to the bidders' requests and questions. It is assumed that all drafted addendum(s) will be provided to PBCWUD by the CONSULTANT, and that PBCWUD will be issuing any addendum(s).

4.5 Review Compiled Bid Results, Verify Bid Package for the Lowest Bidders, Provide Summary of Findings to PBCWUD:

PBCWUD has preferred to compile received Bid results in the past, thus it is assumed that PBCWUD will compile the received Bid results, check the compiled bids for mathematical or entry errors, and shall coordinate with the Palm Beach County Office of Equal Business Opportunity (OEBO) to provide a calculation/decision on any required adjustments to the rankings of the three (3) lowest Base Bidders as required per applicable Local, Small and Minority Business Enterprise preferences/requirements advertised in the Bid. PBCWUD shall then provide all submitted data to the CONSULTANT for the three (3) lowest Base Bidders in addition to the Bidder ranking adjustment calculation/decision by Palm Beach County OEBO.

It is assumed the CONSULTANT shall review the compiled bid results and verify responsiveness of the three (3) lowest bidder(s) bid packages; however, should PBCWUD request it, the CONSULTANT shall be prepared to review up to the lowest five (5) base bidders' packages.

The CONSULTANT shall first verify the provided facts in the provided bid packages, then shall contact all listed references for at least five (5) consecutive business days in an effort to verify past project experience and effectiveness as listed by the three lowest base bidders. The CONSULTANT shall take notes on the conversations with responsive references in order to summarize these communications and resulting assessment of the applicability of the lowest three bidders' provided past experience to the subject project. The CONSULTANT is not responsible for the lack of responsiveness by the Bidders listed references. It is assumed that minimum

experience/qualifications will not be included in this project's advertised public Bid.

The CONSULTANT shall review the three (3) lowest base bidder's unit prices, bringing any significantly unusual Unit prices to PBCWUD's attention. The CONSULTANT shall not be responsible for determining whether or not a bid is "unbalanced" or "front-loaded"; however, if requested by PBCWUD can provide an opinion based on numerical analysis related to the individual Bid Items and Measurement & Payment sections for PBCWUD's review and consideration.

Following the evaluation of the three lowest base bidders' submitted bid packages, the CONSULTANT shall summarize their verifications, findings, and conclusions and prepare a recommendation letter for consideration by PBCWUD in awarding the project to a prospective bidder.

Services in assistance to PBCWUD related to a Bid protest are not included in this CSA, but can be provided via a supplement to this CSA at PBCWUD's request and approval.

Task 5. Public Engagement and Easement Assistance Services During and After Design

5.1 Assistance Towards Public Engagement/Notification and Coordination for Temporary and Permanent Easements (with PBCWUD Public Outreach Consultant):

Following the completion of Task 1, the CONSULTANT's assistance to PBCWUD's public outreach consultant is included in this task on an as needed basis. The CONSULTANT's services included in this task are related to notifying/educating the project areas' various property owners potentially affected by any proposed improvements, as well as final easement acquisition coordination or assistance.

The CONSULTANT shall.

Under this task, the CONSULTANT shall:

- Assist the PBCWUD public outreach consultant's efforts to communicate with and educate all adjacent public and private parties that are affected by this project's improvements.
- Prepare exhibits to be provided to PBCWUD's public outreach consultant for distribution to the property owners as a means of facilitating communication regarding the project's general timeline leading up to and at the onset of construction, as well as the general impacts that property owners can expect during the construction of the necessary improvements.
- Prepare exhibits to be provided to PBCWUD's public outreach consultant to facilitate communication with various property owners regarding agreements to provide PBCWUD with requested temporary construction authorizations
- Prepare exhibits to be provided to PBCWUD's public outreach consultant to finalize any previous communication with various property owners regarding agreements to provide PBCWUD with permanent utility easements that are necessary per PBCWUD standards.
- Review and comment on all related documents prepared by PBCWUD's public outreach consultant to submit to the various property owners.
- Make every reasonable attempt to assist the PBCWUD public outreach consultant's efforts to provide informed answers to affected property owner's submitted or communicated questions.

All utilized public outreach exhibits produced by the CONSULTANT shall be included in the Final Design stage deliverable as requested by PBCWUD staff.

CONSULTANT's Attendance of teleconference or in-person meetings are not included in this task.

5.2 Sketch and Legal Preparation for Permanent Easements:

Upon approval from PBCWUD, the CONSULTANT shall prepare a metes and bounds, or bounded-by sketch and legal description sufficient for public recordation purposes of any

necessary permanent utility easements. Currently, it is assumed that up to ten (10) utility easements will be included, each requiring a separate metes and bounds, or bounded-by sketch and legal description.

All Sketch and Legal Descriptions produced by the CONSULTANT shall be included in the Final Design stage Deliverables as requested by PBCWUD staff.

Task 6. Subsurface Utility Exploration (InfraMap Corp.); (*Proposal included in Attachment "E"*)

InfraMap shall scan the limits of specific strategic areas within the project limits using ground penetrating radar and other methods, as described in their proposal, to identify the approximate horizontal location of wet and dry utilities. Utilities located will be painted or flagged in the field for acquisition by the CONSULTANT's field survey crew. The results of the targeting/scanning will be provided in the form of color-coded sketches identifying the various utilities detected in approximate location trend and configuration. Up to twenty (20) days of scanning are included in this CSA. InfraMap's proposal also includes mileage direct expenses, and as needed administrative fees.

InfraMap shall perform soft digs to provide subsurface information at each of the designated locations and will provide exhibits of the results for each soft dig. Up to forty-five (45) soft digs to a depth of six (6) feet are included with this CSA.

InfraMap's proposal also includes mileage, direct expenses, fees for traffic control flagging, and the use of an arrow board as supplemental fees to be billed as direct expenses should they be required to perform the above referenced soft digs. Implementation and maintenance of necessary maintenance of traffic (MOT) measures are covered under InfraMap's proposal. If the requested utilities are deeper than six (6') feet, InfraMap's proposal includes a contingent as needed fee per feet beyond the included six (6') feet deep soft digs. Should an application of some fashion be required for SUE work within a particular R/W, InfraMap will prepare and submit the applications for approval by the R/W owner.

Task 7. Geotechnical Exploration (Tierra South Florida, Inc.); (*Proposal included in Attachment "E"*)

The Geotechnical Sub-consultant (Tierra) estimates performing a total of fifty (50) Standard Penetration Test (SPT) borings and seventeen (17) asphalt cores throughout the assumed ten (10) confirmed proposed routes (assumed 15,800 LF).

Included in this CSA is one (1) SPT bore to a depth of six (6) feet below the surface, forty-three (43) SPT borings to a depth of ten (10) feet below the surface, two (2) SPT borings to a depth of twenty (20) feet below the surface, and four (4) SPT borings to a depth of thirty (30) feet below the surface, at locations to be coordinated once the proposed looping routes are confirmed and the Preliminary Design Stage is complete (See Task 2.6).

Any encountered unsuitable soils will be identified for consideration during the design process. The results of the asphalt cores and SPT borings will be summarized in a report of findings and recommendations prepared by Tierra for consideration during the design process and inclusion in the public Bid package. The report and AutoCAD software-generated plotted log of each boring profile will be submitted to PBCWUD as a Final Deliverable. The approximate locations of each bore and the respective bore profiles shall be incorporated in a dedicated construction plan sheet of the construction drawings for reference by the contractor.

Tierra's proposal also includes optional supplemental fees to implement any MOT measures necessary for the performance of their work. Additionally, Tierra's proposal includes optional supplemental fees to prepare a MOT plan should it be required in order to perform their work within any applicable R/W.

Deliverables:

A summary of the project documents to be provided as deliverables includes:

1. Photos and/or videos of the site visits provided digitally;
2. Utility location exhibits provided by the utility providers in electronic format and hard copies;
3. Meeting summaries from the kickoff meeting and design review workshops provided digitally;
4. One (1) 24" x 36", two (2) 11"x17" sets of the design route option exhibits;
5. One (1) 24" x 36" set of the preliminary design drawings;
6. Two (2) 24" x 36", one (1) 11"x17" sets of the 60% design plans;
7. One (1) copy of the 60% OPCC (within one week of 60% design submittal);
8. Two (2) 24" x 36", one (1) 11"x17" sets of the 90% design plans;
9. One (1) copy of the 90% OPCC (within one week of 90% design submittal);
10. Four (4) 24" x 36"and Two (2) 11"x17", signed and sealed, sets of the 100%/Final design plans and specifications with two (2) hard copies of the Final OPCC
11. One (1) Compact Disc (CD) containing copies of all permit applications and correspondence with permitting entities;
12. "Permit Book", including a hard copy of all acquired permits and a summary of all permits with expiration dates;
13. Copies of the Subsurface Utility Engineering scanning and soft dig results provided digitally;
14. One (1) signed and sealed copy of the Geotechnical Engineer's report and one (1) digital copy of same;
15. Four (4) signed and sealed hard copies of all legal descriptions and sketches;
16. Digital copies of any title searches performed;
17. Microsoft Word and portable document format (PDF) copies of technical specifications and addenda prepared; and
18. One (1) CD containing all digital final documents/deliverables, AutoCAD files, PDFs, etc.

ATTACHMENT B

SUMMARY AND STATUS OF CONSULTANT SERVICES AUTHORIZATIONS

Auth. No.	PBCWUD Project No.	Title	Status	Project Total Amount	SBE Total Amount	SBE Participation %	Approved By	Approved Date
1	21-033	Belle Glade Water Main Improvements; SE Zone 4 Water System Replacement	Approved	$ 571,537.68	$496,050.00	86.79%	BCC	04/20/2021
2	21-047	Belle Glade Water Main Improvements; SE Zone 6 Water System Replacement	Approved	$ 614,111.43	$537,402.00	87.50%	BCC	05/04/2021
3	21-041	Critical Facilities and Single Feed Community Improvements, Phase 1	Pending	$ 722,774.22	$621,536.00	85.99%	BCC	Pending

Revised 04/26/2021

ATTACHMENT C

OEBO SCHEDULE 1

Office of Equal Business Opportunity Compliance Programs

Revised 04/26/2021

OEBO SCHEDULE 1

LIST OF PROPOSED CONTRACTOR/CONSULTANT AND SUBCONTRACTOR/SUBCONSULTANT PARTICIPATION

SOLICITATION/PROJECT/BID NAME: Critical Facilities and Single Feed Community Improvements, Phase 1

SOLICITATION/PROJECT/BID No.: WUD 21-041

NAME OF PRIME RESPONDENT/BIDDER: Keshavarz & Associates, Inc.

ADDRESS: 711 North Dixie Highway, Suite 201, West Palm Beach, FL 33401

CONTACT PERSON: Amir J. Keshavarz, P.E.

PHONE NO.: 561-689-8600 **E-MAIL:** Amir@Keshavarz.com

SOLICITATION OPENING/SUBMITTAL DATE: 4/13/2021

DEPARTMENT: Palm Beach County Water Utilities Department

PLEASE LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED BY THE PRIME CONTRACTOR/CONSULTANT ON THIS PROJECT. PLEASE ALSO LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED BY ALL SUBCONTRACTORS/SUBCONSULTANTS ON THE PROJECT.

Name, Address and Phone Number	(Check all Applicable Categories) Non-SBE	M/WBE Minority/Women Business	SBE Small Business	DOLLAR AMOUNT OR PERCENTAGE OF WORK Black	Hispanic	Women	Caucasian	Other (Please Specify)
1. Keshavarz & Associates, Inc. 711 N. Dixie Hwy, Suite 201, West Palm Beach, FL 33401 (561) 689-8600	☐	☑	☑					$ 621,536.00 (Asian)
2. InfraMap Corp. 1860 Old Okeechobee Rd, Unit 514, West Palm Beach, FL 33409 (561) 586-0790	☑	☐	☐				$62,373.22	
3. Tierra South Florida, Inc. 2765 Vista Parkway, Suite 10, West Palm Beach, FL 33411 (561) 687-8536	☑	☐	☐					$38,865.00 (Non-S/MBE)
4.	☐	☐	☐					
5.	☐	☐	☐					
Total							$62,373.22	$621,536.00 (Asian) $38,865.00 (Non-S/MBE)

(Please use additional sheets if necessary)

Total Bid Price $ $722,774.22

Total SBE - M/WBE Participation $621,536.00

I hereby certify that the above information is accurate to the best of my knowledge: _____ Signature

Amir J. Keshavarz, P.E., Senior Project Manager — Title

Note:

1. **The amount listed on this form for a Subcontractor/subconsultant must be supported by price or percentage listed on the properly executed Schedule 2 or attached signed proposal.**
2. **Firms may be certified by Palm Beach County as an SBE and/or an M/WBE. If firms are certified as both an SBE and/or M/WBE, please indicate the dollar amount under the appropriate category.**
3. **Modification of this form is not permitted and will be rejected upon submittal.**

ATTACHMENT C

OEBO SCHEDULE 2

Office of Equal Business Opportunity Compliance Programs

Revised 04/26/2021

OEBO LETTER OF INTENT – SCHEDULE 2

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: WUD 21-041

SOLICITATION/PROJECT NAME: Critical Facilities and Single Feed Community Improvements Phase 1

Prime Contractor: Keshavarz & Associates, Inc. Subcontractor: Keshavarz & Associates, Inc.

(Check box(s) that apply)

☑SBE ☐WBE ☑MBE ☐M/WBE ☐Non-S/M/WBE Date of Palm Beach County Certification (if applicable): 10/4/2019 - 10/3/2022.

The undersigned affirms they are the following (select one from each column **if applicable**):

Column 1	Column 2	Column 3
☑Male ☐Female	☐African-American/Black ☑Asian American ☐Caucasian American ☐Hispanic American ☐Native American	☐Supplier

S/M/WBE PARTICIPATION – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any **S/M/WBE** participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/ Units	Contingencies/ Allowances	Total Price/Percentage
1	Engineering and Surveying Services				$596,736.00
2	Reimbursable Expenses				$24,800.00

The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: $621,536.00

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

InfraMap Corp. / Tierra South Florida, Inc.
Name of 2nd/3rd tier Subcontractor/subconsultant

Price or Percentage: $ 62,373.22 / $ 38,865.00

Keshavarz & Associates, Inc.
Print Name of Prime

By: _____
Authorized Signature

Amir J. Keshavarz, P.E.
Print Name

Senior Project Manager
Title

Date: 4/15/2021

Keshavarz & Associates, Inc.
Print Name of Subcontractor/subconsultant

By: _____
Authorized Signature

Amir J. Keshavarz, P.E.
Print Name

Senior Project Manager
Title

Date: 4/15/2021

Revised 09/17/2019

OEBO LETTER OF INTENT – SCHEDULE 2

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. **All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.**

SOLICITATION/PROJECT NUMBER: WUD 21-041

SOLICITATION/PROJECT NAME: Critical Facilities and Single Feed Community Improvements Phase 1

Prime Contractor: Keshavarz & Associates, Inc. Subcontractor: InfraMap Corp.

(Check box(s) that apply)

☐SBE ☐WBE ☐MBE ☐M/WBE ☑Non-S/M/WBE Date of Palm Beach County Certification (if applicable): N/A

The undersigned affirms they are the following (select one from each column **if applicable**):

Column 1	**Column 2**	**Column 3**
☑Male ☐Female	☐African-American/Black ☐Asian American ☑Caucasian American ☐Hispanic American ☐Native American	☐Supplier

S/M/WBE PARTICIPATION – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any **S/M/WBE** participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/ Units	Contingencies/ Allowances	Total Price/Percentage
1	Subsurface Utility Engineering - Targeting Services	1			$ 34,669.82
2	Subsurface Utility Engineering - Test Hole Services	1			$ 27,703.40

The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: $ 62,373.22

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

N/A
Name of 2nd/3rd tier Subcontractor/subconsultant

Price or Percentage: _____

Keshavarz & Associates, Inc.
Print Name of Prime

By: _____
Authorized Signature

Amir Keshavarz, P.E.
Print Name

Senior Project Manager
Title

Date: 4/13/2021

InfraMap Corp.
Print Name of Subcontractor/subconsultant

By: _____
Authorized Signature

Andres Garcia
Print Name

Senior Utility Location Manager
Title

Date: 4/13/2021

Revised 09/17/2019

OEBO LETTER OF INTENT – SCHEDULE 2

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: WUD 21-041

SOLICITATION/PROJECT NAME: Critical Facilities and Single Feed Community Improvements, Phase 1

Prime Contractor: Keshavarz & Associates, Inc. Subcontractor: Tierra South Florida, Inc.

(Check box(s) that apply)

☐SBE ☐WBE ☐MBE ☐M/WBE ☑Non-S/M/WBE Date of Palm Beach County Certification (if applicable): N/A.

The undersigned affirms they are the following (select one from each column if applicable):

Column 1	Column 2				Column 3
☑Male ☐Female	☐African-American/Black	☑Asian American	☐Caucasian American	☐Native American	☐Supplier
	☐Hispanic American				

S/M/WBE PARTICIPATION – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/ Units	Contingencies/ Allowances	Total Price/Percentage
1	6.01 - Geotechnical Engineering	1			$ 38,865.00

The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: $ 38,865.00

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

N/A
Name of 2nd/3rd tier Subcontractor/subconsultant

Price or Percentage: _____

Keshavarz & Associates, Inc.
Print Name of Prime

By: _____
Authorized Signature

Amir Keshavarz, P.E.
Print Name

Senior Project Manager
Title

Date: 4/15/2021

Tierra South Florida, Inc.
Print Name of Subcontractor/subconsultant

By: _____
Authorized Signature

Rajan Krishnasamy, P.E.
Print Name

President
Title

Date: 4/15/2021

Revised 09/17/2019

ATTACHMENT D

PROJECT SCHEDULE

The completion dates for this work will be as follows
(starting from CONSULTANT'S receipt of Notice-to-Proceed).

Engineering Services	*Completion Date from Notice to Proceed*
Task 1. Preliminary Analysis and Consulting Services	*150 Calendar Days*
Task 2. Infrastructure Surveying and Design Services	*360 Calendar Days*
Task 3. Permitting Services with Regulatory Agencies for Proposed Infrastructure Improvements	*405 Calendar Days*
Task 4. Bidding Support Services	*495 Calendar Days*
Task 5. Public Engagement and Easement Assistance Services During and After Design	*540 Calendar Days*
Task 6. Subsurface Utility Exploration (InfraMap Corp.)	*360 Calendar Days*
Task 7. Geotechnical Exploration (Tierra South Florida, Inc.)	*360 Calendar Days*
TOTAL ANTICIPATED DURATION	*540 CALENDAR DAYS*

Revised 04/26/2021

ATTACHMENT – E
BUDGET SUMMARY

Palm Beach County Water Utilities Department

Contract for Consulting/Professional Services: Utility Distribution and Collection System Engineering Services

Resolution #R2020-1898 **Contract Dated December 15, 2020**

Consultant Service Authorization: 3

Consultant: Keshavarz & Associates, Inc.

Project name: Critical Facilities and Single Feed Community Improvements, Phase 1

WUD Project No.: 21-041

		Labor Classification and Hourly Rate											
Task		Project Director / Principal $/hr	Senior Project Manager	Sr Project Eng / Sr Surveyor $/hr	Project Eng. / Project Surveyor $/hr	GIS / Eng CADD Specialist $/hr	Constr Project Representative $/hr	Survey Crew $/hr	Utility / Permit Coord $/hr	Project / Contract Admin $/hr	Clerical $/hr	CONSULTANT Total	Sub Consultant Total
Number	Task Description	$ 216.00	$ 210.00	$ 168.00	$ 126.00	$ 114.00	$ 135.00	$ 150.00	$ 90.00	$ 90.00	$ 60.00	Services	Services
Task 1.1	Project Management, Research, Data Exchange and Project Orientation	40	90	60	16	20	0	0	0	100	20	$ 52,116.00	$ -
Task 1.2	Kick-off, Progress, and Design Review Meetings	10	40	10	35	15	0	0	10	10	10	$ 20,760.00	$ -
Task 1.3	Preliminary Meetings and Coordination with Property/Home Owners Associations and/or Commercial Entities	5	22	0	22	0	0	0	5	0	11	$ 9,582.00	$ -
Task 1.4	Preliminary Meetings and Coordination with Private Property Owners	3	18	3	4	12	0	0	0	0	2	$ 6,924.00	$ -
Task 1.5	Preliminary Meetings and Coordination with Regulatory Agencies and Right-of-Way Owners	4	30	0	15	10	0	0	0	0	10	$ 10,794.00	$ -
Task 1.6	Field Visit(s) and Coordination with O&M Staff	2	18	6	18	10	0	0	0	0	0	$ 8,628.00	$ -
Task 1.7	Coordination for Title Searches and Review of Results	9	19	40	0	0	0	0	0	24	16	$ 15,774.00	$ -
Task 1.8	Utility Coordination	5	10	5	15	30	0	0	35	20	5	$ 14,580.00	$ -
Task 1.9	Confirm Permanent Easement Survey Requirements with Applicable Entities	1	5	10	0	0	0	0	5	0	2	$ 3,516.00	$ -
Task 1.10	Site Analysis, Prepare Exhibits and Present Design Route Options	15	30	20	20	30	0	0	5	10	20	$ 21,390.00	$ -
Task 2.1	Coordination with Subsurface Utility Exploration and Geotechnical Exploration Sub-Consultants for Field Investigations	5	24	10	20	32	0	0	8	6	2	$ 15,348.00	$ -
Task 2.2	Permit Coordination and Right-of-Way Owner Notification for Sub-consultant Efforts	2	8	3	4	0	0	0	6	0	4	$ 3,900.00	$ -
Task 2.3	Field Acquisition of Subsurface Utility Exploration Efforts and Depiction of Results on Construction Plans	2	5	12	0	38	0	122	0	8	2	$ 26,970.00	$ -
Task 2.4	Route Survey	5	8	30	10	20	0	100	0	0	2	$ 26,460.00	$ -
Task 2.5	Topographic Survey	5	10	30	4	130	0	288	0	0	2	$ 66,864.00	$ -
Task 2.6	Preliminary Design Stage	10	25	10	15	40	0	0	4	6	2	$ 16,560.00	$ -
Task 2.7	60% Design Stage	20	76	68	80	200	0	0	6	6	20	$ 66,864.00	$ -
Task 2.8	90% Design Stage	16	62	48	60	160	0	0	6	4	16	$ 52,200.00	$ -
Task 2.9	100%/Final Design Stage	6	16	40	30	60	0	0	6	6	14	$ 23,916.00	$ -
Task 2.10	Preparation of Engineer's Opinion of Probable Construction Cost(s)	5	15	15	40	10	0	0	0	0	3	$ 13,110.00	$ -
Task 3	Permitting Services with Regulatory Agencies for Proposed Infrastructure Replacements	20	84	40	78	102	0	0	96	18	27	$ 62,016.00	$ -
Task 4.1	Review Front End Documents, Prepare Project Description, Summary of Work, Bid Tabulation, Summary of Pay Items	6	11	6	4	0	8	0	0	0	8	$ 6,678.00	$ -
Task 4.2	Preparation of Technical Specifications	7	16	7	4	0	10	0	2	0	10	$ 8,682.00	$ -
Task 4.3	Pre-Bid Meeting Attendance	0	3	1	1	0	0	0	0	0	1	$ 984.00	$ -
Task 4.4	Response to Contractor Requests for Information and Addendum Issuance Assistance to PBCWUD	6	9	10	0	0	8	0	2	0	10	$ 6,726.00	$ -
Task 4.5	Review Compiled Bid Results, Verify Bid Package for the Lowest Bidders, Provide Summary of Findings to PBCWUD	12	19	12	0	0	12	0	0	0	14	$ 11,058.00	$ -
Task 5.1	Assistance Towards Public Engagement/Notification and Coordination for Temporary and Permanent Easements (With PBCWUD Public Outreach Consultant)	5	40	20	0	20	0	0	0	5	5	$ 15,870.00	$ -
Task 5.2	Sketch and Legal Preparation for Permanent Easements; (Up To Ten (10) Permanent Easements)	1	5	40	0	0	0	0	0	2	5	$ 8,466.00	$ -
Task 6	Subsurface Utility Engineering (InfraMap Corp. Includes as needed MOT, Permitting, etc.)	0	0	0	0	0	0	0	0	0	0	$ -	$ 62,373.22
Task 7	Geotechnical Exploration (Tierra South Florida, Inc. Includes as needed MOT, Permitting, etc.)	0	0	0	0	0	0	0	0	0	0	$ -	$ 38,865.00
	Subtotal Services											*$ 596,736.00*	*$ 101,238.22*
	Labor Subtotal Hours	227	718	556	495	939	38	510	196	225	243		
	Labor Raw Costs	$ 72.00	$ 70.00	$ 56.00	$ 42.00	$ 38.00	$ 45.00	$ 50.00	$ 30.00	$ 30.00	$ 20.00		
	Labor Multiplier	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00		
	Labor Sub Total	$ 216.00	$ 210.00	$ 168.00	$ 126.00	$ 114.00	$ 135.00	$ 150.00	$ 90.00	$ 90.00	$ 60.00		
	Labor Total	**$ 596,736.00**											
	Sub-Consultant Labor Total	$ 101,238.22											
	Sub-Consultant Multiplier	1.00											
	Sub-Consultant Total	**$ 101,238.22**											
	Reimbursable, Mileage, Copies, Prints, Deliveries, Title Searches (As Needed Direct Expenses Per Rates & Projections attached)	**$ 24,800.00**											
	Project Total	**$ 722,774.22**											

ATTACHMENT – E

Palm Beach County Water Utilities Department
Contract for Consulting/Professional Services: Utility Distribution and Collection System Engineering Services
Resolution #R2020-1898 Contract Dated December 15, 2020
Consultant Service Authorization: 3
Consultant: Keshavarz & Associates, Inc.
Project name: Critical Facilities and Single Feed Community Improvements, Phase 1
WUD Project No.: 21-041

Reimbursable / Direct Expenses	*Rates*
8½" x 11" Prints/Copies (black/white)	$ 0.25
8½" x 11" Prints/Copies (color)	$ 1.00
11" x 17" Prints/Copies (black/white)	$ 0.50
11" x 17" Prints/Copies (color)	$ 1.00
24" x 36" Prints/Copies (black/white)	$ 1.50
24" x 36" Prints/Copies (color)	$ 3.50
Mileage (in accordance with IRS Rates)	$ 0.565
Bond Copies By Vendor (Billed at Cost - Vendor invoices to be provided when billed)	As Invoiced by Vendor
Deliveries/Courier Service By Vendor (Billed at Cost - Vendor invoices to be provided when billed)	As Invoiced by Vendor
Title Search By Approved Vendor (Billed at Cost - Vendor invoices to be provided when billed)	As Invoiced by Vendor

	Projected Reimbursable Expenses	Projected Quantity	Unit Cost	Projected Cost
DIRECT EXPENSES				
1	8½" x 11" Prints/Copies (black/white)	80	$ 0.25	$ 20.00
2	8½" x 11" Prints/Copies (color)	25	$ 1.00	$ 25.00
3	11" x 17" Prints/Copies (black/white)	70	$ 0.50	$ 35.00
4	11" x 17" Prints/Copies (color)	15	$ 1.00	$ 15.00
5	24" x 36" Prints/Copies (black/white)	20	$ 1.50	$ 30.00
6	24" x 36" Prints/Copies (color)	10	$ 3.50	$ 35.00
6	Mileage (in accordance with IRS Rates)	6000	$ 0.565	$ 3,390.00
7	Bond Copies By Vendor (Billed at Cost - Vendor invoices to be provided when billed)	2600	Est. Invoiced Cost	$2,200.00
8	Deliveries/Courier Service By Vendor (Billed at Cost - Vendor invoices to be provided when billed)	11	Est. Invoiced Cost	$550.00
9	Title Search By Approved Vendor (Billed at Cost - Vendor invoices to be provided when billed)	47	Est. Invoiced Cost	$18,500.00
	Total Projected As Needed Reimburseable Expenses			**$24,800.00**

ATTACHMENT E

InfraMap CORP

Date: April 13, 2021

Presented To: Keshavarz & Associates
711 North Dixie Highway, Suite 201
West Palm Beach, FL 33401

Attention: Amir Keshavarz, PE, Project Manager
E: amir@keshavarz.com
O: +1 (561) 689-8600

Project: CSA #3: WUD 21-041 Critical Facilities and Single Feed Community Improvements Phase 1
Palm Beach County, FL

Dear Mr. Keshavarz:

We have prepared this proposal for subsurface utility engineering services to perform utility targeting (scanning) and air vacuum excavation test holes for the above referenced project.

Our scope of work shall be performed in accordance with the Procedures, Exclusions and Assumptions identified below and will follow *ASCE 38-02 Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data* including the following:

1. **Utility Records Research** - Utility companies that are likely to own utilities within the project limits will be identified and contacted.

2. **Utility Targeting Services** – Utility targeting will be performed at the locations described in the client provided exhibits.

3. **Air Vacuum Excavation Test Holes** – Air vacuum excavation test holes will be performed at the proposed test hole locations provided once utility targeting has been completed and potential utility conflicts have been verified.

Utility Records Research Procedures

1. Utility companies who are likely to own utilities within the project limits will be identified and contacted. We will request documentation on underground utilities from these sources.

2. Utility records will be used to supplement utility attribute data including type, size, material, and configuration as applicable.

Utility Targeting Procedures

1. **Electronic Scan/Sweep/Targeting** - An electronic sweep of the project site will be conducted. This sweep will verify the location of utilities that were identified during record review and to search for utilities that were not identified during records review. The electronic sweep will be conducted utilizing active and passive type utility detection equipment that detects induced or naturally occurring energy fields present on conductive utilities. Utilities identified will be marked on the ground surface for survey using InfraMap paint and symbols standards.

2. **Field Drawings/Notes** - Designators will draft field sheets that show the location, trend and configuration of utilities detected. Field sheets will be prepared with colored pencils to differentiate utility systems and will show underground utility surface features and lines. Utilities will be annotated with size and project specific field notes will be shown.

3. **Survey** – Survey to be performed by others.

4. **CADD** – CADD to be performed by others.

5. **Office Review** - Office review of the existing utility drawing will be performed by InfraMap personnel to compare the utility information to record drawings, field notes and drawings where Quality Levels will be identified. Any additional verification that is required will be noted for personnel conducting the field review.

6. **Field Review** - A final field review will be performed by InfraMap personnel as necessary. This quality assurance function involves verification of the existing utilities depictions. The utility linework and surface feature locations will be checked against field paint and actual surface feature locations. The intent of this task is to check the work of the designators, surveyors, and draftspersons and to ensure all utility locations are within tolerance.

7. **Deliverables** – The client will be provided with Field Draft Sheets.

Air Vacuum Excavation Test Holes Scope of Services

During utility locating by air / vacuum test holes InfraMap will complete the following tasks:

1. **Agency Coordination** – InfraMap will comply with laws and regulations concerning excavation by coordinating with utility inspectors, property owners, "ONE CALL" and others as required.

2. **Anticipated Permits** – InfraMap will secure and coordinating any permits that may be necessary to perform the work. If permitting fees exceed the amount shown in the fee estimate, the client will be billed for them.

3. **Coordination with Client** - Throughout the Test Hole process InfraMap will communicate with the Client with updates on the status of the Test Holes. If utilities are not where the records maps indicate, or a utility is discovered that is not shown on any records and is not detectable during the electronic sweep, InfraMap will contact the client and discuss strategies to address the unpredictable field conditions. InfraMap will work with the client in the identification of additional test holes or removal of test holes from future scope of work.

4. **Test Hole –** InfraMap will perform the following for the Test Hole task:

    a. Field locate the proposed Test Hole based on information provided by the client.

    b. Excavate a Test Hole using air/ vacuum excavation. Provide all measures necessary to perform the work safely and to cause no damage to the utility structure. The Test Hole will be of the minimum size required to expose the utility of interest and record the following information:
        i. Depth below grade (cover).
        ii. Utility material, shape, and overall condition.
        iii. Approximate diameter of pipes, cables, conduits, and the configuration of multiple conduit systems.
        iv. The general directional trend of the utility.
        v. Thickness, type, and condition of paving material.
        vi. General soil conditions.

    c. Install a survey marker directly over the centerline of pipes or edge of concrete structures or conduit banks at grade. Ribbon of appropriate APWA / ULCC color will be installed in the backfill from utility to grade. Indicate on

the Test Hole Form the placement of the marker relative to the utility cross section. Record the location of the marker with a minimum of three (3) swing tie measurements to convenient existing permanent structures on site.

d. Backfill Test Hole with excavated material in 6" lifts by air pneumatic tamping. Soil placed within one (1) foot of the exposed utility will be clean and tamped carefully. Restore Test Hole area to original condition.

e. Repair and restore all pavement cuts to insure a long-lasting repair utilizing asphalt cold patch.

5. **Survey –** Survey to be performed by others.

6. **Office Review –** Office review of the test hole reports will be completed to compare the findings of the test hole to the utility information on the records. InfraMap will evaluate any discrepancies with designators, test hole technicians, surveyors, CADD operators and utilities.

7. **Deliverables –** Deliverables will include Test Hole Forms.

Exclusions and Assumptions:

1. The targeting of subsurface utilities, although highly reliable, is expressly understood to represent an approximate location of the target facility as marked on the ground surface. The accuracy of targeting is subject to certain factors beyond our control such as limitations of available technology and field conditions that may include, but are not limited to depth of utility, electrical conductivity of utility, site conditions and access.

2. Our electronic equipment cannot locate non-conductive pipe systems and or fiber optic line without tracer wire.

3. Concrete Pavement with reinforcement, as well as guide rails and chain link fence, could interfere with our electronic equipment at times to locate utilities.

4. Overhead utilities, irrigation systems, residential/commercial services, and confined space entry are not included in this scope of work. In addition, gravity structure investigations including storm water and sanitary sewer are not included.
5. At this time, geotechnical borings or subgrade information have not been provided. Large stones, shale, construction debris, or other subsurface conditions including a high groundwater table may limit the ability of our equipment to excavate to the utility and or make it very difficult to visually verify the utility condition and material.

6. This proposal assumes test holes will be repaired consistent with the cold patch specifications above. Depending upon test holes locations and/or local, county and state permit requirements, permanent asphalt patch repairs either using hot mix asphalt, asphalt infrared services or cement subbase, are out of the scope of these services. If required, an out-of-scope proposal or supplemental agreement will be prepared before proceeding further.

7. This service will be provided with due diligence and in a manner consistent with standards of the subsurface utility mapping industry. Every reasonable effort will be made to locate all systems of interest whether indicated on records available to us or not. However, we do not guarantee that all existing utility systems can or will be detected. It may not be possible to detect utilities that we do not have prior knowledge of, such as systems that are not depicted on records available to us. Further, this service is not intended to detect non-utility structures such as but not limited to foundations, buried tanks, septic systems, wells, tunnels, concrete or metal structures, or the true size and limits of subsurface utility vaults and manholes.

8. To provide a cost-effective service that causes minimal disturbance to site amenities and utilities, and is acceptable to permitting agencies, the size of the Test Hole excavation is kept to a minimum. The diameter of most pipes greater than 24" cannot be recovered directly from one test hole and it may be necessary to perform additional holes.

InfraMap CORP

9. Encased systems and non-encased conduit banks are typically exposed on one edge. This allows the test hole to be excavated down the side of the utility until a discernable bottom edge can be evaluated. Although it is usually possible to determine the bottom edge of these systems, it is not possible to determine conditions under these or other utility systems, such as concrete over pour and other utilities. It is important for the designer to remember that the bottom edge of an encased system or unencased conduit bank may not represent its lowest point, and that the shape of the system may not be the same on both sides. The width of these systems may not be determined from a single test hole. Encased systems and unencased conduit banks may require two test holes to document the width (and both of the sides top and bottom elevations).

FEE SCHEDULE - TARGETING SERVICES

Resource	**Unit Cost**	**# Units**	**Fee ($)**
Targeting	*$ 1,692.37/day*	*20*	*$ 33,847.40*
Administrative	*$ 69.78/hr.*	*1*	*$ 69.78*
Direct Expenses	**Unit Cost**	**# Units**	**Fee ($)**
Mileage	*$ 0.56/mi.*	*1,344*	*$ 752.64*
		Targeting Services Estimate	*$ 34,669.82*

FEE SCHEDULE - TEST HOLE SERVICES

Resource	**Unit Cost**	**# Units**	**Fee ($)**
Test Hole 0'-6' (If Qty = 3+)	*$ 510.45/ea.*	*45*	*$ 22,970.25*
Contingent Feet (beyond 6')	*$ 112.00/ft.*	*7*	*$ 784.00*
Direct Expenses	**Unit Cost**	**# Units**	**Fee ($)**
Mileage	*$ 0.56/mi.*	*739*	*$ 413.95*
Arrow Board	*$ 80.00/day*	*9*	*$ 720.00*
Permit (Estimate Only)	*$ 180.00/ea.*	*10*	*$ 1,800.00*
Flaggers	*$ 63.45/hr.*	*16*	*$ 1,015.20*
		Test Hole Services Estimate	*$ 27,703.40*

Our total estimated cost for this project is **$62,373.22**. If you have any questions or concerns regarding this proposal, please do not hesitate to call at (561) 586-0790 or email Lreumann@inframap.net. We look forward to working with Keshavarz & Associates on this project.

Regards,

Lee Reumann, Regional Survey Manager

Attachment A

SUBSURFACE UTILITY TARGETING SERVICE SCOPE OF WORK

In the performance of subsurface utility targeting, InfraMap Corp. proposes to:

1. Utilize client provided records from utility companies, unless stated as an InfraMap function in the scope statement. Gathered materials will be used as an aid in the identification of the number, identity, size and material of utilities located in the field, and will not be used as a substitute for actual geophysical location unless the system cannot be verified electronically using industry standard techniques for this level of investigation.

2. Conduct a thorough electronic search of the site for the buried utility systems shown on records acquired. Also, conduct an electronic grid sweep of the site to search for utilities that do not appear on available records, and attempt to determine type. This investigation will be accomplished using active and passive type utility detection gear that detects induced or naturally occurring energy fields present on conductive utilities. This investigation is not a ground penetrating radar sweep, nor will ground penetrating radar be used, unless specifically requested. The targeting of subsurface utilities, although highly reliable, is expressly understood to represent an approximate location of the target facility as marked on the ground surface. The accuracy of this targeting is subject to certain factors beyond our control such as limitations of available technology and field conditions that may include, but are not limited to: depth of utility, electrical conductivity of utility, site conditions and access. Where nonconductive or nonlocatable utilities are present, we will attempt to use all available information to place targeting in the field for those systems and generate notes for each such utility.

3. Technicians will draft field sheets that show the approximate location, trend and configuration of utilities detected if requested by client.

4. Field sheets will be provided to the project surveyors. Survey and computer drafting will be performed by others.

5. If a part of the scope statement and if the client provides InfraMap with plots of the utility file with referenced topography, InfraMap will provide a final office and/ or field review.

Attachment B

SUBSURFACE UTILITY LOCATING BY AIR/VACUUM TEST HOLE SERVICE

The intent of the proposed test hole service is to provide the actual horizontal and vertical location of existing utilities or structures at the point of interest by air/ vacuum excavation to facilitate the identification and resolution of potential design conflicts and aid in the protection of these facilities during construction.

Tasks:

1. Request records from utility owning agencies as appropriate.

2. Supply qualified personnel and provide them with the resources, transportation and field supplies to perform the requested services.

3. Coordinate with the client to determine what test holes are needed and their expected locations.

4. Coordinate with inspectors, property owners, "ONE CALL" and others as required. Comply with all laws and regulations concerning excavation. Obtain all permits needed to perform the test holes.

5. Determine in the field the actual location of the proposed improvements in possible conflict with existing utilities. This shall be accomplished by using the plan supplied by the client.

6. At the approximate point of possible conflict with the proposed improvement, excavate a test hole using air/ vacuum excavation. Provide all measurements necessary to perform the work safely and to cause no damage to the utility structure. The test hole will be of the minimum size required to expose the utility of interest and record the following information:

    a. Depth below grade (cover).
    b. Utility material, shape and overall condition.
    c. Approximate diameter of pipes, cables, conduits and the configuration of multiple conduit systems.
    d. The general directional trend of the utility.
    e. Thickness, type and condition of paving material.
    f. General soil conditions.

7. Install a permanent survey marker directly over the centerline of pipes or edge of concrete structures or conduit banks at grade. Indicate on the Test Hole Form the placement of the marker relative to the utility cross section.

8. Backfill test hole with excavated material in 6" lifts by air pneumatic tamping. Soil placed within 1 foot of the exposed utility will be clean and tamped carefully. Backfill materials will be adequately compacted to prevent later subsidence of the test hole. Provide select backfill materials, such as insulating sands and gravels, when needed. Restore test hole area to original condition. Ribbon of appropriate APWA/ULCC color will be installed in the backfill from utility to grade.

9. Repair and restore all pavement cuts to insure a long lasting, permanent repair using our standard cold patch method. Guarantee patch for 1 year and return to repair within that time if test hole sinks more than ½" below original grade (permanent marker). In the event that the permitting agency does not accept cold patch as permanent repair, the cost to restore the pavement to the satisfaction of the permitting agency will become a cost over and above the estimate.

10. Record the location of the permanent marker with a minimum of three (3) swing tie measurements to convenient existing permanent structures on site.

10a. (Optional - See Scope Statement) Survey test hole locations with a total station survey instrument and data collector relevant to the client provided project control. Process survey locations to provide northing, easting and grade/ utility elevations. Generate stations and offset for the test holes if baseline geometry is provided.

11. Cad Test Hole Forms. Also, provide a Test Hole Inventory report to list numerically the test holes completed/ attempted.

12. Technical limitations of small hole Air/Vacuum excavation:

    In order to provide a cost effective service that causes minimal disturbance to site amenities and utilities, and is acceptable to permitting agencies, the size of the test hole excavation is kept to a minimum. A nominal size of 64 square inches (8" x 8") is the assumed size of the average test hole. Given this size excavation, the following limitations are stated for the benefit of the designer in choosing test hole locations.

    a. The bottom/invert of pipes and large diameter cables and conduits is not directly available in most test holes. The point of measurement of these utilities is typically the crown or shallowest point on the utility. Invert information is derived from crown cover plus diameter.

    b. The diameter of most pipes greater than 24" cannot be recovered directly from a single test hole. The diameter of pipes less than 24" is determined by exposing half or the entire pipe, as needed, and directly

measuring the outside diameter with a rule to the nearest 1/2". If pipe diameter is critical on larger than 24" pipes, it may be necessary to perform additional holes. This type of investigation falls outside of the normal scope of test hole services.

c. Encased systems and non-encased conduit banks are typically exposed on one edge. This allows the test hole to be excavated down the side of the utility until a discernable bottom edge can be evaluated. Although it is usually possible to determine the bottom edge of these systems, it is not possible to determine conditions under these or other utility systems, such as concrete overpour and other utilities. It is important for the designer to remember that the bottom edge of an encased system or unencased conduit bank may not represent its lowest point, and that the shape of the system may not be the same on both sides. The width of these systems may not be determined from a single test hole. Encased systems and unencased conduit banks may require two test holes to document the width (and both sides top and bottom elevations).

1100 N Florida Mango Rd, Suite D, West Palm Beach, FL 33409
10365 S. Cedar Lane, Glen Allen, VA 23059
804-550-2937 www.inframap.net

March 11, 2021

Palm Beach County Water Utilities Department
8100 Forest Hill Boulevard
West Palm Beach, FL 33413

Reference: WUD 19-082 Utility Distribution & Collection System Engineering Services

To Whom It May Concern:

We are hereby designating Andres Garcia as an authorized signer associated with the contract referenced above and any associated Consultant Service Authorizations and invoices that may fall under this agreement.

Thank you,

Darlene Siegel
CFO, InfraMap Corp.

ATTACHMENT E

April 12, 2021

Keshavarz & Associates, Inc.
711 North Dixie Highway, Suite 201
West Palm Beach, Florida 33401
Attn: Mr. Amir J. Keshavarz, P.E.
email: Amir@keshavarz.com

RE: **Proposal for Geotechnical Services**
Critical Facilities and Single Feed Community Improvements PHASE 1
Palm Beach County, Florida
TSF Proposal No.: 2104-242

Dear Amir:

As requested, **TIERRA SOUTH FLORIDA, INC. (TSF)** is pleased to submit this proposal for the above-referenced project. This proposal includes an outline of our proposed scope of work, an estimate of the total fees, and our anticipated schedule for completion of the work.

PROPOSED SCOPE OF WORK

All work performed by TSF will be in general accordance with PBC and FDOT standards. We understand that utility installation and improvements are anticipated for the project sites and areas identified by Palm Beach County Water Utilities Department (WUD), as listed below in Table 1.

Table 1 – Site ID # and Name

ID#	NAME	ID#	NAME
1	Saratoga Pines	99	Glades Health Care Center
3	Bay Hill Estates	167	Arbor Oaks @ Greenacres
9	Pine Ridge at Haverhill	207	Renal Care Center – Belle Glade
11	Foxwood Estates	661	South Bay Correctional Institution
12	The Tennis Club of Palm Beach	663	Sago Palm Work & Re-entry Center

Field services are proposed as summarized in Table 2 below. Close coordination will be completed by TSF with: Palm Beach County, FDOT, Village of Royal Palm Beach, City of Pahokee, City of Belle Glade, South Florida Conservancy District, and Indian Trails Improvement District. Coordination to include roadway closures or Maintenance of Traffic (MOT) operations within the Right-Of-Way (ROW) .

Table 2 – Proposed Field Testing	
Location	**Proposed Services**
Utility Areas	Standard Penetration Test (SPT) Borings - One (1) SPT Borings to 6 feet - Forty-Three (43) SPT Boring to 10 feet - Two (2) SPT Borings to 20 feet - Four (4) SPT Borings to 30 feet
Roadways	Seventeen (17) asphalt cores - 2 ft base check with each core
Note – the total number of borings within the roadway is not known. However, SPTs within the roadway will be performed at the location of the asphalt cores. It is estimated that at least ½ of the remaining borings will need to be performed in the roadway due to site access or utility issues.	

Boring locations will be approximately located and noted in the field by our personnel by measuring distances with a tape from known reference points. Elevations at boring locations can be interpreted from topographic plans if furnished by others. Prior to drilling at the project site, TSF will notify the local utility companies through the State's 811 Utility Clearance Service and request that underground utilities be marked. This service will review utilities within the roadway ROW only. Any borings required outside of the ROW will not have utility review by the 811 Service, as the utility companies will not mark privately owned utilities. Our proposal assumes that private property utility lines will be located in the field by others prior to mobilization of the drill rig if borings outside of the ROW are required. TSF will recommend a utility line locating service upon request.

Upon completion of the field exploration, laboratory testing will be performed on selected samples. A geotechnical engineer will evaluate the results of all drilling and laboratory testing. A report will be issued that contains the exploration data, a discussion of the site and subsurface conditions, evaluation, and recommendations of soil parameters for utility installation, and a discussion of some construction considerations.

ESTIMATED FEES

It is proposed that the fee for the performance of the services outlined above is determined on a unit price basis in accordance with the attached Fee Schedule. On the basis of the proposed quantities, it is estimated that the total fee will be as noted below. The total budget amount will be considered a Not To Exceed (NTE), without prior authorization from the Client.

I. SOIL TESTING	**$2,480.00**
II. CONCRETE & MASONRY MATERIALS	**$0.00**
III. AGGREGATE TESTING	**$960.00**
IV. ASPHALT TESTING	**$2,210.00**
V. INSPECTION SERVICES	**$0.00**
VI. FIELD EXPLORATIONS / INVESTIGATIONS	**$19,520.00**
VII MISCELLANEOUS SERVICE	**$4,800.00**
VII ENGINEERING AND PROFESSIONAL SERVICES	**$8,895.00**
	$38,865.00

Our estimate covers the work needed to present our findings in a formal report. Not included are reviews of foundation drawings, preparation of construction specifications, special conferences and any other work requested after submittal of our report.

Boring, sampling, and testing requirements are a function of the subsurface conditions encountered. Therefore, the estimated fee previously indicated is approximate, and compensation for the exploration will be based on the actual work and tests performed. We will endeavor to keep the exploration cost at a minimum consistent with good engineering practice.

SCHEDULE AND AUTHORIZATION

TSF will proceed with the work after receipt of a signed copy of this proposal. With our present schedule, we can commence work within a few days of project approval (weather permitting and utility clearance). The fieldwork is expected to take about eight days to complete. The written report can be submitted about three weeks after completion of the field exploration, depending on the extent of the laboratory-testing program. Verbal preliminary recommendations can be made to appropriate parties prior to submittal of the written report. The report will include soil profiles, asphalt core data in the form of photos and layer identification estimates, a summary of recommendations for construction, and formal plan sheets for the boring location plan sheet and soil profile sheets to be incorporated into the construction plan set.

We at TSF appreciate the opportunity to submit this proposal and look forward to working with you on this project. If you should have any questions concerning our proposal, please contact our office.

Respectfully submitted,

TIERRA SOUTH FLORIDA, INC.

Harmon C. Bennett, P.E.
Principal Engineer

Ramakumar Vedula, P.E.
Principal Engineer

Attachments:
Fee Estimate

		Unit	Rate	Quantity	Fees
I.	**SOIL TESTING**				
1	Field Density Test (five [5] minimum)	test	$30.00		
2	Proctors	test	$100.00		
3	Florida Bearing Value Test	test	$45.00		
4	Limerock Bearing Ratio Test	test	$300.00		
5	Atterberg Limit Test	test	$80.00	4	$320.00
6	Carbonate Content Test	test	$100.00		
7	Organic Content Test	test	$50.00	8	$400.00
8	Corrosion Series	test	$190.00	8	$1,520.00
9	Soil Observation (On Site)	hr.	$60.00		
10	Natural Sample Moisture Content	test	$20.00	12	$240.00
11	Unit Weight and Moisture Content (Undisturbed Sample)	test	$50.00		
II.	**CONCRETE & MASONRY MATERIALS**				
1	Concrete Compression test (Min four [4] cylinders per trip)				
	-Prepare cylinders & slump test on site, and deliver to lab	set	$150.00		
2	Additional Concrete cylinders	cyl.	$18.00		
3	Concrete Compression test only [delivered to lab]	cyl.	$18.00		
4	Slump test	ea.	$18.00		
5	Air Content Test	ea.	$25.00		
6	Stand-by	hr.	$65.00		
7	Grout Prism (Six [6] per set)				
	- Includes preparation of Prism on site	set	$80.00		
8	2" x 2" Mortar Cubes (Six [6] per set)				
	- Includes preparation of Cubes on site..	set	$80.00		
9	Additional Mortar cubes	ea.	$18.00		
10	Masonry Units				
	A. Compressive Strength	unit	$80.00		
	B. Absorption	unit	$50.00		
11	Concrete Cores (Min 3);				
	A. Secure, trim & test	core	$80.00		
	B. Testing of core [delivered to lab (Incl Trim)]	core	$50.00		
12	Swiss Hammer Testing.	hr.	$65.00		
13	Windsor Probe Test (Min. 3 shots)	test	$150.00		
14	Additional Windsor Probe Tests...	test	$100.00		
III.	**AGGREGATE TESTING**				
1	Grain size determination:				
	A. Full grain size (8 sieves)	test	$75.00	8	$600.00
	B. Wash through (#200)	test	$45.00	8	$360.00
2	Sieve Analysis – Course Aggregate	test	$45.00		
3	Specific Gravity & Absorption of Fine or Coarse Aggregate	test	$70.00		
IV.	**ASPHALT TESTING**				
1	Asphalt Cores (obtaining core samples)	ea.*	$130.00	17	$2,210.00
2	Asphalt Extraction & Gradation	ea.	$150.00		
3	Asphalt Density and Thickness	ea.	$25.00		
4	Marshall Stability (Incl density, flow and stability of 3 specimens)				
	(50 blows)	ea.	$150.00		
5	Coring Machine plus Generator Rental	trip	$400.00		
6	Superpave Resolution Testing				
	A. Gyratory Compaction, bulk specific gravity	ea.	$175.00		
	B. Rice Testing	ea.	$120.00		
V.	**INSPECTION SERVICES**				
1	Concrete Inspection (on job-site or plant)	hr.	$65.00		
2	Pile Driving Inspection	hr.	$70.00		
3	Pre-Stress Yard Inspection	hr.	$70.00		
4	Steel Inspection	hr.	$70.00		
5	Threshold Inspection	hr.	$70.00		
6	Asphalt Inspection (Plant or Roadway)	hr.	$85.00		
7	Helical Pile Inspection	hr.	$70.00		
8	Drilled Shaft Logging / Inspection Services	hr.	$70.00		
VI.	**FIELD EXPLORATIONS / INVESTIGATIONS**				
1	Auger Borings	ft.	$10.00	34	$340.00
2	Hand Augers	hr.**	$130.00		
3	Standard Penetration Test Borings - Truck Rig				
	A. 0' – 50'	ft.	$13.00	630	$8,190.00
	B. 1' – 100'.	ft.	$15.00		
4	Grout-Seal Boreholes				
	A. 0' – 50'	ft.	$6.00	630	$3,780.00
	B. 1' – 100'.	ft.	$7.00		
5	Casing Allowance	ft.	$7.00		
	A. 0' – 50'	ft.	$7.00	630	$4,410.00
	B. 1' – 100'.	ft.	$9.00		
6	Muck Probing (4 hr min) (2-man crew)	hr.**	$130.00		
7	Mobilization of drilling equipment to project (Min Charge)				
	A. 50-mile travel	ea.	$350.00	8	$2,800.00
	B. 100-mile travel	ea.	$450.00		
VII.	**MISCELLANEOUS SERVICE**				
1	Foundation Analysis and Recommendation				
2	Percolation Test	test	$300.00		
3	Install Monitoring Well, 25' Depth (per PBCWUD Standards & Details)	LF	$50.00		
4	Plug & Abandon Monitoring Well, 25' depth	hour	$150.00		
5	Maintenance of Traffic	Day	$1,200.00	4	$4,800.00
VIII.	**ENGINEERING AND PROFESSIONAL SERVICES**				
1	Principal Engineer/PM, PE	hour	$185.00	2	$370.00
2	Senior Geotechnical Engineer, PE	hour	$175.00	4	$700.00
3	Project Engineer	hour	$145.00	8	$1,160.00
4	Staff Engineer	hour	$110.00	18	$1,980.00
5	Senior Engineering Technician	hour	$110.00	16	$1,760.00
6	Engineering Technician	hour	$65.00	25	$1,625.00
7	Drafter/CADD	hour	$65.00	20	$1,300.00
					$38,865.00

ATTACHMENT F

Palm Beach County Water Utilities Department
Contract for Consulting/Professional Services
Utility Distribution and Collection System Engineering Services

Resolution No. R2020-1898 Contract Dated December 15, 2020

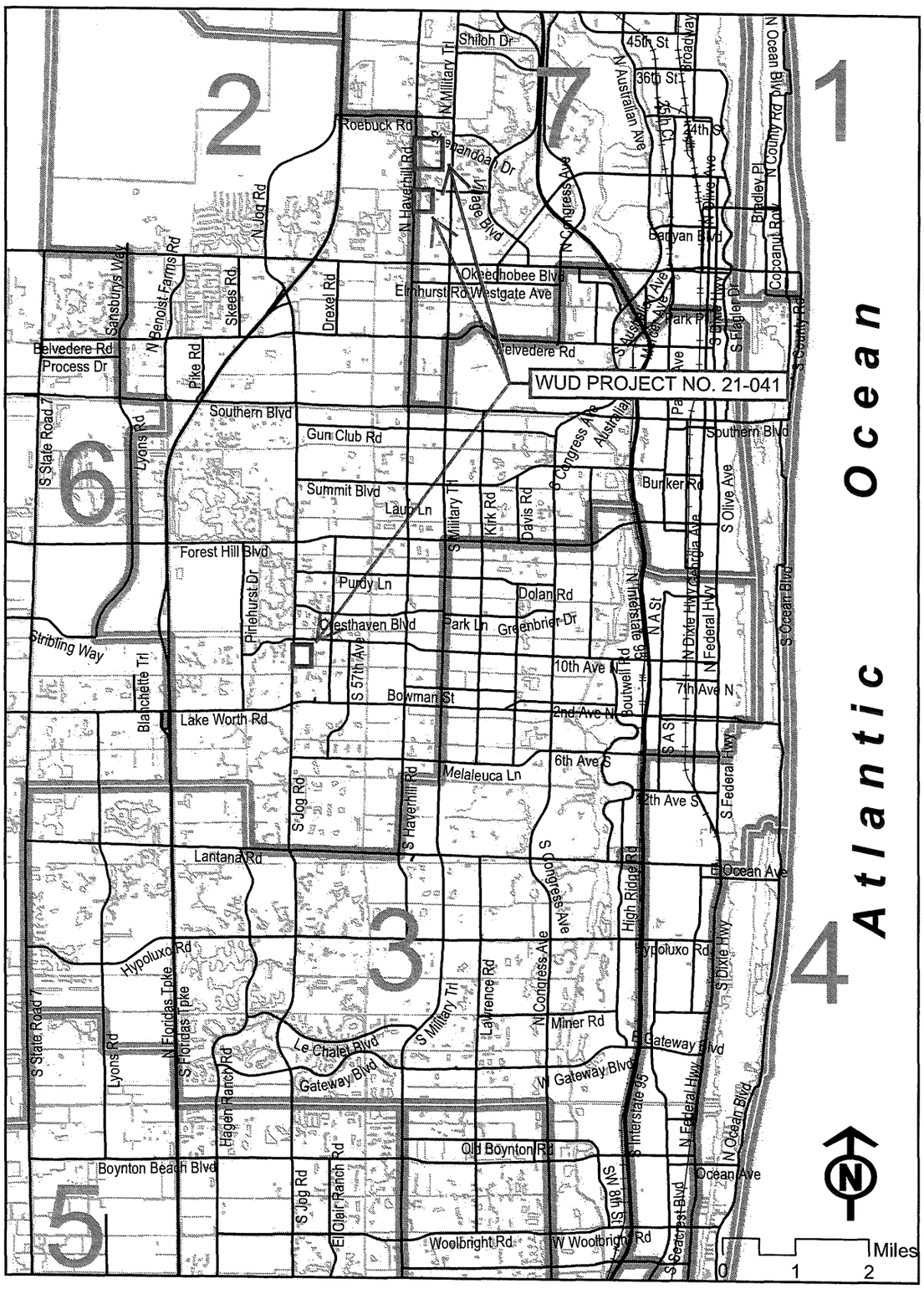
SUMMARY OF
SBE-M/WBE BUSINESS TRACKING

Master Contract Goals	SBE: 85%	M/WBE: 85%	MBE (Asian): 82%	MBE (Black): 3%
Current Proposal				
Value of Authorization No. 3	**$722,774.22**	**$722,774.22**	**$722,774.22**	**$722,774.22**
Value of SBE-M/WBE Letters of Intent	**$621,536.00**	**$621,536.00**	**$621,536.00**	**$0.00**
Actual Percentage	**85.99%**	**85.99%**	**85.99%**	**0.00%**
Signed/Approved Authorizations				
Total Value of Authorizations	$1,185,649.11	$1,185,649.11	$1,185,649.11	$1,185,649.11
Total Value of SBE-M/WBE Signed Subcontractors	$1,033,452.00	$1,033,452.00	$1,033,452.00	$0.00
Actual Percentage	87.16%	87.16%	87.16%	0.00%
Signed/Approved Authorizations Plus Current Proposal				
Total Value of Authorizations	**$1,908,423.33**	**$1,908,423.33**	**$1,908,423.33**	**$1,908,423.33**
Total Value of Subcontractors & Letters of Intent	**$1,654,988.00**	**$1,654,998.00**	**$1,654,998.00**	**$0.00**
Actual Percentage	**86.72%**	**86.72%**	**86.72%**	**0.00%**

ATTACHMENT G

LOCATION MAP

WUD NO. 21-041

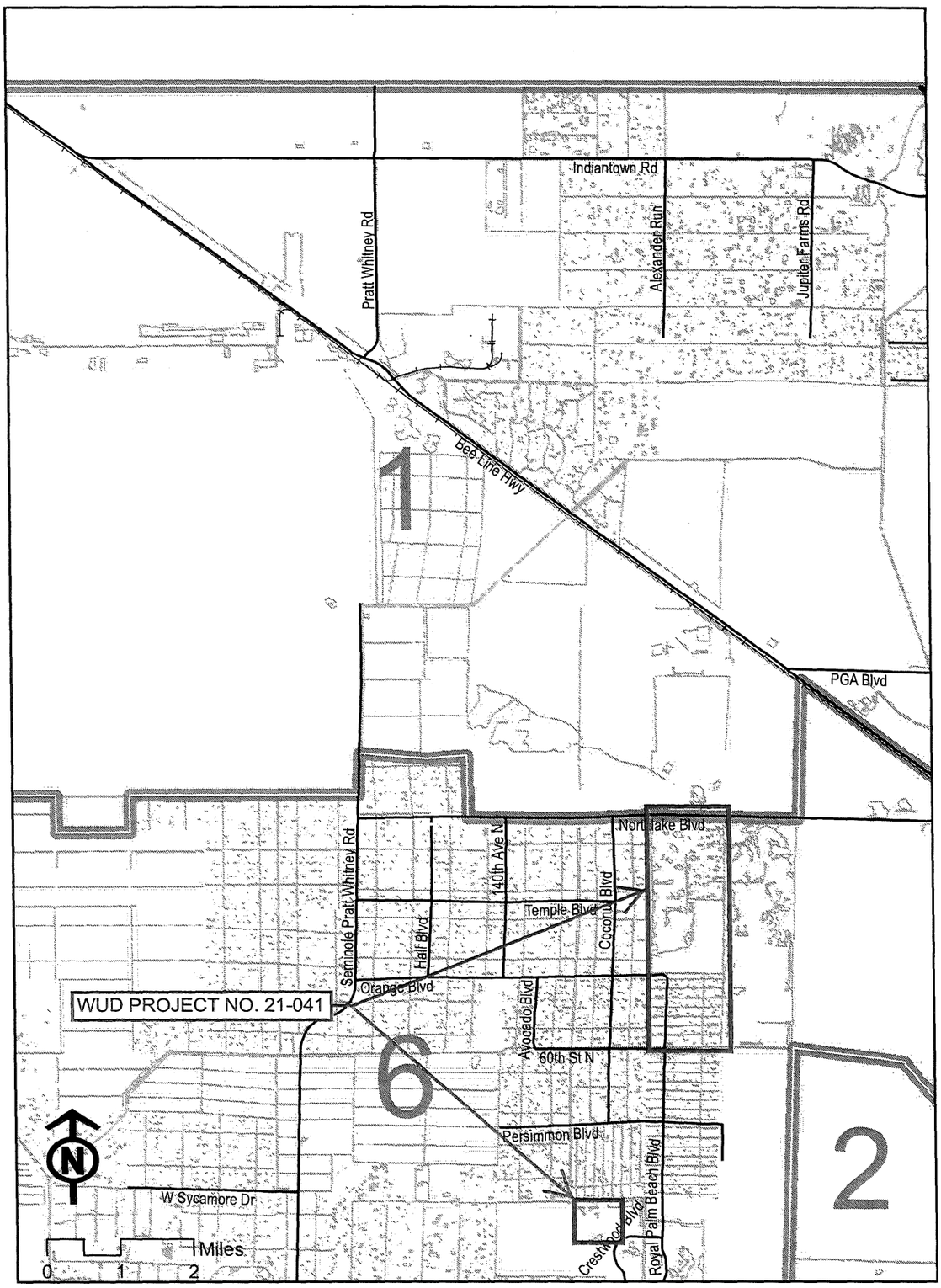


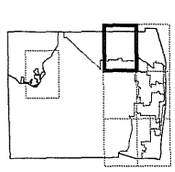
Revised 04/26/2021

ATTACHMENT G

LOCATION MAP

WUD NO. 21-041



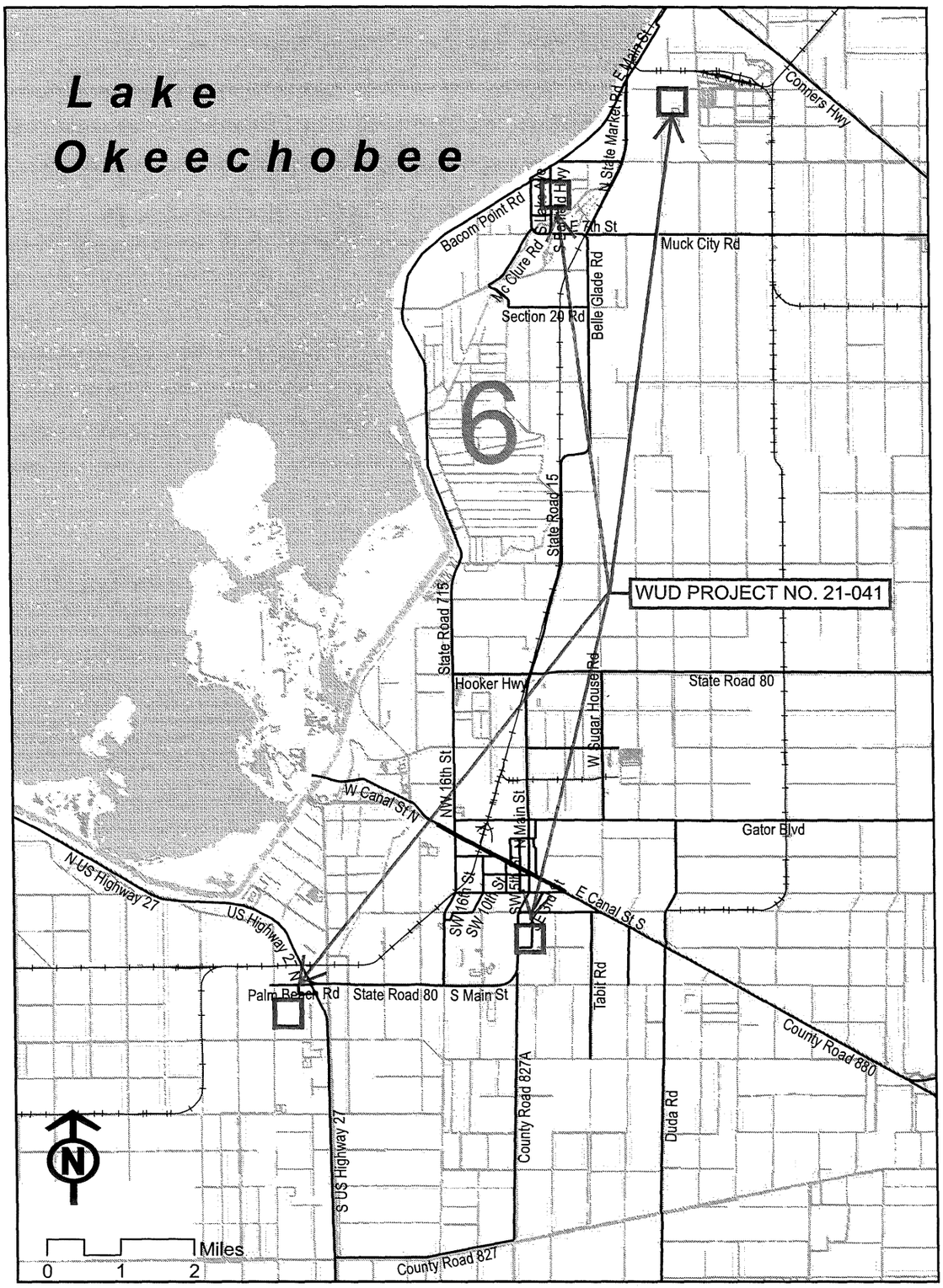


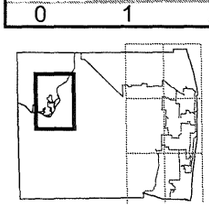
Revised 04/26/2021

ATTACHMENT G

LOCATION MAP

WUD NO. 21-041



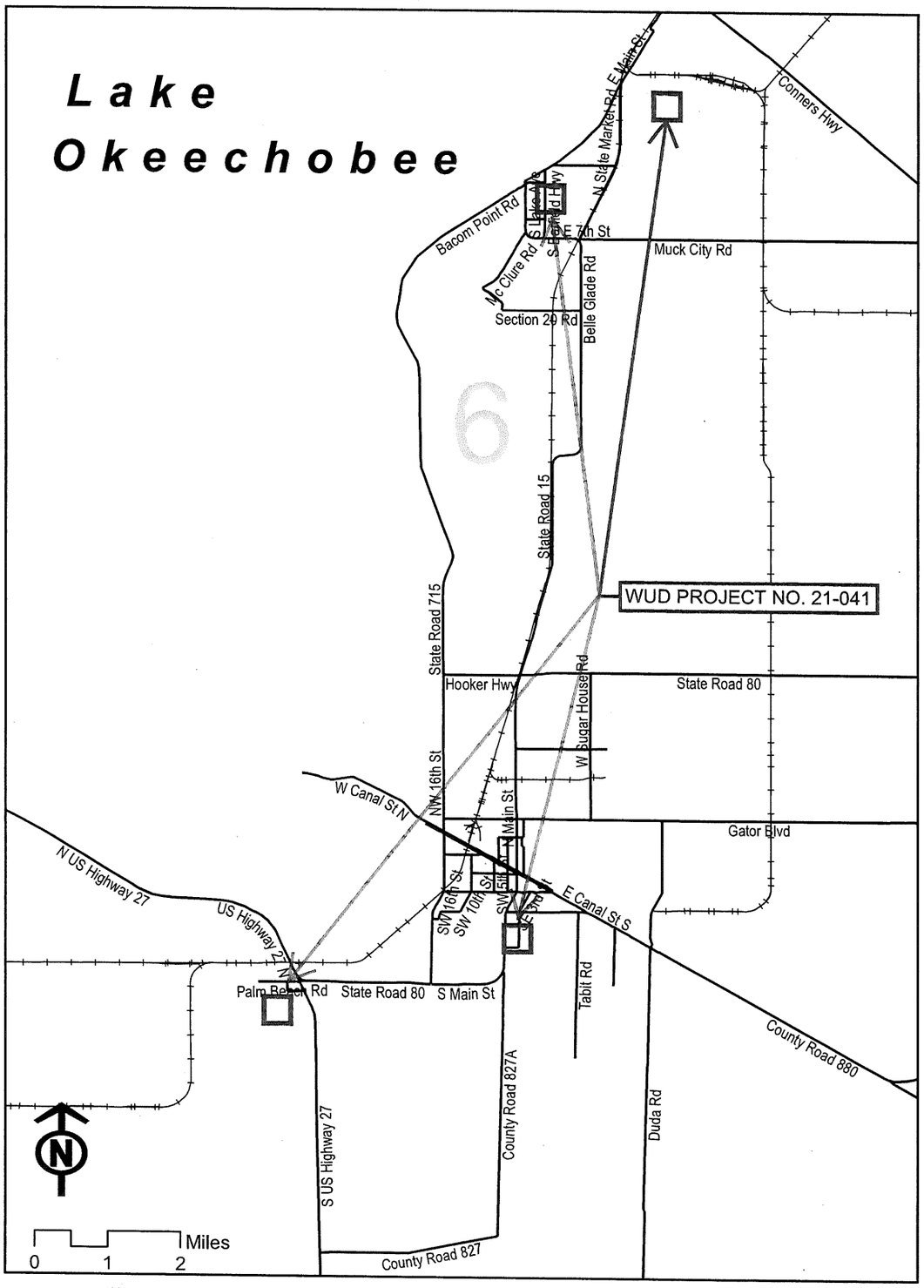


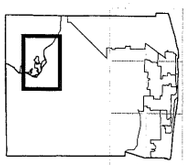
Revised 04/26/2021

ATTACHMENT 2

LOCATION MAP

WUD NO. 21-041

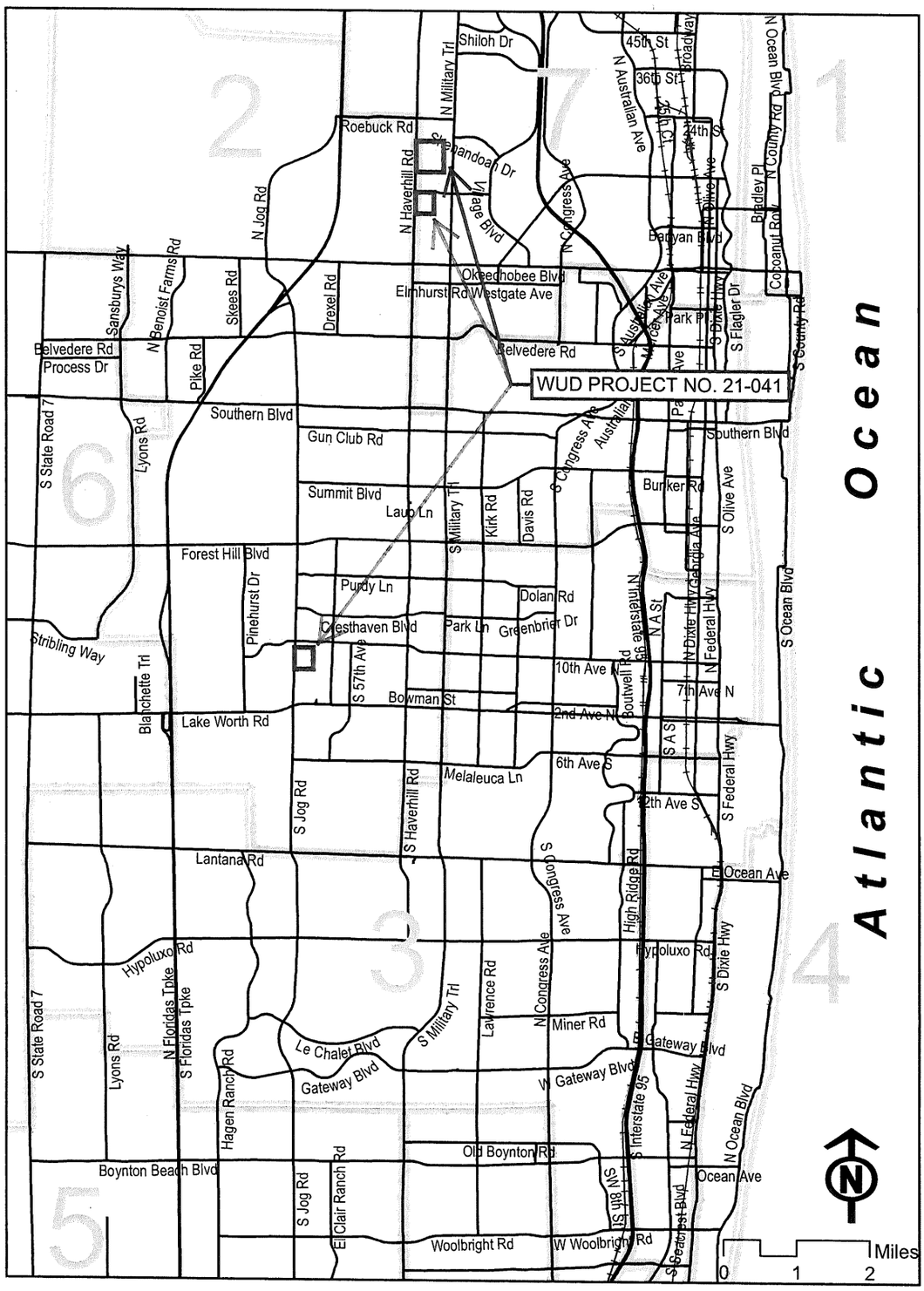




Revised 02/11/2021

LOCATION MAP

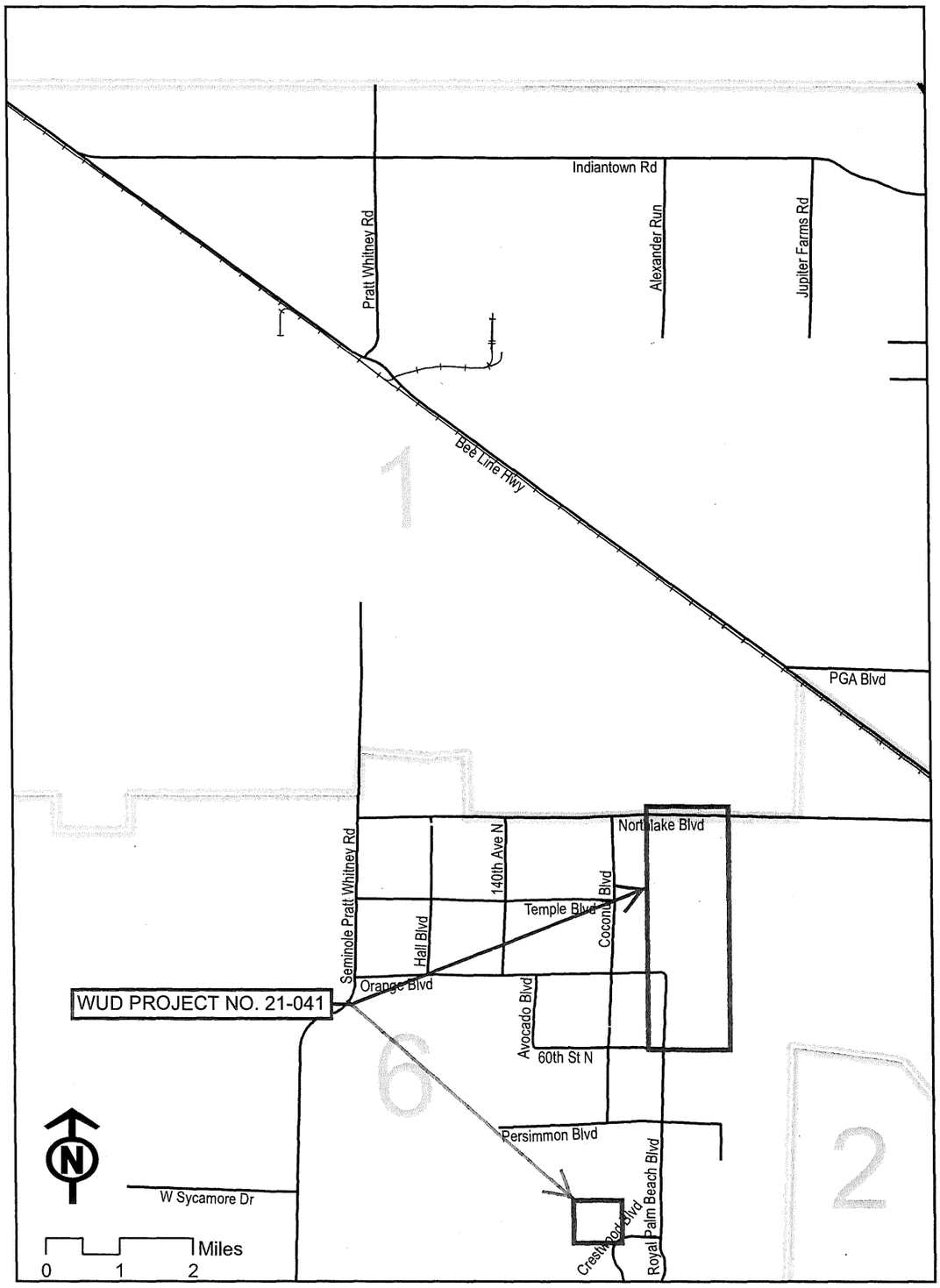
WUD NO. 21-041

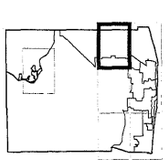


Revised 02/11/2021

LOCATION MAP

WUD NO. 21-041





Revised 02/11/2021

ATTACHMENT 3

KESH&AS-01 HAZELWOODM

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 2/23/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER License # 0E67768 Insurance Office of America Abacoa Town Center 1200 University Blvd, Suite 200 Jupiter, FL 33458	CONTACT NAME: Ale Castaneda PHONE (A/C, No, Ext): (561) 721-3755 FAX (A/C, No): E-MAIL ADDRESS: Ale.Castaneda@ioausa.com
INSURED Keshavarz & Associates, Inc. 711 N. Dixie Hwy Suite 201 West Palm Beach, FL 33401	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A : Travelers Indemnity Company — 25658 INSURER B : Travelers Property Casualty Insurance Company — 36161 INSURER C : Travelers Casualty & Surety Company — 19038 INSURER D : QBE Insurance Corporation — 39217 INSURER E : INSURER F :

COVERAGES CERTIFICATE NUMBER: REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY							
	[ ] CLAIMS-MADE [X] OCCUR	X	X	660-6J917378-IND-20	7/1/2020	7/1/2021	EACH OCCURRENCE	$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100,000
							MED EXP (Any one person)	$ 5,000
							PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	[ ] POLICY [X] PRO-JECT [ ] LOC						PRODUCTS - COMP/OP AGG	$ 2,000,000
	OTHER:							$
A	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	X ANY AUTO	X	X	BA-6J917538-20	7/1/2020	7/1/2021	BODILY INJURY (Per person)	$
	[ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	[ ] HIRED AUTOS ONLY [ ] NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
B	X UMBRELLA LIAB [X] OCCUR			CUP-4688T918-20	7/1/2020	7/1/2021	EACH OCCURRENCE	$ 1,000,000
	EXCESS LIAB [ ] CLAIMS-MADE						AGGREGATE	$ 1,000,000
	DED [X] RETENTION $ 10,000							$
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y / N						X PER STATUTE [ ] OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? [ ] (Mandatory in NH)	N / A	X	UB-7K077863-20	7/1/2020	7/1/2021	E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
D	Professional Liabili			ANE41300-01	7/1/2020	7/1/2021	Per Claim	3,000,000
D	Professional Liabili			ANE41300-01	7/1/2020	7/1/2021	Aggregate	3,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Contract for Consulting/Professional Services Pressure Pipeline Engineering Services WUD Project No. 20-044
Palm Beach County Board of County Commissioners, a political Subdivision of the State of Florida, its officers, employees and agents are Additional Insured with respect to General Liability when required by written contract per form CGD381 09/15 on a Primary Non-Contributory basis; and is also Additional Insured with respect to Auto Liability with Waiver of Subrogation when required by written contract per form #CAF219 08/17. Waiver of Subrogation with respect to General Liability per form #CGD379 02/19, and with respect to Workers' Compensation per form #WC000313 4/84.

CERTIFICATE HOLDER

Palm Beach County Board of County Commissioners
c/o Water Utilities Department
8100 Forest Hill Blvd
West Palm Beach, FL 33413

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
C. Ray Dorsey III