CITY OF POMPANO BEACH
RAW WATER WELL DESIGN SERVICES

Work Authorization No. 1
Production Well 3 and Raw Water Main Replacement

Work Authorization No. 1 includes providing engineering design, permitting, bidding assistance, and construction administration services to replace the abandoned Production Well 3 serving the raw water system route to the Lime Softening Water Treatment Plant (WTP). Refer to the attached Site Plan which provides an aerial view of said abandoned well and preliminary Well 3R location. Based on regulatory permitting requirements, Production Well 3R and Raw Water Main Replacement will be designed and constructed as two separate projects.

Project No. 1: Well 3R design, permitting, technical specifications, bidding assistance and construction administration services.

Project No. 2: Well 3R design, permitting, technical specifications for the wellhead mechanical/ electrical appurtenances and raw water main. Construction administration for only the wellhead mechanical/ electrical appurtenances.

The services rendered pursuant to this Work Authorization No. 1 are in accordance with the terms and conditions of the Agreement for Professional Consulting Services, defined in RLI E-23-20, between the City and Tetra Tech, Inc. (Tetra Tech) dated March 1, 2021.

I. PROJECT BACKGROUND

As recorded in the City Water Use Permit (WUP) No. 06-00070-W, Production Well 3 was 16 inches in diameter with a total depth of 107 feet; the well pump had a capacity of 1,500 gallons per minute (gpm). The City plugged and abandoned Production Well 3 due to its proximity to a new injection well and will construct Well 3R of similar dimensions and a production rate of 2,100 gpm.

Production Well 3R will be located in the southwest corner of Folio 4842-35-68-0010, approximately 300 feet west-southwest of the abandoned well and will be connected to the raw water transmission line on NE 3rd Avenue in the same general vicinity between NE 12th Street and NE 13th Street. Per the City, Production Well 3R will be equipped with a submersible well pump on a concrete pad; well head appurtenances and raw water piping will be required to connect the well to the existing yard piping. Primary and standby power will be supported from existing onsite power service.

The City has advised that they can self-perform construction of the raw water main, system testing, restoration, and preparation of record drawings in accordance with the design specifications and drawings for the new piping conveying raw water from Production Well 3R to the connection point on the raw water main along NE 3rd Avenue; therefore, this portion of work for Project No. 2 is not included in the bid documents issued for the wellhead construction work and can be delivered ahead of the well construction, per the City's request. Tetra Tech will stay involved on matters supporting permit closeouts. The City and Wellhead Contractor will coordinate accordingly.

Tetra Tech will prepare separate technical specifications and drawings for both projects.

II. SCOPE OF WORK

Task 1 – Well Site Selection and Sanitary Survey

A. Coordinate and attend one project kick-off meeting with the project team and City Staff to discuss the well construction, wellhead mechanical / electrical and appurtenances, and raw water main projects. Provide minutes summarizing the meeting discussions. On the day of the kick-off meeting, visit the site with City Staff.

B. Tetra Tech will perform a sanitary survey for siting Production Well 3R. The sanitary survey will include contacting the property owners adjacent to the well site to field document the location of any sanitary hazards defined in Chapters 62-532.400(7) and 62-555.312 of the Florida Administrative Code (F.A.C.). There are several parcels adjacent to or surrounding Folio 4842-35-68-0010. GPS coordinates for the approximate location of the sanitary hazards will be obtained and an aerial map generated to identify the minimum regulatory setback requirements and subsequently verified by field survey in Task 2. A technical memorandum with site plan figure illustrating the setbacks will be delivered to the City for review and comment.

Task 2 – Final Design: Well 3R with Appurtenances and Raw Water Main

Upon acceptance of the well site selection and sanitary survey, Tetra Tech will initiate the final design of Projects 1 and 2. The final design will result in preparation of the bid documents, engineering drawings and specifications, which will be submitted for review at 60%, 90% and 100% completion levels along with an opinion of cost update. Provide three (3) hard copies and an electronic copy of the drawings and specifications in PDF format for each review. A review meeting will be held following each submission. Services to be completed during Task 2 are summarized below:

Survey:

Tetra Tech's subconsultant, Keith and Associates, Inc., will prepare a topographic survey of the well site (100 ft radius from the well) and raw water main route including Folio 4842-35-68-0010 and NE 3rd Avenue between NE 12th Street to NE 13th Street. Survey shall show the approximate boundary lines per the Broward County GIS together with surface improvements such as buildings, roadways, pavement, sidewalks, traffic striping, walls, fences, surface utilities, etc. Trees shall be noted by common name and diameter at breast height (DBH). Storm and sanitary structures shall be noted with rim elevations (north side of rim), along with pipe invert elevations, bottom of structure elevations, pipe diameters, pipe materials, and pipe directions. Survey shall be referenced to the Florida State Plane Coordinate System (NAD83/11) and the North American Vertical Datum of 1988 (NAVD88). Elevations shall be shown at an interval of approximately 50 feet, including intermediate changes in grade. Includes finished floor elevations and surface markings for underground utilities. Survey of said markings shall be based on Real-Time Kinematic (RTK) GPS observations and referenced to the Florida State Plane Coordinate System (NAD83/11) and the North American Vertical Datum of 1988 (NAVD88). Survey of horizontal designations shall be delivered in a geo-referenced (NAD83/11) AutoCAD file. Includes horizontally marking any known toneable and non-toneable underground utilities that are represented on as-built plans, above ground appurtenances, and other miscellaneous utility records provided by the City. Conductive utilities will be marked on the surface utilizing active geophysical prospecting techniques in conjunction with electromagnetic equipment utilizing passive radio and audio frequencies. Known non-conductive utilities and/or structures will be marked on the surface utilizing Ground Penetrating Radar (GPR), above ground features, professional judgment, utility plats and/or as-

builts. This task does not include identifying gravity systems, service laterals, irrigation, or overhead facilities.

Subsurface Utility Excavations (SUEs):

After City-review of the 60% Submittal, Tetra Tech will coordinate with its subconsultant, Keith and Associates, Inc. (Keith), to perform up to five (5) test holes at $520 per test hole and includes up to four (4) test holes per mobilization. Test holes will be utilized to expose utilities to minimize any potential for damage during construction. Test holes performed will be of minimum size (usually 1' by 1'). Backfill of test holes will be performed utilizing the removed material. Areas will be restored as close as possible to their original condition. Installation of an identifiable above ground marker will be performed at each test hole location. Field markers will consist of a nail and disk in asphalt, or an iron rod and cap with survey stake in grassed areas. Test holes performed in the street will be patched using cold patch. The test hole number and utility will be identified on the ground or on the stake, as appropriate. A test hole summary report will be created providing coordinates, depth of cover, type, size, and material if applicable.

Surveying services will be performed to collect the surface markings for each test hole at $140 per test hole and includes up to four (4) test holes per mobilization. Survey of said markings shall be based on real-time kinematic (RTK) GPS observations and referenced to the Florida State Plane Coordinate System (NAD83/11) and the North American Vertical Datum of 1988 (NAVD88). Survey of test holes shall be delivered in a geo-referenced (NAD83/11) AutoCAD file. Survey of test holes shall be delivered in Excel in PNEZD format.

Tetra Tech will contact Sunshine State One Call of Florida forty-eight (48) hours in advance of Keith's mobilization to the site. Access to confined spaces is not included. If confined spaces need to be accessed for locating purposes, then the City will be notified, and further arrangements will be made for said access. Additional fees may be applicable. If additional maintenance of traffic (MOT) is required beyond standard MOT operations, Tetra Tech will notify the City. Site access for SUE operations is assumed between the hours of 7:30 AM and 5:00 PM, Monday – Friday.

A. Project No. 1: Well 3R Construction

1. Tetra Tech will prepare a comprehensive project manual to contain bidding, contract, general requirements, and technical specifications for competitive bidding. The project manual and its contents will be formatted in accordance with the Construction Specification Institute (CSI) MasterFormat and prepared using Microsoft Word®. Figures illustrating the well location and well section will be incorporated into the project manual.

B. Project No. 2: Well 3R Wellhead and Raw Water Main

1. Tetra Tech will verify the hydraulic analysis of the raw water transmission system for design of the proposed raw water transmission main and well pump. The City will provide as-built drawings of the existing raw water transmission mains and discharge elevation at the WTP site for Production Well 3R.

2. Tetra Tech will prepare drawings using AutoCAD. A preliminary list and quantity of drawings is provided on the following page.

Preliminary Drawings List and Quantity of Wellhead with Appurtenances

General
Cover Sheet
Index of Drawings and General Notes
Legend and Abbreviations

Civil
Demolition and Erosion Control Plan
Civil Site Plan
Raw Water Main – Plan and Profiles
Civil Details (2 sheets)

Structural
Structural General Notes
Wellhead Pad – Plan, Section and Details

Process Mechanical
Mechanical Site Plan
Mechanical Plan and Section
Mechanical Details

Electrical
Electrical Legend and General Notes
Electrical Site Plan
Electrical Well Plans
Wiring Diagrams (2 sheets)
Single Line Diagram
Electrical Schedules
Electrical Details (2 sheets)

Instrumentation
Instrumentation and Control Legend
Network Architecture
Well P&ID
Wiring Diagrams
Instrumentation Details (2 sheets)
Instrumentation and Control Schedules

Wellhead design includes a variable frequency drive (VFD) and sensors to monitor oxidation-reduction potential (ORP), potential hydrogen (pH), static pumping water levels (drawdown), flow, and pressure run through a programmable logic control (PLC) served by a new onsite fiber line installed by the City. Specifics on ventilation of the VFD can be coordinated during design.

3. Tetra Tech will prepare a comprehensive project manual to contain bidding, contract and general requirements and technical specifications for competitive bidding. The project manual and its contents will be formatted in accordance with the Construction Specification Institute (CSI) MasterFormat and prepared using Microsoft Word®.

Task 3 – Permitting

Based on previous experience in South Florida and with agencies having jurisdiction (AHJs), Tetra Tech will prepare and submit permit applications and supporting documentation to the South Florida Water Management District (SFWMD), Florida Department of Environmental Protection (FDEP) Southeast District Office, Broward County Environmental Protection and Growth Management Department (EPGMD), City Building Department, and City Public Works as required to secure permits for construction and operation of Production Well 3R and the raw water transmission main. One (1) round of request for additional information (RAI) from the permitting agencies is anticipated to clarify the original application. Tetra Tech will closely coordinate with the City relative to RAI responses. City shall pay all permit application and advertisement fees. It is anticipated that design will minimize impervious area and not impact wetlands, therefore, environmental resource permitting with the SFWMD is not anticipated. Should submittals to other agencies, Tetra Tech will prepare a proposal to address such additional services. The following are the permit applications that have been included:

A. Project No. 1: Well 3R Construction

1. A courtesy letter will be prepared and submitted to the SFWMD notifying them of the installation of Production Well 3R.

The following permit application submittal will be initiated by the selected well driller.

2. SFWMD Well Construction Permit. A Well Construction Permit must be obtained for well construction by the licensed water well driller. Tetra Tech will assist by providing the well driller information needed to complete the application.

B. Project No. 2: Well 3R Wellhead and Raw Water Main
Permit application submittals will begin after having addressed City comments on the 90% Submittals for Project No. 2.

1. FDEP Application for a Specific Permit to Construct PWS Components [DEP Form 62.555.900(1)] – Production Well 3R and Raw Water Main.

2. City Public Works Right-of-Way Utilization Permit application for raw water tie-in work within the NE 3rd Avenue right-of-way.

3. City Building Department. Submit a "dry run" application package for review and comment prior to bidding. Responses to the City's dry run submittal comments will be incorporated into the final design documents prior to bidding. Upon award of the contract, Tetra Tech will provide the contractor information as required to obtain the Building Department permit.

4. Coordination with EPGMD as needed to place the wellhead into operation.

5. FDEP Application for a Certification of Construction Completion and Request for Clearance to Place Permitted PWS Components into Operation [DEP Form 62.555.900(9)] – Production Well 3R and Raw Water Main. This form will be supported with as-built drawings and well bacteriological analysis results in accordance with Rule 62-555.315 (6)(b) 1., F.A.C.

Upon issuance of the above permits relating to the raw water main construction, Tetra Tech will provide one (1) electronic copy of specifications and drawings for the City's use in construction, system testing, and restoration of existing conditions. Review of raw water main as-builts, bacteriological sample results, and hydrostatic pressure test results will be completed and submitted with the above DEP application [Form 62.555.900(9)] for clearance. Meetings, responses to RAIs, addenda, clarifications, record drawing preparation, and bidding of the raw water main are not included.

Task 4 – Bidding and Award

A. Project No. 1: Well 3R Construction

Upon authorization to proceed with the bidding and award phase of the well construction project, Tetra Tech will complete the following tasks:

1. Tetra Tech will provide one (1) electronic copy of technical specification and drawings to the City Purchasing Department so that the City may advertise and receive bids.

2. Tetra Tech will provide responses to questions from bidders and include addenda as required to interpret, clarify or expand the bidding documents.

3. Review and evaluate the three (3) apparent low bidders' qualifications for undertaking the work and make recommendation of award of the contract.

B. Project No. 2: Well 3R Wellhead

Upon authorization to proceed with the bidding and award phase of the wellhead construction project, Tetra Tech will complete the following tasks:

1. Tetra Tech will provide one (1) electronic copy of technical specification and drawings to the City Purchasing Department for bidding purposes.

2. Tetra Tech will provide responses to questions from bidders and include addenda as required to interpret, clarify or expand the bidding documents.

3. Review and evaluate the three (3) apparent low bidders' qualifications for undertaking the work and make recommendation of award of the contract.

Task 5 – Construction Administration

A. Project No. 1: Well 3R Construction

Upon award of the contract, Tetra Tech will conduct a preconstruction conference with the selected Contractor, subcontractors, and City and prepare minutes of the conference and following tasks:

1. Prepare one (1) electronic copy of the conformed set of technical specifications and drawings for public record and reference during construction.

2. Conduct five (5) monthly progress meetings with City and the Contractor. Tetra Tech will prepare an agenda and meeting summary with distribution to all attendees. The construction is anticipated to take 150 calendar days from notice to proceed until substantial completion.

3. Review the Contractor's application for payment and the accompanying data and schedules, determine the amounts owed to the Contractor, and advise the Owner of the recommended payments to the Contractor.

4. Provide interpretation or clarification of the design documents when requested for clarification of the technical specifications and drawings.

5. Review shop drawings and other required Contractor submittals up to two (2) times per submittal for general conformance with the technical specifications and drawings.

6. Conduct one (1) substantial completion site visit and develop a punchlist of items to be corrected by the Contractor. Final completion inspection to determine if the punch list items have been completed in accordance with the technical specifications and drawings will be performed by City.

B. Project No. 2: Well 3R Wellhead and Raw Water Main

Upon award of the contract, Tetra Tech will attend and conduct a preconstruction conference with the selected Contractor, subcontractors, and City and prepare a summary of the conference. In addition, during the construction management phase of the project, Tetra Tech will complete the following tasks:

1. Prepare one (1) electronic copy of the conformed set of technical specifications and drawings for public record and reference during construction.

2. Conduct eight (8) monthly site visits to the construction site to oversee construction of the project and attend eight (8) monthly progress meetings. These site visits will observe the progress and quality of the construction and its general conformance to the technical specifications and drawings. These site visits will be conducted following each progress meeting. The construction is anticipated to take 240 calendar days from notice to proceed until substantial completion.

3. Review the Contractor's application for payment and the accompanying data and schedules, determine the amounts owed to the Contractor, and advise the Owner of the recommended payments to the Contractor.

4. Provide interpretation or clarification of the design documents when requested, review / evaluate, and prepare change orders required for clarification or minor modification of the technical specifications and drawings.

5. Review shop drawings and other required Contractor submittals up to two (2) times per submittal for general conformance with the technical specifications and drawings.

6. Conduct a substantial completion site visit and develop a punch list of items to be corrected by the Contractor.

7. Conduct a final completion site visit to determine: (1) if the punchlist items have been completed in accordance with the technical specifications and drawings and (2) if the Contractor's obligations are fulfilled thereunder and recommend final payment to the Contractor.

8. Prepare one (1) set of record drawings and electronic copy on CD for City, incorporating those changes made during construction based on record information furnished by the Contractor.

Task 6 – Project No. 1: Well 3R Construction and Testing Observation

Tetra Tech will provide the following services:

1. Construction. Tetra Tech will provide quality control observations during the well construction period, including a staff hydrogeologist to observe portions of the following processes:

    1. Pilot hole drilling
    2. Casing emplacements
    3. Welding of casings
    4. Installation of centralizers
    5. Grouting of casings
    6. Completion of borehole
    7. Geophysical / video logging
    8. Aquifer performance testing
    9. Water quality sampling
    10. Plumbness and Alignment testing

2. Well Development. Tetra Tech will provide up to 44 hours of development observation to measure sand content and turbidity using a Rossum sand test unit through the development process. The well driller will be required to provide well development at the specified rates and development methods. If development is not proceeding as expected, alternate methods can be pursued prior to the allotted development time being expended. The new production well should produce water with turbidity less than 1 NTU and sand content less than 1 ppm before being placed into service.

3. Step-Drawdown Testing. Tetra Tech will be present for the step-drawdown testing to assist in the data collection and to ensure the flow rate is maintained as specified, and that the required water levels are collected.

4. Geophysical and Video Logging. Tetra Tech will be on-site during the geophysical logging and the video logging of the well to note any problems or concerns with the borehole or the completed well. The final video log confirms the final well casing setting depth and the total well depth.

5. Plumbness and Alignment Testing. Tetra Tech will be on-site during the plumbness and alignment testing of the well casing. This test is performed to ensure the selected submersible pump will be able to fit into the completed well.

6. Water Quality Sampling. Tetra Tech will collect water quality samples during the pilot hole construction to help define the changes in water quality with depth. Water quality testing will be performed during pilot hole construction to determine if alternate construction can improve water quality. Water quality sampling will be conducted after well development has been completed to analyze for Primary and Secondary Drinking Water Standards.

7. Well Construction Summary Report. Tetra Tech will prepare a well construction summary report to summarize the well construction process including drilling, casing installation, grouting, development, and testing. The results and analyses of each of the performed tests will be included. This summary report will be a vital resource to evaluate the well's performance over time.

III. ASSUMPTIONS AND EXCLUSIONS

The following assumptions and exclusions are critical to this proposed scope and compensation:

- Time for project management is included within each task.
    - Tasks include attendance at one (1) project kickoff meeting with the City, including preparation of the agenda and minutes.
    - Overall management of the project, preparation of a Health and Safety Plan, Quality Assurance / Quality Control reviews of design deliverables, including contract administration, budget management, invoicing, preparation of a project schedule in MS Word, and coordination with the City.
- Surveying and Subsurface Utility Excavations (SUEs) are limited to Folio 4842-35-68-0010 and NE 3rd Avenue between NE 12th Street and NE 13th Street.
- SUEs will meet Quality Level A standards per ASCE/UESI 38-02 and are needed from the well site to the raw water main tie-in location to capture underground utilities in conflict with the proposed path. Asphalt depth will also be measured where test holes are performed through asphalt.
- The City will provide Tetra Tech with copies of all available as-builts, record drawings and specifications and access to the site when required for field reconnaissance and measurements.
- Not included in this scope are Maintenance of Traffic; AHJ-inspector field directives affecting design; safety / security drawings and specifications related to fence, camera, alarm sensor, and security communications; and water treatment.
- Impact to the proposed Reclaimed Water Pumping and Storage Facility Site Plan dated October 19, 2020 is not anticipated.
- Drawings and technical specifications for Project Nos. 1 and 2 will be prepared and delivered separately and in succession. The raw water main design and permitting will be delivered ahead of the well construction, per the City's request.
- As part of Project No. 2, safety / security drawings and specifications related to fence, camera, alarm sensor, and security communications are not included in this work authorization.
- Design services are limited to civil, structural, electrical, and mechanical engineering.
- Geotechnical engineering services, if required, will be an additional service.
- A pump house / building structure and architecture services are not included.
- It is assumed that the City will construct the raw water main between Production Well 3R and the connection on NE 3rd Avenue. Tetra Tech will:
    - provide specifications and drawings in electronic format to the City for the raw water main in parallel, though separate, from the bid documents sent to the City for solicitation;
    - review shop drawing submittals on the proposed raw water piping, fittings, and valves; and
    - observe the hydrostatic pressure testing during a monthly site visit.

  To reduce or avoid overlap of construction activities, the City may consider scheduling the raw water main construction to be complete prior to the well driller mobilizing to the site.
- Tetra Tech will provide up to 173 hours of quality control observations during the assumed 250-hour / 150 calendar day well driller construction period.
- The City's Procurement Division will be responsible for reproduction and distribution of bidding documents and the distribution of all addenda to registered plan holders.
- Permit application fees will be paid for by the City.
- Construction inspections by the Building Department are separate from Tetra Tech's observation schedule, unless called on by the City.

IV. COMPENSATION

The total compensation for the Scope of Work described in **Section II** is a lump sum of $257,683 and will be invoiced monthly on a percentage complete. The compensation for the Scope of Work by task is summarized below.

Task	Description	Fee
1	Well Site Selection and Sanitary Survey	$12,880
2	Final Design	
	Survey	$11,895
	Subsurface Utility Excavations (SUEs)[1]	$3,820
	A. Project No. 1: Well 3R Construction	$17,936
	B. Project No. 2: Well 3R Wellhead and Raw Water Main	$100,260
3	Permitting	
	A. Project No. 1: Well 3R Construction	$5,398
	B. Project No. 2: Well 3R Wellhead and Raw Water Main	$6,100
4	Bidding and Award	
	A. Project No. 1: Well 3R Construction	$7,047
	B. Project No. 2: Well 3R Wellhead	$6,175
5	Construction Administration	
	A. Project No. 1: Well 3R Construction	$20,534
	B. Project No. 2: Well 3R Wellhead and Raw Water Main[2]	$35,800
6	Well Construction and Testing Observation	$29,838
	Total Lump Sum	$257,683

1. SUEs include up to four (4) test holes per mobilization and are priced at $520 each plus $140 to collect survey for each.
2. Assumes raw water main will be constructed by City and is not included in Bid Documents for public solicitation.

V. SCHEDULE

Tetra Tech estimates that the scope of services described in **Section II** can be completed as follows:

Project No.	Description	Duration (Days)	Cumulative Days
1	Well Construction (Tasks 1 – 6)	420	420
2	Wellhead Construction (Tasks 2 – 5)	410	830

"CITY":

Witnesses:

CITY OF POMPANO BEACH

_____

By:_____
REX HARDIN, MAYOR

_____

By:_____
GREG HARRISON, CITY MANAGER

Attest:

_____ (SEAL)
ASCELETA HAMMOND, CITY CLERK

Approved As To Form:

_____
MARK E. BERMAN, CITY ATTORNEY

STATE OF FLORIDA
COUNTY OF BROWARD

The foregoing instrument was acknowledged before me this _____ day of _____, 2017 by **REX HARDIN** as Mayor, **GREG HARRISON** as City Manager and **ASCELETA HAMMOND** as City Clerk of the City of Pompano Beach, Florida, a municipal corporation, on behalf of the municipal corporation, who are personally known to me.

NOTARY'S SEAL:

_____
NOTARY PUBLIC, STATE OF FLORIDA

_____
(Name of Acknowledger Typed, Printed or Stamped)

_____
Commission Number

"**CONTRACTOR":**

_____
(Print name of company)

Witnesses:

By:_____

_____

Print Name:_____

_____

Title:_____

ACKNOWLEDGMENT OF CONTRACTOR, IF A CORPORATION

STATE OF }
} ss:
COUNTY OF }

On this _____ day of _____, _____, before me personally came and appeared _____,
to me known, who, being by me duly sworn, did depose and say that he resides at _____
_____, that he is the _____
of ___ Tetra Tech, Inc. ____ _____, the corporation described in
and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the impressions affixed to said instrument is an impression of such seal; that he is the proper official of said corporation designated to execute such contract, that he has authority so to do, that he executed same for and in behalf of said corporation, and this his act is the act and deed of said corporation.

Witness my hand and official notarial seal at _____
_____ the day and year above written.

My Commission Expires: _____ _____
Notary Public

Price Proposal

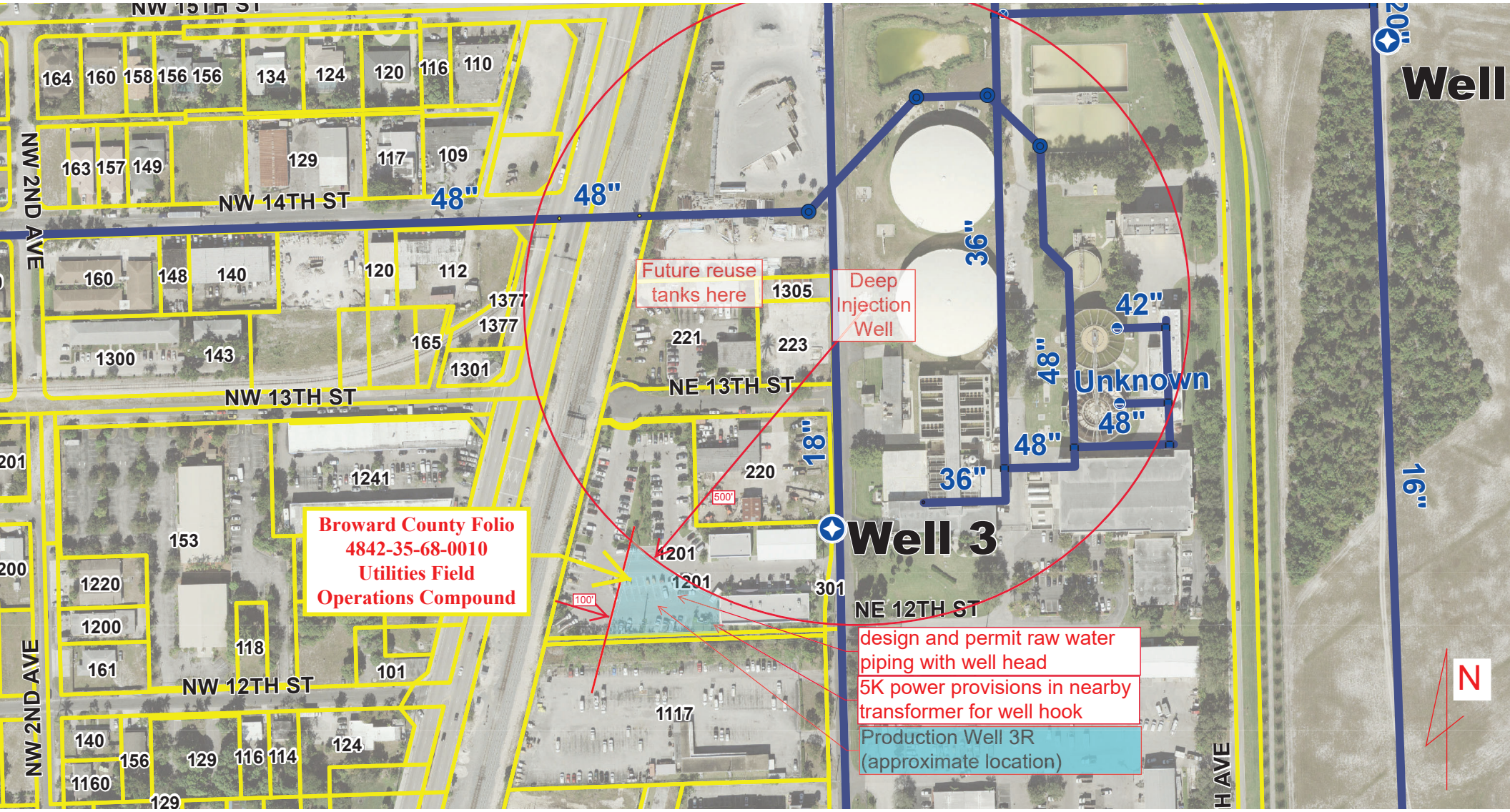
WA 1 - Production Well 3 Replacement

Submitted to: City of Pompano Beach

Contract Type: Lump Sum

Project Phases / Tasks	Total Labor Hrs	ProjMgmt	Program Manager	Project Manager 1	Admin	Project Administrator	Civil	Sr Engineer 3	Engineer 1	Sr CAD Designer 1	Structural	Sr Engineer 1	Engineer 2	Sr CAD Designer 1	Electrical	Sr Engineer 1	Engineer 2	Labor ($)	Subs ($)	Travel ($) per 2022 GSA rate of $0.585 per mile	ODCs ($) Reproduction	Task Pricing Totals ($)
Labor Plan (Staff Hours)																						
Bill Rate >			275.00	190.00		95.00		260.00	100.00	135.00		225.00	115.00	135.00		225.00	115.00					
1. Well Site Selection and Sanitary Survey	**33**		**5**	**18**		**-**		**-**	**3**	**-**		**-**	**-**	**-**		**7**	**-**	**6,670.00**	**5,825.00**	**385.00**	**-**	**12,880.00**
2. Final Design	**634**		**11**	**119**		**2**		**10**	**24**	**119**		**9**	**25**	**8**		**156**	**151**	**105,335.00**	**27,861.00**	**165.00**	**550.00**	**133,911.00**
Survey (Sub: Keith)	8		1	4		-		-	3	-		-	-	-		-	-	1,335.00	10,560.00	-	-	11,895.00
SUEs (Sub: Keith)	1		-	1		-		-	-	-		-	-	-		-	-	190.00	3,630.00	-	-	3,820.00
A. Project No. 1: Well 3R Construction	22		1	21		-		-	-	-		-	-	-		-	-	4,265.00	13,671.00	-	-	17,936.00
B. Project No. 2: Well 3R Wellhead and Raw Water Main	603		9	93		2		10	21	119		9	25	8		156	151	99,545.00	-	165.00	550.00	100,260.00
3. Permitting	**48**		**9**	**35**		**-**		**-**	**4**	**-**		**-**	**-**	**-**		**-**	**-**	**9,525.00**	**1,973.00**	**-**	**-**	**11,498.00**
A. Project No. 1: Well 3R Construction	14		9	5		-		-	-	-		-	-	-		-	-	3,425.00	1,973.00	-	-	5,398.00
B. Project No. 2: Well 3R Wellhead and Raw Water Main	34		-	30		-		-	4	-		-	-	-		-	-	6,100.00	-	-	-	6,100.00
4. Bidding and Award	**48**		**5**	**27**		**1**		**2**	**5**	**4**		**-**	**-**	**-**		**2**	**2**	**8,840.00**	**4,052.00**	**110.00**	**220.00**	**13,222.00**
A. Project No. 1: Well 3R Construction	14		2	12		-		-	-	-		-	-	-		-	-	2,830.00	4,052.00	55.00	110.00	7,047.00
B. Project No. 2: Well 3R Wellhead	34		3	15		1		2	5	4		-	-	-		2	2	6,010.00	-	55.00	110.00	6,175.00
5. Construction Administration	**235**		**23**	**130**		**2**		**-**	**38**	**4**		**-**	**19**	**2**		**5**	**12**	**40,515.00**	**14,004.00**	**1,815.00**	**-**	**56,334.00**
A. Project No. 1: Well 3R Construction	31		3	28		-		-	-	-		-	-	-		-	-	6,145.00	14,004.00	385.00	-	20,534.00
B. Project No. 2: Well 3R Wellhead and Raw Water Main	204		20	102		2		-	38	4		-	19	2		5	12	34,370.00	-	1,430.00	-	35,800.00
6. Well Construction Observation and Testing	**-**		**-**	**-**		**-**		**-**	**-**	**-**		**-**	**-**	**-**		**-**	**-**	**-**	**29,838.00**	**-**	**-**	**29,838.00**
Totals	**998**		**53**	**329**		**5**		**12**	**74**	**127**		**9**	**44**	**10**		**170**	**165**	**170,885.00**	**83,553.00**	**2,475.00**	**770.00**	**257,683.00**

SITE PLAN


Broward County Folio
4842-35-68-0010
Utilities Field
Operations Compound
Future reuse tanks here
Deep Injection Well
Well 3
Well
Unknown
design and permit raw water piping with well head
5K power provisions in nearby transformer for well hook
Production Well 3R (approximate location)
NW 14TH ST
NW 13TH ST
NW 12TH ST
NE 13TH ST
NE 12TH ST
NW 2ND AVE
48"
36"
42"
18"
16"
20"
100'
500'
N