

Work Authorization No. CDMS13-22

2A Electrical Switchgear Improvements – Design, Permit, Bid, CMS
Under
Agreement between Broward County and CDM Smith Inc.
for

Continuing Engineering Services for Water Treatment and Raw Water Production Systems

1. This Work Authorization is issued pursuant to the Agreement between Broward County (hereinafter referred to as "COUNTY") and CDM Smith Inc. for Continuing Engineering Services for Water Treatment and Raw Water Production Systems (hereinafter "the Agreement"), which was approved by the Board of County Commissioners on January 14, 2014.

2. This Work Authorization requires CDM Smith Inc. (hereinafter referred to as "CONSULTANT") to provide the services described in Exhibit "A" to this Work Authorization. These services are authorized pursuant to Article 3 of the Agreement.

3. Compensation and Method of Payment.

3.1 Payment for the services authorized by this Work Authorization shall be in accordance with Article 5 of the Agreement and the agreed method of compensation shall be as follows:

Maximum Amount Not-To-Exceed Compensation. COUNTY agrees to pay CONSULTANT as compensation for performance of all services set forth in Exhibit "A" to this Work Authorization, and as required under the terms of the Agreement, Salary Costs as described in Section 5.2 of the Agreement, up to a maximum amount not-to-exceed \$398,187.12 and to reimburse CONSULTANT for Reimbursables as described in Section 5.3 of the Agreement, up to maximum amount not-to-exceed \$8,000.00, for a total maximum amount not-to-exceed \$406,187.12. It is understood that the method of compensation is that of "maximum amount not-to-exceed" which means that CONSULTANT shall perform all services set forth herein for total compensation in the amount of or less than that stated above.

3.2 Payments for this Work Authorization shall be charged against:

Budget No. 44250-44100-67301010-512110-100870

4. CONSULTANT shall perform the services described in Exhibit A within

_____ calendar days ("Time for Performance"), or

the time periods specified in the Project Schedule included in Exhibit A ("Time for Performance"); said time periods shall commence from the date of the Notice to Proceed for such services.

4.1 If this box is checked, liquidated damages shall be applicable. In the event CONSULTANT fails to complete the services identified in Exhibit "A" to this Work Authorization, on or before the Time for Performance set forth in section 4 above, CONSULTANT shall pay to COUNTY the sum of \$_____ for each calendar day after the applicable Time for Performance, plus approved time extensions thereof, until completion of the service. These amounts are not penalties but are liquidated damages to COUNTY for its inability to proceed with, and complete, the service in a timely manner pursuant to the agreed upon Schedule. Liquidated damages are hereby fixed and agreed upon by the parties, recognizing the impossibility of precisely ascertaining the amount of damages that will be sustained by COUNTY as a consequence of such delay, and both parties desiring to obviate any question or dispute concerning the amount of said damages and the cost and effect of the failure of CONSULTANT to complete the services within the applicable Time for Performance. This provision shall not affect the rights and obligations of either party as set forth in Section 10.7 of the Agreement.

4.2 If this box is checked, the COUNTY shall not withhold any amounts due under this Work Authorization as retainage.

5. CBE Goals.

5.1 In an effort to assist COUNTY in achieving its overall goal as set forth in the Agreement, CONSULTANT agrees to meet the following CBE participation goals by utilizing the CBE firms for the work and dollar values described in subsection 5.2: 0.0%.

5.2 In performing services for this Project, COUNTY and CONSULTANT hereby incorporate CONSULTANT's participating CBE firms, addresses, scope of work, and dollar value identified in the Letter of Intent (attached hereto and incorporated herein as Exhibit "B").

6. The terms and conditions of the Agreement are hereby incorporated into this Work Authorization. Nothing contained in this Work Authorization shall alter, modify, or change in any way the terms and conditions of the Agreement with the County.

IN WITNESS WHEREOF, the Parties have made and executed this Work Authorization No. CDMS13-22: BROWARD COUNTY, by and through its BOARD OF COUNTY COMMISSIONERS, signing by and through its Mayor or Vice-Mayor, authorized to execute same by Board action on the ___ day of _____, 20__, and CDM SMITH INC., signing by and through its President or Vice President, duly authorized to execute same.

COUNTY

ATTEST:

BROWARD COUNTY, by and through its Board of County Commissioners

Broward County Administrator, as Ex-officio Clerk of the Broward County Board of County Commissioners

By _____ Mayor

____ day of _____, 20__

Approved as to form by
Andrew J. Meyers
Broward County Attorney
Governmental Center, Suite 423
115 South Andrews Avenue
Fort Lauderdale, Florida 33301
Telephone: (954) 357-7600
Telecopier: (954) 357-7641

Insurance requirements
Approved by Broward County
Risk Management Division

By Tim Crady 10/27/17
Signature (Date)

By Angela F. Benjamin 11/3/17
Assistant County Attorney (Date)

Tim Crady, Deputy Secretary
Print Name and Title above

Michael J. Kerr 11/8/17
Deputy County Attorney

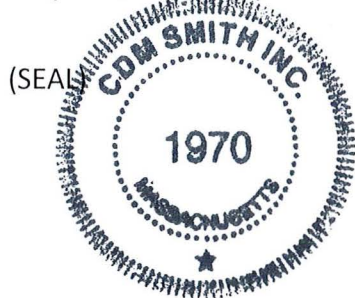
CONSULTANT

ATTEST:

CDM SMITH INC.

Mario Marcano
Corporate Secretary

By Kevin C. Leo
Principal or Vice President



Kevin C. Leo, Senior Vice President
(Print Name and Title)

18 day of Oct, 2017.

Exhibit "A"

Scope of Services

Work Authorization No. CDMS 13-22

Agreement No: RLI No. R1025211R1
Agreement Title: Water Treatment and Raw Water Production Systems (January 14, 2014)
Work Authorization Name: 2A Electrical Switchgear Improvements – Design, Permit, Bid, CMS

PROJECT DESCRIPTION

On April 29, 2011, Broward County Water and Wastewater Services finalized a Technical Memorandum to detail required improvements for Water Treatment Plant 2A Electrical Equipment Replacement, as part of the Broward County Water and Wastewater Capital Improvements Program. The Technical Memorandum provided the feasibility study for the replacement and upgrade of the existing medium voltage main electrical switchgear, associated medium voltage high service and transfer pump motor starters, and generator paralleling switchgear at Water Treatment Plant 2A. The Technical Memorandum identified existing conditions and operational constraints particular to the electrical equipment and proposed possible approaches (options) to replace equipment that has reached the end of its useful life, and associated improvements aimed at decreasing the operation and maintenance costs.

PROJECT SITE

The project site is located at 1390 NE 51 Street, Pompano Beach, Florida, 33064.

BASIC SERVICES

CONSULTANT shall provide engineering services described herein for the following electrical components:

1. Replace Generator Paralleling Switchgear.
2. Replace Tie Breaker
3. Replace Variable Speed Pump Control Panel.
4. Replace Main #1 Breaker
5. Replace Feeder #1 Breaker
6. Replace Main #2 Breaker.
7. Replace Feeder #2 Breaker.
8. Replace Generator Breaker.
9. High Service Pump #4 Starter convert to variable frequency drive.
10. High Service Pump #5 Starter convert to variable frequency drive.

11. Transfer Pump #1 Starter convert to variable frequency drive.
12. Transfer Pump #2 Starter convert to variable frequency drive.
13. Two new 13.2 -4.1 KV FPL transformers, meters, maintenance access structures, conduit, wire, and concrete encasement for new power feeds of the above replaced electrical components.

Task 1 - Conceptual Design

CONSULTANT shall prepare a conceptual design for the basic services identified above at the 2A.

Activities shall include evaluation of an updated existing load and power demands, preparation of a conceptual design level opinion of probable construction cost, and coordination/review with COUNTY.

A. Kick-Off Meeting/Design Preference Site Visit and Review

The CONSULTANT shall prepare for to participate in a Project kick-off meeting with COUNTY within ten (10) working days of the Notice to Proceed date. The primary purpose of the meeting shall include but not be limited to establishing appropriate contacts for each major project component, determination of the availability of data relating to the electrical components (i.e., operating data, record drawings, etc.), and discussion of a conceptual-level project schedule. CONSULTANT shall also review with COUNTY specific objectives of the project, and discuss design criteria and preferences of the project, as well as any specific equipment preference of the COUNTY.

B. Conceptual Design

Following completion of the design preference site visit and review, CONSULTANT shall prepare the conceptual design. The conceptual design shall include but not be limited to the following:

1. A review of historical electrical power usage over the past three.
2. A review of existing 4160-Volt and 480-Volt single line schematics.
3. A preliminary site layout showing the approximate locations of proposed major electrical components.
4. A detailed plan for temporary power and coordination of work and sequence of construction for uninterrupted power and operation of the load centers and related electrical work.
5. An evaluation of control requirements.
6. A conceptual level of the opinion of probable construction costs for the proposed improvement.
7. An updated project schedule.
8. A review of permits required for construction of the facility.
9. Conceptual construction drawings and technical specification Table of Contents.

C. Milestone Deliverable consists of four (4) bound paper copies and one electronic copy (PDF format) of the conceptual memorandum, drawings, and list of the technical specifications.

CONSULTANT shall meet with the COUNTY to receive and discuss COUNTY review comments. CONSULTANT shall incorporate the review comments of COUNTY as required. Meeting notes shall be prepared by CONSULTANT and distributed electronically to attendees.

Task 2 – Design and Construction Documents

CONSULTANT shall provide the following services:

- A. Services for 60 Percent Design Development** consist of advancing the development of drawings and technical specifications based on the design identified in the conceptual design above.
1. CONSULTANT shall develop 60% completed (average) project specific drawings.
 2. CONSULTANT shall develop 60% project specific specifications applicable to the project for Divisions 1 through 16.
 3. **Milestone Deliverable** consists of four (4) bound paper copies and one electronic copy (PDF format) of 60% Drawings (11-inch by 17-inch) and Specifications for review. CONSULTANT's project schedule provides for thirty calendar days of review time for COUNTY. CONSULTANT shall meet with COUNTY to receive and discuss COUNTY's review comments. CONSULTANT shall incorporate into the construction documents the review comments of COUNTY as required. CONSULTANT shall prepare written correspondence explaining how each COUNTY review comments has been addressed.
- B. Services for 90 Percent Pre-Final Design** services consists of advancing the development of drawings and technical specifications based on the design identified in the design development above.
1. CONSULTANT shall develop 90% project specific drawings.
 2. CONSULTANT shall develop 90% project specifications applicable to the project for Divisions 1 through 16.
 3. CONSULTANT shall update the design schedule and prepare and estimated opinion of probable project costs of the 90% construction documents consistent with AACE International. An estimate of this type is normally expected to be accurate within (+) 15 percent and (-) 10 percent.
 4. **Milestone Deliverable** consists of four (4) bound paper copies and one electronic copy (PDF format) of the 90% Drawings (11-inch by 17-inch) and Specifications for review. CONSULTANT's project schedule provides for thirty calendar days of review time for COUNTY. CONSULTANT shall meet with COUNTY to receive and discuss COUNTY'S review comments. CONSULTANT shall incorporate into the construction documents the review comments of COUNTY as required. CONSULTANT shall prepare written correspondence explaining how each COUNTY review comment has been addressed.

- C. Services for Permitting** consist of preparing construction license applications to the following regulatory agencies having jurisdiction on a project. License application forms are to be delivered by CONSULTANT to the appropriate regulatory agencies. CONSULTANT shall pay permit fees based on the fee value provided by the regulator. COUNTY shall reimburse CONSULTANT for these fees.
1. CONSULTANT shall submit the 90% construction documents to the State of Florida Department of Environmental Protection Department (FDEP) - Broward County Health Department on behalf of the COUNTY (Application for a Public Drinking Water Facility Construction Permit Form 62-555.900(1)).
 2. CONSULTANT shall submit the 90% construction documents for a Planning and Zoning review to the City of Pompano Beach on behalf of the COUNTY. All technical comments received in a timely manner will be addressed by inclusion into the 100% Documents or by inclusion through an addendum to the Bid Documents.
- D. Services for 100% Final Design** shall consist of finalizing documents and technical specification sections identified in the pre-final design phase. These documents include review comments from regulatory agencies, COUNTY, and CONSULTANT on the pre-final submittal documents.
1. COUNTY will provide one electronic copy (PDF) format of their front end documents. Any changes to the standard language or format of the front end required prior to Bid will be completed by the COUNTY. CONSULTANT shall prepare a single construction bid package.
 2. **Milestone Deliverable** consist of two (2) electronic CD's (PDF) format of the 100% Drawings and Specifications, plus four hard copies in three-ring binders for Purchasing review.

Task 3 – Bidding and Award of Contract

CONSULTANT shall perform the following tasks:

- A. Preparation of Final Bid Documents** shall consist of making revisions to the documents based on review comments receive from the permitting agencies and the COUNTY Purchasing Department. CONSULTANT shall provide the COUNTY four (4) bound paper copies and one electronic copy (PDF format).
- B. Pre-Bid Conference Job Walk Through** shall consist of attending one pre-bid conference and job walk through prior to the advertised bid date.
- C. Issue Bid Documents and Addenda** shall consist of the COUNTY distributing bid documents to construction contractors requesting documents. COUNTY will maintain a list of plan holders. CONSULTANT shall provide timely responses to the inquiries of potential bidders through written addenda. These queries shall be transmitted to the COUNTY by CONSULTANT. CONSULTANT shall prepare addenda and sent to the COUNTY for approval and distribution.
- D. Bid Evaluation** shall consist of the COUNTY forwarding the lowest responsible bid to CONSULTANT to provide support in reviewing the bidder's qualifications and reasonableness of bid amount. Bond and insurance requirement shall be evaluated by the COUNTY. The Scope of Services

does not include time for CONSULTANT to assist COUNTY in the event of a bid protest.

- E. Preparation of Contract Documents for Execution** shall consist of CONSULTANT providing six (6) sets of paper bid documents and addenda for execution by COUNTY and Construction Contractor.

Task 4 – Construction Management Services

CONSULTANT shall perform the following tasks:

- A. Building Department** - CONSULTANT shall provide assistance to the Contractor for procuring the Building Department permit. CONSULTANT shall address up to three (3) set of comments from the Building Department and prepare drawing modifications in response to these comments as required.
- B. Preconstruction Conference** - CONSULTANT's shall conduct one (1) preconstruction conference attended by representatives of COUNTY and by the construction Contractor. CONSULTANT shall provide the attendees with a written summary of the meeting which will be distributed electronically.
- C. Construction Process Meetings** - CONSULTANT shall conduct up to four (4) progress meetings with the construction Contractor and the COUNTY to review project status and identify issues that may affect the project schedule. CONSULTANT shall provide COUNTY with a written summary of each progress meeting which will be distributed electronically to the attendees, including updated versions of correspondence, submittal and Request for Information (RFI) logs.
- D. Site Observations** - CONSULTANT shall undertake up to four (4) periodic site reviews sufficient for each Engineer of Record to certify completion of the project of each discipline.
- E. Pre-Start Up Conference** - CONSULTANT shall conduct one (1) pre-start up conference attended by the construction Contractor and representatives of COUNTY. CONSULTANT shall provide the attendees with a written summary of the meeting which will be distributed electronically.
- F. Pay Requests** - CONSULTANT shall review up to ten (10) applications for payment and accompanying data, determine the amounts owed, and recommend approval of payments due to the Contractor. CONSULTANT's recommendation of any payment requested in an application for payment will be based on CONSULTANT's onsite observations of construction in progress and on CONSULTANT's review of the application for payment and the accompanying data and schedules, that construction has progressed to the point indicated. In addition, it is understood that the quality of construction is in general conformance with the Contract Documents; subject to an evaluation of construction upon substantial completion, to the results of any subsequent tests called for in the Contract Documents, and any qualifications stated in the recommendation; and that the Contractor is due the amount recommended.
- G. Construction Schedule** - CONSULTANT shall perform up to ten (10) reviews of the construction contractor's schedules including initial construction schedule and progress updates, keep COUNTY informed of any perceive problems with the schedule, and advise the construction Contractor of

noted errors in logic or inconsistencies with the Contract Documents.

- H. Submittals** - CONSULTANT shall log, track, and code up to thirty (30) shop drawings and any other submittals which the construction Contractor is required to submit within twenty-one (21) working days of receipt of the submittal except for special items requiring longer review time if so noted in the construction documents. The code shall be for general conformance with the design intent and compliance with the information presented in the construction documents. CONSULTANT shall determine the acceptability of materials and equipment proposed by the construction Contractor.
- I. Vendor Provided O&M Manuals** - CONSULTANT shall log, track, and code up to four (4) vendor provided operation and maintenance manuals required as part of the construction documents.
- J. Contract Interpretations and Clarifications** - CONSULTANT shall answer up to five (5) RFI's and issue necessary interpretations and clarifications of the construction documents in a timely manner. Non-technical administrative interpretations will be issued by the COUNTY.
- K. Change Management** - CONSULTANT shall prepare up to one (1) technical input for requests for routine project cost and /or schedule changes from the construction Contractor. CONSULTANT shall log, track, and evaluate the impact of the change request in terms of project cost and schedule. CONSULTANT shall prepare a recommendation of the change request and if acceptable, a statement noting that the request cost / schedule impacts as fair and reasonable. CONSULTANT's analysis of the change request shall be forwarded to COUNTY for processing. It is noted that claim analysis or litigation support is not a basic service.
- L. Project Closeout** - CONSULTANT, in conjunction with appropriate COUNTY staff, shall develop a "punch list" of the project upon receiving notice from the Contractor that the project is substantially complete. The "punch list" shall include items needing completion or correction prior to consideration of final acceptance. CONSULTANT shall develop the list with assistance from the COUNTY. The list shall be forwarded to the Contractor by the COUNTY. Upon notification from the Contractor that all remaining "punch list" items have been resolved, CONSULTANT, in conjunction with appropriate COUNTY staff, shall perform a final review of the finished project. Based on successful completion of all outstanding work items by the Contractor, CONSULTANT shall assist in closing out the construction contract by certifying final construction to the Health Department.
- M. Record Drawings** - CONSULTANT shall prepare and distribute to the COUNTY two (2) sets of 24" x 36" signed and sealed prints. CONSULTANT shall also deliver the AutoCAD electronic version of the record drawings on compact disk. The record drawings shall incorporate those changes made during the construction process, based on the marked-up prints, drawings, as-built survey, and other data furnished by the construction Contractor and COUNTY to CONSULTANT.
- N. Field Observation Services** - CONSULTANT shall provide a part-time (up to 320-hours) project representative for field observation services of the proposed work. The project representative shall not undertake any of the responsibilities of contractor or its subcontractors, nor direct any of their work. The project representative shall not advise on or issue directions pertaining to any

aspect of the means, methods, techniques, sequences or procedures of construction unless such is specifically called for in the Contract Documents; project representative shall not advise on, or issue directions about safety precautions and programs related to the contractor's work. Project representative shall not approve any interruptions or modification of COUNTY's facilities without the approval of COUNTY.

Task 5 – Optional Additional Services

CONSULTANT shall provide additional basic services, as identified by the Contract Administrator, which are related to but beyond the level of effort of the scope of service outlined above.

ASSUMPTIONS

1. COUNTY will provide access to the site.
2. Access road, parking, storm water management, fire sprinkler, landscape, irrigation, site security are not contemplated.
3. Environmental investigations for contaminated soils is not contemplated.
4. Specialty inspection services other than those identified above are not contemplated.
5. A South Florida Water Management District permit is not contemplated.
6. The Contractor will obtain the Building Department permit.
7. COUNTY will handle and coordinate front-end contract bid documents.
8. COUNTY will handle printing for bidding purposes.

SCHEDULE

The estimated schedule duration for each task of the project is presented below.

Task	Duration
Task 1 – Conceptual Design:	1 month
Task 2 – Design and Construction Documents:	7 months
Task 3 – Bidding and Award of Contract:	6 months
Task 4 – Construction Management Services:	10 months

CDM Smith Inc.

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ATTACHMENT TO EXHIBIT A

LEVEL OF EFFORT ESTIMATING TOOL

Water Treatment and Raw Water Production Systems

Water Treatment Plant - 2A Electrical Switchgear Improvements

Broward County Water and Wastewater Services Working Document

RLI No. R1025211R1 - Work Authorization No. CDMS 13-22

23-Dec-16

Description	Contract Amount	Brinson Amount	CES Amount	Keith Amount	Thompson Amount	CDM Smith Amount
	NTE	CBE Goal 12%	CBE Goal 6%	CBE Goal 5%	CBE Goal 2%	
Task 1 - Conceptual Design Phase	\$ 6,997.94	\$ -	\$ -	\$ -	\$ -	\$ 6,997.94
Task 2 - Design and Construction Documents Phase	\$ 166,648.72	\$ -	\$ -	\$ -	\$ -	\$ 166,648.72
Task 3 - Bidding and Award of Contract Phase	\$ 13,699.26	\$ -	\$ -	\$ -	\$ -	\$ 13,699.26
Task 4 - Construction Management Services Phase	\$ 160,841.20	\$ -	\$ -	\$ -	\$ -	\$ 160,841.20
Task 5 - Optional Additional Services	\$ 50,000.00	\$ -	\$ -	\$ -	\$ -	\$ 50,000.00
Reimbursable (permit Fees)	\$ 8,000.00	\$ -	\$ -	\$ -	\$ -	\$ 8,000.00
NTE Salary TOTALS	\$ 406,187.12	\$ -	\$ -	\$ -	\$ -	\$ 406,187.12
Actual Certified Business Enterprise Percent		0.00%	0.00%	0.00%	0.00%	

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ATTACHMENT TO EXHIBIT A

LEVEL OF EFFORT ESTIMATING TOOL

Water Treatment and Raw Water Production Systems

Water Treatment Plant - 2A Electrical Switchgear Improvements - Design, Permit, Bid

Broward County Water and Wastewater Services Working Document

RLI No. R1025211R1 - Work Authorization No. CDMS 13-22

23-Dec-16

Total Sheet Count 33
CDM Smith Sheet Count 33
Estimated Construction Cost \$ 1,500,000

PHASE AND DESCRIPTION	Principal/Associate	Senior Professional	Professional II	Professional I	Senior Support Services	Staff Support Services	Project Administration	TOTAL HOURS	HOURLY COSTS
Other employees, categories and hours may be applicable to the services as allowable in the Agreement. Phases are interdependent and build upon each other throughout the project.	Designer Engineer	0	28	500	81	138	22.64		
		110	340	111	0	0	17.00		
Estimated Hours		110	368	611	81	138	44	39	1391
Task 1 - Conceptual Design		30	0	0	0	0	4	4	38
		27%	0%	0%	0%	0%	10%	3%	
Task 1 - Design & Permit Project Initiation and Kick Off		9					4	13	\$745.87
Task 1 - Design & Permit Advance the Conceptual Design Materials, Schedule, Sequencing		4					4	8	\$364.84
Task 1 - Design & Permit Prepare Engineer's Opinion of Probable Project Costs		17					6	17	\$1,168.75
Task 2.A - 60 Percent Design Development Drawings and Technical Specifications		25	131	173	27	98	8	6	468
		23%	36%	28%	33%	71%	15%	34%	
Task 2.A - Design & Permit Drawings and Technical Specifications			131	173	27		8	339	\$14,842.03
Task 2.A - Design & Permit Technical Review before Deliverable to County		20				8		28	\$1,696.04
Task 2.A - Design & Permit Prepare Draft Documents, Four Bound and One PDF							6	6	\$134.76
Task 2.A - Design & Permit County Comments Review Meeting with Pre and Post Activities		4						4	\$275.00
Task 2.A - Design & Permit Prepare Engineer's Opinion of Probable Project Costs		1				90		91	\$3,680.45
Task 2.B - 90 Percent Pre Final Design and Specifications		25	106	190	27	32	8	6	394
		23%	29%	31%	33%	23%	15%	28%	
Task 2.B - Design & Permit Drawings and Technical Specifications			106	190	27		8	331	\$14,011.44
Task 2.B - Design & Permit Technical Review before Deliverable to County		20				8		28	\$1,696.04
Task 2.B - Design & Permit Prepare Draft Documents, Four Bound and One PDF							6	6	\$134.76
Task 2.B - Design & Permit County Comments Review Meeting with Pre and Post Activities		4						4	\$275.00
Task 2.B - Design & Permit Prepare Engineer's Opinion of Probable Project Costs		1				24		25	\$1,031.87
Task 2.C - Permitting		0	0	65	0	0	8	0	73
		0%	0%	11%	0%	0%	0%	5%	
Task 2.C - Design & Permit FDEP/HD Form 62-555.900(1)				35			8	43	\$1,522.29
Task 2.C - Design & Permit City Building Department Preliminary Review				30				30	\$1,086.90
Task 2.D - 100 Percent Final Design and Specifications		24	72	183	27	8	8	6	328
		22%	20%	30%	33%	6%	15%	24%	
Task 2.D - Design & Permit Drawings and Technical Specifications			72	183	27	8	8	298	\$12,111.63
Task 2.D - Design & Permit Technical Review before Deliverable to County		20						20	\$1,375.00
Task 2.D - Design & Permit Prepare Draft Documents, Four Bound and One PDF							6	6	\$134.76
Task 2.D - Design & Permit County Comments Review Meeting with Pre and Post Activities		4						4	\$275.00
Task 3 - Bidding and Award of Contract Phase		6	59	0	0	0	8	17	90
		5%	16%	0%	0%	0%	44%	6%	
Task 3 - Provide Project Management and Administration for up to Six (6) Months		6					8	3	\$734.12
Task 3.A - Preparation of Final Bid Documents								6	\$134.76
Task 3.B - Pre Bid Conference and Job Walk Through			4					4	\$231.44
Task 3.C - Issue Bid Documents and Addenda			47					47	\$2,719.42
Task 3.D - Bid Evaluation			4					8	\$411.12
Task 3.E - Preparation of Contract Documents for Execution			4					4	\$231.44
Estimated Hours		110	368	611	81	138	44	39	1,391
		8%	26%	44%	6%	10%	3%	3%	100%
Hourly Rate		\$68.75	\$57.86	\$36.23	\$27.42	\$40.13	\$31.78	\$22.46	
		\$7,562.50	\$21,292.48	\$22,136.53	\$2,221.02	\$5,537.94	\$1,398.32	\$875.94	

Conceptual Design subtotal
\$6,997.94

Design and Construction Documents
\$166,648.72

Bidding and Award of Contract subtotal
\$13,699.26

\$61,024.73 check

1,391 hrs

CDM Smith Estimated Hours 1,391
CDM Smith Estimated Hourly Costs \$ 61,024.73
CDM Smith Multiplier 3.07
CDM Smith Estimated Billing Rate Costs \$ 187,345.92

Estimated Subconsultant Salary Costs (McCafferty Brinson Consulting, LLC) \$ - **0.00% Process Engineering Design**
Estimated Subconsultant Salary Costs (CES Consulting, Inc.) \$ - **0.00% Civil Engineering/Geotechnical**
Estimated Subconsultant Salary Costs (Keith and Associates, Inc.) \$ - **0.00% Survey/SUE/Landscape Architectural**
Estimated Subconsultant Salary Costs (Thompson & Associates, Inc.) \$ - **0.00% Civil Engineering**

Maximum Amount Not-To-Exceed Compensation \$ 187,345.92

Total Maximum Amount Not-To-Exceed Compensation \$ 187,345.92

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ATTACHMENT TO EXHIBIT A

LEVEL OF EFFORT ESTIMATING TOOL

Water Treatment and Raw Water Production Systems

Water Treatment Plant - 2A Electrical Switchgear Improvements - Construction Management Services

Broward County Water and Wastewater Services Working Document

RLI No. R1025211R1 - Work Authorization No. CDMS 13-22

23-Dec-16

PHASE AND DESCRIPTION	Principal/ Associate	Senior Professional	Professional II	Senior Support Services	Staff Support Services	Project Administration	TOTAL HOURS	HOURLY COSTS
Other employees, categories and hours may be applicable to the services as allowable in the								
Estimated Hours	104	221	377	328	39	36	1105	\$52,391.27
	9%	20%	34%	30%	4%	3%	100%	
Task 3 - Construction Management Services								
Task 4 - Provide General Project Management and Administration for up to Thirteen (13) Months	104		39		39	6	188	\$10,290.10
Task 4.A - Building Department up to One (1) Set of Comments to resolve issues		2	32				34	\$1,533.06
Task 4.B - Pre Construction Conference - One (1) Meeting		8					8	\$459.28
Task 4.C - Construction Progress Meetings - Four (4) Meetings		24				2	26	\$1,422.76
Task 4.D - Site Observations (4 site visits during a monthly progress meeting)		32	8				40	\$2,191.68
Task 4.E - Pre Start Up Conference - One (1) Meeting		12	8				20	\$1,043.48
Task 4.F - Pay Requests - Ten (10) Months		18				5	23	\$1,145.68
Task 4.G - Construction Schedule - Ten (10) Months		9					9	\$516.69
Task 4.H - Submittals - Thirty (30) Shop Drawings		30	120			15	165	\$7,377.60
Task 4.I - Vendor Provided O&M Manuals - Four (4) Vendor Manuals		4	24			2	30	\$1,338.24
Task 4.J - Contract Interpretations and Clarifications - Five (5) RFI's		36	60			3	99	\$4,793.34
Task 4.K - Change Management - One (1) Change Request including Revisions to Initial Request		4	46			1	51	\$2,290.82
Task 4.L - Project Closeout		40				1	41	\$2,318.86
Task 4.M - Record Drawings - 33 sheets at 1.5 hours per sheet		2	40	8		1	51	\$2,245.68
Task 4.N - Field Observations by Project Representative				320			320	\$13,424.00
Estimated Hours	104	221	377	328	39	36	1,105	\$52,391.27
	9%	20%	34%	30%	4%	3%	100%	
Hourly Rate	\$69.11	\$57.41	\$44.32	\$41.95	\$31.78	\$22.46		
	\$7,187.44	\$12,687.61	\$16,708.64	\$13,759.60	\$1,239.42	\$808.56		

CDM Smith Estimated Hours 1,105
 CDM Smith Estimated Hourly Costs \$ 52,391.27
 CDM Smith Multiplier 3.07
 CDM Smith Estimated Billing Rate Costs \$ 160,841.20

Estimated Subconsultant Salary Costs (McCafferty Brinson Consulting, LLC) \$ - **0.00% Process Engineering Design**
 Estimated Subconsultant Salary Costs (CES Consulting, Inc.) \$ - **0.00% Civil Engineering/Geotechnical**
 Estimated Subconsultant Salary Costs (Keith and Associates, Inc.) \$ - **0.00% Survey/SUE/Landscape Architectural**
 Estimated Subconsultant Salary Costs (Thompson & Associates, Inc.) \$ - **0.00% Civil Engineering**

Maximum Amount Not-To-Exceed Compensation \$ 160,841.20

Total Maximum Amount Not-To-Exceed Compensation \$ 160,841.20

CDM Smith Inc.

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ATTACHMENT TO EXHIBIT A

LEVEL OF EFFORT ESTIMATING TOOL

Water Treatment and Raw Water Production Systems

Water Treatment Plant - 2A Electrical Switchgear Improvements

Broward County Water and Wastewater Services Working Document

RLI No. R1025211R1 - Work Authorization No. CDMS 13-22

23-Dec-16

REIMBURSABLES	Quantity	Units	Rate	Cost
Design				
Permit Fee	1	ea @	\$ 4,000.00	\$ 4,000.00
McCafferty Brinson Consulting, LLC	0	ea @	\$ 1.00	\$ -
CES Consultants, Inc.	0	ea @	\$ 1.00	\$ -
Thompson & Associates, Inc.	0	ea @	\$ 1.00	\$ -
Keith & Associates, Inc.	0	ea @	\$ 1.00	\$ -
Pervious Test Holes	0	ea @	\$ 290.00	\$ -
Impervious Teat Holes	4	ea @	\$ 440.00	\$ 1,760.00
Copies	360	ea @	\$ 1.00	\$ 360.00
Construction Services				
Courier	24	ea @	\$ 25.00	\$ 600.00
FedEx	24	ea @	\$ 25.00	\$ 600.00
Copies	680	ea @	\$ 1.00	\$ 680.00

REIMBURSABLES BUDGET TOTAL

\$ 8,000