1560 Sawgrass Corporate Parkway
Suite 240
Sunrise, Florida 33323

T: 954.200-7233
F: 954.200-7212

May 14, 2019

Clèce Aurélus, P.E.
Engineering Manager - ECSD
Department of Public Utilities
1621 N. 14th Avenue
P.O. Box 229045
Hollywood, FL 33022 152602

Subject: City of Hollywood
Professional Engineering Administrative Services – Deep Injection Wells No. 3 and No. 4 and Monitoring Well 2
City Project No. 18-9119

Dear Mr. Aurélus:

Brown and Caldwell is pleased to provide the bid tabulation form, evaluation and qualification review for the City's referenced project. The bids were received by the City of Hollywood until 2:00 p.m. on April 30, 2019. The bids were opened at 2: 30 p.m. The apparent low bid was provided by Youngquist Brothers, Inc. in the amount of $39,939,939.00.

Only one (1) bid was received for the project - Youngquist Brothers, Inc. A "No Bid" submittal was received from Florida Drilling. After reviewing the bid, Brown and Caldwell cross-checked and verified the mathematical calculations on the bid form provided by Youngquist Brothers. A Bid Tabulation of the bid was prepared in an Excel spreadsheet by Brown and Caldwell and is enclosed hereto.

Youngquist Brothers, Inc. has successfully completed similar utility projects for several municipalities throughout Florida and have demonstrated capability to install deep injection wells of this casing size – 36 inches. Brown and Caldwell checked several references provided by Youngquist Bothers, Inc. and has found their recent work history and performance to be in line with the requirements for this project.

Based on the review of the required information provided, the similar project experience, and the check of the references, it is our opinion that this project should be awarded to Youngquist Brothers, Inc. as the lowest responsive and responsible bidder. It should be noted that there is an error on the date (November 28, 2019) written on page 00300-4 of the Proposal. It is recommended that Youngquist Brothers, Inc. be allowed to correct this date and provide the revised page.

The City's budgeted amount of $25.0M for this project was based on the Engineer's Opinion of Estimated Construction Cost (EOPCC). The EOPCC was established based on the cost of a comparable well that was bid for the Miami-Dade Water and Sewer

Department and a review of market conditions at the time the estimate was prepared. Conditions that have arisen that may have a contributing impact on current pricing include:

1. Reduction in the number of competitive well drillers as evidenced by reduced competition from other drillers on recent bids;
2. Terms and conditions that allow the City to seek consequential damages coupled with high liquidated damages that increase risk to contractors and could potentially deter competition;
3. Impact of trade tariffs and funding policies to promote the purchase of American made materials.

The impact of market conditions and risk allocation is dynamic and difficult to predict. Should the City desire to pursue a more competitive price, its options are to: 1) pursue direct negotiations; 2) reassess the current deterrents to competition; and 3) implement, where feasible, changes to the contract terms and conditions that have the potential to reduce risk and elicit greater participation from prospective bidders. However, it is noted that Youngquist Brothers, Inc. is the most qualified driller of injection wells of this scale and the impact of any rebid effort on price and competition is unpredictable.

If you have any questions or need anything further from us, please feel free to contact me.

Very truly yours,

Brown and Caldwell

Celia D. A. Earle, Ph.D.
Vice President

Enclosure (1) - Bid Tabulation Form

City of Hollywood
Injection Wells IW-3 and IW-4 Project No. 18-9119
BID TABULATION

				BIDDER			
				Bid		No Bid	
				Youngquist Brothers, Inc.		Florida Design Drilling	
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT	UNIT PRICE	TOTAL AMOUNT
	Construction of Deep Injection Well IW-3						
1	Drill pilot hole from land surface to 3,500 feet	3,500	FT	$300	$1,050,000		
2	Ream Pilot Hole						
a	74-inch diameter to approximately 225 feet	225	FT	$450	$101,250		
b	66-inch diameter to approximately 900 feet	675	FT	$400	$270,000		
c	56-inch diameter to approximately 1,500 feet	600	FT	$350	$210,000		
d	46-inch diameter to approximately 2,900 feet	1,400	FT	$300	$420,000		
e	24-inch diameter to approximately 3,500 feet	600	FT	$150	$90,000		
3	Provide and install drillable bridge plug at 2,900 feet	1	LS	$40,000	$40,000		
4	Casing:						
a	Furnish and install 66-inch carbon steel casing	225	FT	$1,000	$225,000		
b	Furnish and install 56-inch carbon steel casing	900	FT	$950	$855,000		
c	Furnish and install 46-inch carbon steel casing	1,500	FT	$750	$1,125,000		
d	Furnish and install 36-inch carbon steel casing	2,900	FT	$950	$2,755,000		
e	Furnish and install 24-inch FRP tubing with cement packer	2,890	FT	$1,370	$3,959,300		
5	Furnish and emplace ASTM C150, Type II cement with additives	45,000	CF	$24	$1,080,000		
6	Furnish and emplace gravel	50	CY	$405	$20,250		
7	Geophysical Logging:						
a	Perform pilot hole logging from land surface to 250 feet	1	LS	$30,400	$30,400		
b	Perform reamed hole logs from land surface to 225 feet	1	LS	$30,400	$30,400		
c	Perform pilot hole logging from 225 to 925 feet	1	LS	$49,400	$49,400		
d	Perform reamed hole logs from 225 to 900 feet	1	LS	$38,000	$38,000		
e	Perform pilot hole logging from 900 to 1,600 feet	1	LS	$57,000	$57,000		
f	Perform reamed hole logs from 900 to 1,500 feet	1	LS	$38,000	$38,000		
g	Perform pilot hole logging if excessive dredging 1,500 to 3,500 feet, if directed	1	LS	$76,000	$76,000		
h	Perform pilot hole logging from 1,500 to 3,500 feet	1	LS	$76,000	$76,000		
i	Perform reamed hole logs from 1,500 to 2,900 feet	1	LS	$41,800	$41,800		
j	Perform all cement top temperature logs	1	LS	$72,200	$72,200		
k	Perform cement bond, temperature and video logs on 24-inch casing	1	LS	$117,800	$117,800		
l	Perform reamed hole logs from 2,900 to 3,500 feet	1	LS	$38,000	$38,000		
m	Perform logs (including RTS) on the completed well	1	LS	$95,000	$95,000		
8	Collect and analyze 10-foot cores between 1,500 and 2,800 feet	8	EA	$20,000	$160,000		
9	Set up and perform inflatable packer testing	12	EA	$24,000	$288,000		
10	Perform all IW-3 Water Quality Testing and Analyses	1	LS	$137,000	$137,000		
11	Set up and perform pressure test on 36-inch casing	1	LS	$118,000	$118,000		
12	Set up and perform pressure test on FRP injection tubing after cementing in place	1	LS	$118,000	$118,000		
13	Develop IW-3	1	LS	$60,000	$60,000		
14	Install wellhead, prepare site, and install surface equipment	1	LS	$200,000	$200,000		
15	Setup and Perform Injection Test of IW-3	1	LS	$200,000	$200,000		
	Subtotal for Installation of Deep Injection Well No. 3				**$14,241,800**		
	Construction of Injection Well IW-4						
16	Drill pilot hole from land surface to 3,500 feet	3,500	FT	$250	$875,000		
17	Ream Pilot Hole						
a	74-inch diameter to approximately 225 feet	225	FT	$450	$101,250		
b	66-inch diameter to approximately 900 feet	675	FT	$400	$270,000		
c	56-inch diameter to approximately 1,500 feet	600	FT	$350	$210,000		
d	46-inch diameter to approximately 2,900 feet	1,400	FT	$300	$420,000		
e	24-inch diameter to approximately 3,500 feet	600	FT	$150	$90,000		
18	Provide and install drillable bridge plug at 2,900 feet	1	LS	$40,000	$40,000		
19	Casing:						
a	Furnish and install 66-inch carbon steel casing	225	FT	$1,000	$225,000		
b	Furnish and install 56-inch carbon steel casing	900	FT	$950	$855,000		
c	Furnish and install 46-inch carbon steel casing	1,500	FT	$750	$1,125,000		
d	Furnish and install 36-inch carbon steel casing	2,900	FT	$950	$2,755,000		
e	Furnish and install 24-inch FRP tubing with cement packer	2,890	FT	$1,330	$3,843,700		
20	Furnish and emplace ASTM C150, Type II cement with additives	45,000	CF	$24	$1,080,000		
21	Furnish and emplace gravel	50	CY	$405	$20,250		
22	Geophysical Logging:						
a	Perform pilot hole logging from land surface to 250 feet	1	LS	$30,400	$30,400		
b	Perform reamed hole logs from land surface to 225 feet	1	LS	$30,400	$30,400		
c	Perform pilot hole logging from 225 to 925 feet	1	LS	$49,400	$49,400		
d	Perform reamed hole logs from 225 to 900 feet	1	LS	$38,000	$38,000		
e	Perform pilot hole logging from 900 to 1,600 feet	1	LS	$57,000	$57,000		
f	Perform reamed hole logs from 900 to 1,500 feet	1	LS	$38,000	$38,000		
g	Perform pilot hole logging if excessive dredging 1,500 to 3,500 feet, if directed	1	LS	$76,000	$76,000		
h	Perform pilot hole logging from 1,500 to 3,500 feet	1	LS	$76,000	$76,000		
i	Perform reamed hole logs from 1,500 to 2,900 feet	1	LS	$41,800	$41,800		
j	Perform all cement top temperature logs	1	LS	$74,100	$74,100		

City of Hollywood
Injection Wells IW-3 and IW-4 Project No. 18-9119
BID TABULATION

ITEM	DESCRIPTION	QUANTITY	UNIT	BIDDER: Bid — Youngquist Brothers, Inc. UNIT PRICE	Youngquist Brothers, Inc. TOTAL AMOUNT	BIDDER: No Bid — Florida Design Drilling UNIT PRICE	Florida Design Drilling TOTAL AMOUNT
k	Perform cement bond, temperature and video logs on 24-inch casing	1	LS	$95,000	$95,000		
l	Perform reamed hole logs from 2,900 to 3,500 feet	1	LS	$38,000	$38,000		
m	Perform logs (including RTS) on the completed well	1	LS	$95,000	$95,000		
23	Collect and analyze 10-foot cores between 1,500 and 2,800 feet	8	EA	$20,000	$160,000		
24	Set up and perform inflatable packer testing	12	EA	$23,000	$276,000		
25	Perform all IW-4 Water Quality Testing and Analyses	1	LS	$133,000	$133,000		
26	Set up and perform pressure test on 36-inch casing	1	LS	$100,000	$100,000		
27	Set up and perform pressure test on FRP injection tubing after cementing in place	1	LS	$100,000	$100,000		
28	Develop IW-4	1	LS	$52,000	$52,000		
29	Install wellhead, prepare site, and install surface equipment	1	LS	$180,000	$180,000		
30	Setup and Perform Injection Test of IW-4	1	LS	$180,000	$180,000		
	Subtotal for Installation of Injection Well No. 4				**$13,830,300**		
	Construction of Monitor Well MW-2						
31	Drill pilot hole from land surface to 1,825 feet	1,825	FT	$200	$365,000		
32	Ream Pilot Hole						
a	44-inch diameter to approximately 225 feet	225	FT	$450	$101,250		
b	34-inch diameter to approximately 900 feet	675	FT	$300	$202,500		
c	24-inch diameter to approximately 1,300 feet	400	FT	$150	$60,000		
d	16-inch diameter to approximately 1,800 feet	500	FT	$100	$50,000		
33	Casing:						
a	Furnish and install 34-inch carbon steel casing	225	FT	$350	$78,750		
b	Furnish and install 24-inch carbon steel casing	900	FT	$250	$225,000		
c	Furnish and install 16-inch carbon steel casing	1,300	FT	$200	$260,000		
d	Furnish and install 6-5/8-inch FRP tubing with external casing packer	1,750	FT	$120	$210,000		
34	Furnish and emplace ASTM C150, Type II cement with additives	7,700	LS	$12	$92,400		
35	Geophysical Logging:						
a	Perform pilot hole logging from land surface to 250 feet	1	LS	$30,400	$30,400		
b	Perform reamed hole logs from land surface to 225 feet	1	LS	$30,400	$30,400		
c	Perform pilot hole logging from 225 to 925 feet	1	LS	$49,400	$49,400		
d	Perform reamed hole logs from 225 to 900 feet	1	LS	$38,000	$38,000		
e	Perform pilot hole logging from 900 to 1,450 feet	1	LS	$47,500	$47,500		
f	Perform reamed hole logs from 900 to 1,300 feet	1	LS	$38,000	$38,000		
g	Perform pilot hole logging from 1,300 to 1,825 feet	1	LS	$47,500	$47,500		
h	Perform reamed hole logging from 1,300 to 1,800 feet	1	LS	$38,000	$38,000		
i	Perform all cement top temperature logs	1	LS	$34,200	$34,200		
j	Perform logging on completed well	1	LS	$47,500	$47,500		
36	Set up and perform inflatable packer tests	6	EA	$20,000	$120,000		
37	Perform all MW-2 Water Quality Testing and Analyses	1	LS	$80,000	$80,000		
38	Set up and perform pressure test on 6-5/8-inch FRP tubing	1	LS	$60,000	$60,000		
39	Develop MW-2	1	LS	$40,000	$40,000		
40	Furnish and install concrete pad and permanent wellhead with instrumentation	1	LS	$120,000	$120,000		
	Subtotal for Installation of Monitor Well				**$2,465,800**		
	Valves Costs						
41	Furnish 24" D.I. Ball Valves	2	EA	$90,000	$180,000		
42	Furnish and Install 24" S.S. Ball Valves	2	EA	$260,000	$520,000		
	Subtotal for Valves				**$700,000**		
	General Costs						
43	Remove and Dispose of Piping, Debris and Relocation of Piping and Structures	1	LS	$235,029	$235,029		
44	Mobilization , Demobilization, and General Requirements	1	LS	$7,867,000	$7,867,000		
45	Consideration for Indemnification	1	LS	$10	$10		
46	Permits, Licenses, Fees, and Material Testing Allowance	1	LS	$100,000	$100,000		
	Subtotal for General Costs				**$8,202,039**		
47	Owner's Contingency	1	LS	$500,000	**$500,000**		
	Bid Base Total for Complete Project				**$39,939,939**		

Signature: _____ Date: 5/13/19