



3100 SW 15th Street
 Deerfield Beach, Florida 33442
 Office:(954)426-1221
 Fax:(954)426-1226

City of Miami Beach
 Capital Improvement Projects Office
 1700 Convention Center Drive
 Miami Beach, FL 33139

May 11, 2021
 Sent Via Email

Attn: Sabrina Baglieri

Re: West Ave 090 – South

Subj: Change Order Review – RMCF Submission dated April 21, 2021
 CMA Comment Sheet Received 4/28/21

Revision #1

10 Year Storm Piping & Structures	<u>\$ 1,012,455</u>
Water Quality	<u>\$ 3,592,652</u>
Commodity & Subcontractor Escalation	<u>\$ 347,003</u>
RMCF Labor Escalation	<u>\$ 131,072</u>
Time Extension	1588 Cal Days

Sabrina,

In response to the change order review conducted yesterday 4/28/21 wherein RMCF received CMA's comment sheet (attached) we offer the following response and clarifications to our proposal sent on 4/21/21. RMCF revises its original submission dated 4/21/21 to account for errantly including 2.1B pricing from the 8/7/19 proposal in the evaluations and certain reductions in rebar, redimix quantities based on further developed WQ design, commodity and labor escalation was revised accordingly.

Pump Station Design – Items 1-4

Comments have been sent to CES for formal response and will be submitted to the City under separate cover.

Storm Drainage Design 2016-KB 60%, Phase II North of 14th Street resubmittal dated 4/2/21 and Change Order Submittal.

Item 1 – See comment C below.

Item 2 - Commodity escalation was detailed in RMCF's proposal letter with documentation provided on escalations from the U.S Bureau of Labor Statistics which confirms at least a 3.6% average increase in pricing January 2020 through February 2021. This factor was applied to specific commodities shown on the submitted spread sheet. Escalations quoted by Subcontractors and main/critical suppliers such as Flygt pumps, DI pipe, Asphalt and



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Electrical where direct quotes from RMCF's suppliers under contract presently and are listed separately. These submissions reflect the most up to date pricing available.

Item 3 - Utility relocations are shown on the 60% WQ Drawings submitted under separate cover for each location. The majority of relocations are CMB utilities.

Item 4 - Labor escalation was provided at 3% and deemed reasonable. The hours provided are actual anticipated work hours for RMCF labor for the base and changed work escalated at .25% per month taking into account CO 3B escalation already approved. The 0.25% per month factor was extended to substantial completion. (see submitted spread sheet for dates and calculation.) Previous labor escalation is contained under item 11 of CO 3B and totaled \$66,026 for direct labor trades.

Item 5 - See Item B below

Item 6 - RMCF will re-organize to the City's format (template) at your direction upon approval of the Change Order amount including scope clarifications contained therein.

Item 7 - The full 60 % submittal of the WQ wells will be submitted shortly under separate cover. The 30% drawings which depict the location and arrangement of the wells including mechanical and electrical details have been submitted to e-builder.

Item 8 - Detail of the connection to the trunk lines are shown on the details provided in the 60% drainage submission.

Other items:

- A- RMCF has revised the cost sheets to designate the applied 5% Subcontractor mark-up and 10% RMCF mark up, accordingly.
- B- RMCF attaches back-up for the Bond and Insurance premium re-calculation of 1.51%.
- C- Conflict structure costs have not been included in either the August 7, 2019 proposal (not acted upon by the City) or the current pricing which supersedes the August 7 proposal due to the fact that FPL has not settled on relocation or payment to RMCF for installing these conflict structures. Further CO 3B item 17 did not contemplate conflict structures since the utility plan was in its infancy at the time of submission and pricing was based solely on AECOM's drainage map. In either case, either FPL relocates their ductbank with others or pays RMCF for the new conflict structures under a contract arrangement.



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D- The Drainage Piping was re-calculated based on our incorrect assumption that the 2.1B proposal dated 8/7/19 was an actual Change Order. 2.1B was never acted upon by the City as a change. The final charges have been adjusted off of CO 3B item 5.

Please contact me if you require additional information.

Sincerely,

Michael R. Fischer, COO
Ric-Man Construction Florida, Inc.

Attachments:

- CMA West Ave C.O. Review Meeting Comments
- RMC's Performance and Payment Bond Rates
- Brown & Brown Policy Premium Summary
- Commodity & Subcontractor Escalation 5/11/21
- RMCF Labor Escalation 5/11/21
- Revised Cost Spread Sheets (WQ & Drainage) Rev 1 - 5/11/21
- Quantity Spread Sheet - Structures

CC:

Danny Mancini
Tyson DiPetrillo
Dan LaCross
Rafael Vega
Jose Caraballo
Jorge Rodriguez
Nick Karpathy - Chen Moore

2103 Coral Way, Suite 401
Miami, FL 33145
Office: +1 (786) 497-1500



**WEST AVENUE STORM DRAINAGE DESIGN
CHANGE ORDER REVIEW MEETING COMMENTS
4/28/2021**

GENERAL COMMENTS:

PUMP STATION DESIGN – 60% SUBMITTAL DATED 3/22/2021

1. Need to Clarify heading on sheet PS-M01 "Pump Design Criteria" and "Pump System Design Notes", what pumps they are referring to (primary pumps and sump pumps).
2. The plans show five (5) primary pumps with one (1) backup pump at 19,750 GPM (44 CFS), what is the Pump Station Maximum Flow based on?
3. Drainage well conductivity is given as 500 GPM/FT of Head. Has this value been verified? Has a Reasonable Assurance Report been done to justify the assumed flow? Please advise.
4. Cannot determine if the proposed well design is providing an adequate bypass with a design elevation of 6.50 FT-NAVD. Please provide.

**STORM DRAINAGE DESIGN 2016-091-KB 60%, PHASE II NORTH OF 14TH STREET
RESUBMITTAL DATED 4/02/2021 and CHANGE ORDER SUBMITTAL**

1. First and foremost, this submittal is a compilation of documents put together that do not have the format, or organization that we need in order to create a Change Order. Provide a Request for Change Order document with Exhibits numbered and organized.
2. Material escalations can vary from time to time and even day to day and are subject to revisions up to 4 months after estimated. Projects of this magnitude can command a better negotiated price with suppliers that does not always include the higher of the average increases. Please provide the most up to date pricing available with this submittal.
3. Perhaps a clause can be stated that a credit for materials needs to be returned to the City if prices do go down during the life of the project.
4. The labor escalation of 3% per year seems reasonable. However, no back-up was provided in this package to compare the man-hours being claimed with the previous man-hour estimates. Please provide.

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**STORM DRAINAGE DESIGN 2016-091–KB 60%, PHASE II NORTH OF 14TH STREET
RESUBMITTAL DATED 4/02/2021 (cont.)**

5. Some of the credits for the new “Drainage” spreadsheet (10yr increase + WTS) are not identified. Please identify.
6. CMB/CIP will need more detail to evaluate the new prices in these proposals. Almost ½ of the back-up package consists of the old e-mails and CES proposals that have already been evaluated.
7. The estimated increase in the duration of the project has not changed.
8. Plans did not include any details on the water quality pump stations (graphic views but no callouts, sections, or insets).
9. The direct connections of future yard drains/stub-outs to trunklines take into consideration system maintenance to prevent blockages and provide for cleaning?

**STORM DRAINAGE DESIGN 2016-090–KB 60%, PHASE II SOUTH OF 14TH STREET
RESUBMITTAL DATED 4/02/2021 and CHANGE ORDER SUBMITTAL**

1. In the narrative, please clarify conflict structures as required by 60% design drawings and specifically excluded by August 7, 2019 correspondence.
2. In the narrative for subcontractor commodity escalation, complete backup must be provided to justify the proposed cost.
3. In the narrative for Water Quality Enhancements – utility relocations as needed shall include details describing what is affected now that was not affected before.
4. Provide the previous amount RMC was considering for labor escalation.
5. Provide back up for Water Quality enhancement cost: clarify subcontractor markup percentage and estimated amounts, GC markup, bond and insurance percentage.
6. All the info must be referenced as exhibits in the narrative.
7. Plans did not include any details on the water quality pump stations (graphic views but no callouts, sections, or insets).
8. The direct connections of future yard drains/stub-outs to trunklines take into consideration system maintenance to prevent blockages and provide for cleaning?



090
SOUTH

RIC-MAN CONSTRUCTION FLORIDA, INC.
PERFORMANCE AND PAYMENT BOND RATES

For first	\$100,000 contract value	\$10.80 per \$1,000
For next	2,400,000 contract value	7.56 per \$1,000
For next	2,500,000 contract value	6.48 per \$1,000
For next	5,000,000 contract value	5.64 per \$1,000
For over	10,000,000 contract value	4.56 per \$1,000

Co Value

5,083,000

1.	1,080	100,000
2.	18,144	2,400,000
3.	16,200	2,500,000
4.	<u>500</u>	83,000,000
	35,924	

$$35,924 / 5,083,000 = 0.717$$

MJK
9/29

Confidence. For What's Next.™



BROWN & BROWN OF DETROIT, INC.
 35735 MOUND ROAD
 STERLING HEIGHTS, MI 48310
 PHONE: 586-977-6300 | FAX: 586-977-6780
 WWW.BBDETROIT.COM

Ric-Man Construction Florida, Inc
 3100 SW 15th Street
 Deerfield Beach, FL 33442

RE: Policy Premium Summary

Policy #'s; A-5CAA-0001702; ZUP-16N53072-20-NF; A-5CGA-001702; QT-660-72N270023;
 SXS 7186303-01

To Whom it May Concern,

Included are the policy premiums for Ric-Man Construction Florida, Inc for their insurance years.

<u>Policy Year</u>	<u>W/ Labor</u>		<u>W/ Labor</u>	
	<u>General Liability</u>	<u>Automobile</u>	<u>Umbrella</u>	<u>Installation/Equipment</u>
2019-2020	\$222,500 (\$51.74 rate)	\$90,000	\$123,000	\$19,828
2020-2021	\$368,869 (\$67.21 rate)	\$150,660	\$167,514	\$22,525
2021-2022	\$287,017 (\$68.45 rate)	\$175,992	\$230,000	\$30,251

Please direct any additional inquires to my attention.
 Thank you.

Sincerely,

Brian Pilarski
 C.I.C.; M.B.A.; L.I.C.
 Commercial Insurance Agent
 Resident Counselor
 Surplus Broker

South 090

$2019-2020 = \$109,828 / \$34,278,000 = 0.32\%$
 $2020-2021 = \$173,185 / \$39,693,000 = 0.44\%$

$\% \text{ Inc} = 38\% - \text{Contract Completion } 7/2023$
 $\text{Allow } 2 \text{ Years @ } 15\% \text{ Inc} = 30\% \text{ Inc}$
 $0.44\% \times 1.38 = 0.61 + 30\% \text{ Escal} = 0.79$

Carry 0.79

		West Ave South -090 Commodity and Subcontractor Escalation		5/11/2021			
Item	New Total	CO 3B total	Delta Material	Delta Subcontract	Total Impact	Notes	
Quoted Escalator							
DI Pipe	\$ 473,490.00	\$ 359,455.00	\$ 114,035.00			US Pipe	
Taxes - 7%			\$ 7,982.00				
3.6% Escalator							
Trench drains	\$ 15,010.00	\$ 14,489.00	\$ 521.00			See Producer Price Index Graph	
Aggregates	\$ 284,373.00	\$ 274,491.00	\$ 9,882.00				
Landscaping/Irrigation	\$ 275,544.00	\$ 267,900.00	\$ 7,644.00				
Pipe Commodities	\$ 41,440.00	\$ 40,000.00	\$ 1,440.00				
PVC Pipe,Fittings	\$ 44,785.00	\$ 43,729.00	\$ 1,556.00				
Taxes 7% on \$27,789			\$ 1,945.00				
Subcontractor Adjustments							
Asphalt					\$ 14,634.00		See Quote Comparison and Proportioning to 090
Electrical- So FI Elect					\$ 159,019.00		See unit Pricing spread sheet from So FI Elect
Total			\$ 145,005.00	\$ 173,653.00			
OH- 10/5			\$ 14,501.00	\$ 8,683.00			
Subtotal			\$ 159,506.00	\$ 182,336.00			
1.51% Bond & Ins			\$ 2,408.00	\$ 2,753.00			
			\$ 161,914.00	\$ 185,089.00	\$ 347,003.00		

West Ave 090/091		5/11/2021		91		Comments	
Escalation RMCF Direct labor		Hours	Cost	Hours	Cost		
Item		90	Cost	91	Cost		
Base Contract		23,762	\$ 1,019,810.00	50,573	\$ 2,157,261.00		
CO3B							
#11/23- labor escalation			\$ 66,028.00		\$ 114,825.00		
#5/17- 10 year Storm water		7,361	\$ 372,194.00	12,150	\$ 610,694.00		
#16- Alton Ct		1028	\$ 16,865.00				
#15- Rear to Front				939	\$ 45,862.00		
#6/18		0	\$ -	2453	\$ 141,781.00		
# 1/14- Gen sets		3433	\$ 199,037.00	3433	\$ 200,101.00		
#14- Lincoln Rd PS				323	\$ 16,865.00		
#2 -Alton CT		95	\$ 6,141.00				
#4 -6th St Side walk		53	\$ 3,120.00				
#3- Alton CT re-surfacing		385	\$ 37,714.00				
Sub Totals		36,117	\$ 1,720,909.00	69,871	\$ 3,287,389.00		
30 Months at 3% per year (0.25% per month)= 7.5%) -091					\$ 246,554.00	June 2022- January 2025	
27 Months at 3% per year (0.25% per Month=6.75%- 090			\$ 116,161.00			March 9,2021 - July 4, 2023	
New CO Escalation							
24 Months at 3% per year= 6%- 091		17,075	\$ 860,732.00	53,725	\$ 2,736,752.00	Jan 2023- Jan 2025	
6 months at 3% per year (0.25% per month = 1.5%)- 090			\$ 12,911.00		\$ 164,295.00	Jan 2023- July 2023	
Total Escalation			\$ 129,072.00		\$ 410,849.00		
1.44% N/1.55%			\$ 2,000.00		\$ 5,916.00		
Grand Total			\$ 131,072.00		\$ 416,765.00		



Activity Unit Price Summary

Biditem Activity	Description	Quantity	Unit	Calendar WC	Hrs/Shift	Labor	Perm Material	Constr Matl/Exp	Equip- ment	Sub- Contract	Total	
*** 10	General Conditions					Takeoff:	1.00 LS		Bid:		1.00 LS	
10.1	Mobilization	1.00	LS	F6319A	50	10.00		63,588			63,588	
Mh:	Shifts:	Mh/Un:		Un/Sh:				63,588.00			63,588.00	
10.2	General Conditions	60.00	DAY	F6319A	50	10.00	99,487	64,580	3,600		167,667	
Mh:	1,920.00	Shifts:	Mh/Un:	32.0000	Un/Sh:		1,658.11	1,076.33	60.00		2,794.45	
*****Biditem/Category	10	*****					99,487	128,168	3,600		231,255	
Mh:	1,920.00	Mh/Un:	1,920.0000				99,486.72	128,168.00	3,600.00		231,254.72	
*** 31	Template					Takeoff:	1.00 LS		Bid:		1.00 LS	
31.01	Excavate and Haul	102.00	CY	F6319A	50	10.00	4,033		5,466	500	9,998	
Mh:	84.00	Shifts:	1.2	Mh/Un:	0.8235	Un/Sh:	85.0000	39.53	53.59	4.90	98.02	
31.02	Concrete Template (5% Waste	69.00	CY	F6319A	50	10.00	4,369	9,630	5,921		19,920	
Mh:	91.00	Shifts:	1.3	Mh/Un:	1.3188	Un/Sh:	53.0769	63.31	139.57	85.82	288.70	
31.03	Forms - Sonotube	66.00	EA	F6319A	50	10.00	22,179		4,280	30,063	56,522	
Mh:	462.00	Shifts:	6.6	Mh/Un:	7.0000	Un/Sh:	10.0000	336.04	64.85	455.50	856.39	
31.04	Forms - Exterior	3.00	EA	F6319A	50	10.00	4,033		3,852	5,466	13,350	
Mh:	84.00	Shifts:	1.2	Mh/Un:	28.0000	Un/Sh:	2.5000	1,344.17	1,284.00	1,821.99	4,450.16	
31.05	Blocking	1.00	LS	F6319A	50	10.00	1,008			1,367	2,375	
Mh:	21.00	Shifts:	0.3	Mh/Un:	21.0000	Un/Sh:	3.3333	1,008.12		1,366.50	2,374.62	
31.06	Survey	1.00	LS	F6319A	50	10.00			5,850		5,850	
Mh:		Shifts:		Mh/Un:		Un/Sh:			5,850.00		5,850.00	
31.07	Pump Concrete	1.00	LS	F6319A	50	10.00				2,140	2,140	
Mh:		Shifts:		Mh/Un:		Un/Sh:				2,140.00	2,140.00	
31.08	Haul Old Template Debris	1.00	LS	F6319A	50	10.00	2,016		4,025	2,733	8,774	
Mh:	42.00	Shifts:	0.6	Mh/Un:	42.0000	Un/Sh:	1.6667	2,016.25	4,025.00	2,732.99	8,774.24	
*****Biditem/Category	31	*****					37,637	9,630	18,007	53,156	500	118,929
Mh:	784.00	Mh/Un:	784.0000				37,636.62	9,630.00	18,007.00	53,155.78	500.00	118,929.40
*** 32	Drill and PLace Grout					Takeoff:	1.00 LS		Bid:		1.00 LS	
32.01	Drill and Place Grout	72.00	EA	F6319A	50	10.00	97,249		249,096		346,345	
Mh:	2,160.00	Shifts:	24.0	Mh/Un:	30.0000	Un/Sh:	3.0000	1,350.68	3,459.67		4,810.34	
32.02	Grout	450.00	CY	F6319A	50	10.00		69,818			69,818	
Mh:		Shifts:		Mh/Un:		Un/Sh:		155.15			155.15	
32.03	Rebar	78,750.00	LBS	F6319A	50	10.00		37,919		23,625	51,544	
Mh:		Shifts:		Mh/Un:		Un/Sh:		0.48		0.30	0.78	
32.04	Spoils Disposal	450.00	CY	F6319A	50	10.00			5,062		5,062	
Mh:		Shifts:		Mh/Un:		Un/Sh:			11.25		11.25	
32.05	Concrete Pump	450.00	CY	F6319A	50	10.00			6,420		6,420	
Mh:		Shifts:		Mh/Un:		Un/Sh:			14.27		14.27	
*****Biditem/Category	32	*****					97,249	107,736	5,062	255,516	23,625	489,188
Mh:	2,160.00	Mh/Un:	2,160.0000				97,248.60	107,736.16	5,062.00	255,516.00	23,625.00	489,187.76
*** 33	Mass Excavation and Tremie					Takeoff:	1.00 LS		Bid:		1.00 LS	
33.01	Excavation	444.00	CY	F6319A	50	10.00	10,734		13,665		24,398	
Mh:	240.00	Shifts:	3.0	Mh/Un:	0.5405	Un/Sh:	148.0000	24.17	30.78		54.95	
33.02	Excavation (Last 4')	66.00	CY	F6319A	50	10.00	4,651		5,921		10,573	
Mh:	104.00	Shifts:	1.3	Mh/Un:	1.5758	Un/Sh:	50.7692	70.47	89.72		160.19	
33.03	Clean Sides	1.00	LS	F6319A	50	10.00	3,220		4,099		7,320	
Mh:	72.00	Shifts:	0.9	Mh/Un:	72.0000	Un/Sh:	1.1111	3,220.06	4,099.48		7,319.54	
33.04	Tremie Pour	150.00	CY	F6319A	50	10.00	13,954	20,063	17,764		51,780	
Mh:	312.00	Shifts:	3.9	Mh/Un:	2.0800	Un/Sh:	38.4615	93.02	133.75	118.43	345.20	
33.05	Tremie Rebar/Bottom Slab	26,250.00	LBS	F6319A	50	10.00		14,044		7,875	21,919	
Mh:		Shifts:		Mh/Un:		Un/Sh:		0.54		0.30	0.84	
33.06	Dewater and Seal	1.00	LS	F6319A	50	10.00	5,367		6,832		12,199	
Mh:	120.00	Shifts:	1.5	Mh/Un:	120.0000	Un/Sh:	0.6667	5,366.76	6,832.49		12,199.25	
33.07	Leveling Course	30.00	CY	F6319A	50	10.00	5,713	4,013	7,743		17,469	
Mh:	119.00	Shifts:	1.7	Mh/Un:	3.9667	Un/Sh:	17.6471	190.42	133.75	258.12	582.29	
33.08	Trucking	1.00	LS	F6319A	50	10.00			5,738		5,738	
Mh:		Shifts:		Mh/Un:		Un/Sh:			5,738.00		5,738.00	
33.09	Tremie Pump and Level Cours	1.00	LS	F6319A	50	10.00				1,926	1,926	
Mh:		Shifts:		Mh/Un:		Un/Sh:				1,926.00	1,926.00	

Activity Unit Price Summary

Biditem Activity	Description	Quantity	Unit	Calendar WC	Hrs/Shift	Labor	Perm Material	Constr Matl/Exp	Equip-ment	Sub-Contract	Total	
33.10	Poly Tube Injection / Seal	1.00	LS	F6319A	50	10.00	5,350				5,350	
Mh:	Shifts:	Mh/Un:		Un/Sh:			5,350.00				5,350.00	
*****Biditem/Category		33	*****			43,638	43,469	5,738	57,952	7,875	158,672	
Mh:	967.00	Mh/Un:	967.0000			43,637.81	43,468.75	5,738.00	57,952.28	7,875.00	158,671.84	
***	51	Template				Takeoff:	1.00	LS	Bid:	1.00	LS	
51.01	Excavate and Haul	102.00	CY	F6319A	50	10.00	4,033		5,466	500	9,998	
Mh:	84.00	Shifts:	1.2	Mh/Un:	0.8235	Un/Sh:	85.0000		39.53	53.59	4.90	98.02
51.02	Concrete Template (5% Waste	69.00	CY	F6319A	50	10.00	4,369	9,630	5,921		19,920	
Mh:	91.00	Shifts:	1.3	Mh/Un:	1.3188	Un/Sh:	53.0769	63.31	139.57	85.82	288.70	
51.03	Forms - Sonotube	66.00	EA	F6319A	50	10.00	22,179		4,280	30,063	56,522	
Mh:	462.00	Shifts:	6.6	Mh/Un:	7.0000	Un/Sh:	10.0000	336.04	64.85	455.50	856.39	
51.04	Forms - Exterior	3.00	EA	F6319A	50	10.00	4,033		3,852	5,466	13,350	
Mh:	84.00	Shifts:	1.2	Mh/Un:	28.0000	Un/Sh:	2.5000	1,344.17	1,284.00	1,821.99	4,450.16	
51.05	Blocking	1.00	LS	F6319A	50	10.00	1,008			1,367	2,375	
Mh:	21.00	Shifts:	0.3	Mh/Un:	21.0000	Un/Sh:	3.3333	1,008.12		1,366.50	2,374.62	
51.06	Survey	1.00	LS	F6319A	50	10.00			5,850		5,850	
Mh:		Shifts:		Mh/Un:		Un/Sh:			5,850.00		5,850.00	
51.07	Pump Concrete	1.00	LS	F6319A	50	10.00			2,140		2,140	
Mh:		Shifts:		Mh/Un:		Un/Sh:			2,140.00		2,140.00	
51.08	Haul Old Template Debris	1.00	LS	F6319A	50	10.00	2,016		4,025	2,733	8,774	
Mh:	42.00	Shifts:	0.6	Mh/Un:	42.0000	Un/Sh:	1.6667	2,016.25	4,025.00	2,732.99	8,774.24	
*****Biditem/Category		51	*****			37,637	9,630	18,007	53,156	500	118,929	
Mh:	784.00	Mh/Un:	784.0000			37,636.62	9,630.00	18,007.00	53,155.78	500.00	118,929.40	
***	52	Drill and PLace Grout				Takeoff:	1.00	LS	Bid:	1.00	LS	
52.01	Drill and Place Grout	72.00	EA	F6319A	50	10.00	128,584		329,357		457,941	
Mh:	2,855.99	Shifts:	31.7	Mh/Un:	39.6665	Un/Sh:	2.2689	1,785.88	4,574.40		6,360.29	
52.02	Grout	486.00	CY	F6319A	50	10.00			81,435		81,435	
Mh:		Shifts:		Mh/Un:		Un/Sh:			167.56		167.56	
52.03	Rebar	85,050.00	LBS	F6319A	50	10.00			45,512	25,515	71,027	
Mh:		Shifts:		Mh/Un:		Un/Sh:		0.54		0.30	0.84	
52.04	Spoils Disposal	450.00	CY	F6319A	50	10.00			5,625		5,625	
Mh:		Shifts:		Mh/Un:		Un/Sh:			12.50		12.50	
52.05	Concrete Pump	486.00	CY	F6319A	50	10.00			6,420		6,420	
Mh:		Shifts:		Mh/Un:		Un/Sh:			13.21		13.21	
*****Biditem/Category		52	*****			128,584	126,948	5,625	335,777	25,515	622,448	
Mh:	2,855.99	Mh/Un:	2,855.9900			128,583.65	126,947.58	5,625.00	335,776.98	25,515.00	622,448.21	
***	53	Mass Excavation and Tremie				Takeoff:	1.00	LS	Bid:	1.00	LS	
53.01	Excavation	486.00	CY	F6319A	50	10.00	8,945		11,387		20,332	
Mh:	200.00	Shifts:	2.5	Mh/Un:	0.4115	Un/Sh:	194.4000	18.40	23.43		41.84	
53.02	Excavation (Last 8')	141.00	CY	F6319A	50	10.00	9,936		12,649		22,586	
Mh:	222.18	Shifts:	2.8	Mh/Un:	1.5757	Un/Sh:	50.7742	70.47	89.71		160.18	
53.03	Clean Sides	1.00	LS	F6319A	50	10.00	3,936		5,010		8,946	
Mh:	88.00	Shifts:	1.1	Mh/Un:	88.0000	Un/Sh:	0.9091	3,935.62	5,010.49		8,946.11	
53.04	Tremie Pour	96.00	CY	F6319A	50	10.00	6,798	14,894	8,654		30,347	
Mh:	152.00	Shifts:	1.9	Mh/Un:	1.5833	Un/Sh:	50.5263	70.81	155.15	90.15	316.11	
53.05	Tremie Rebar / Bottom Slab	16,800.00	LBS	F6319A	50	10.00			8,988	5,040	14,028	
Mh:		Shifts:		Mh/Un:		Un/Sh:		0.54		0.30	0.84	
53.06	Dewater and Seal	1.00	LS	F6319A	50	10.00	4,651		5,921		10,573	
Mh:	104.00	Shifts:	1.3	Mh/Un:	104.0000	Un/Sh:	0.7692	4,651.20	5,921.48		10,572.68	
53.07	Leveling Course	21.00	CY	F6319A	50	10.00	3,360	2,809	4,555		10,724	
Mh:	70.00	Shifts:	1.0	Mh/Un:	3.3333	Un/Sh:	21.0000	160.02	133.75	216.90	510.67	
53.08	Trucking	1.00	LS	F6319A	50	10.00			5,738		5,738	
Mh:		Shifts:		Mh/Un:		Un/Sh:			5,738.00		5,738.00	
53.09	Tremie Pump and Level Cours	1.00	LS	F6319A	50	10.00			1,926		1,926	
Mh:		Shifts:		Mh/Un:		Un/Sh:			1,926.00		1,926.00	
53.10	Poly Tube Injection / Seal	1.00	LS	F6319A	50	10.00				5,000	5,000	
Mh:		Shifts:		Mh/Un:		Un/Sh:				5,000.00	5,000.00	

Activity Unit Price Summary

Biditem Activity	Description	Quantity	Unit	Calendar WC	Hrs/Shift	Labor	Perm Material	Constr Matl/Exp	Equip-Ment	Sub-Contract	Total
*****Biditem/Category		53	*****			37,626	26,691	5,738	50,104	10,040	130,199
Mh:	836.18 Mh/Un:	836.1800				37,626.18	26,691.15	5,738.00	50,104.06	10,040.00	130,199.39
*** 54	Mechanical Work				Takeoff:			1.00 LS	Bid:	1.00 LS	
54.01	Baffle Skimmer	3.00	EA	F6319A	50	10.00	2,942	32,100	3,510		38,552
Mh:	60.00 Shifts:	1.2 Mh/Un:	20.0000	Un/Sh:	2.5000		980.65	10,700.00	1,169.99		12,850.63
54.05	25 HP Flygt Pump	3.00	EA	F6319A	50	10.00	16,962	416,395	17,550		450,907
Mh:	360.00 Shifts:	6.0 Mh/Un:	120.0000	Un/Sh:	0.5000		5,654.05	138,798.26	5,849.94		150,302.25
54.06	12" DIP Discharge	225.00	LF	F6319A	50	10.00	2,942	13,924	3,510		20,376
Mh:	60.00 Shifts:	1.2 Mh/Un:	0.2667	Un/Sh:	187.5000		13.08	61.88	15.60		90.56
54.08	12" Check Valve	3.00	EA	F6319A	50	10.00	883	35,085	1,053		37,021
Mh:	18.00 Shifts:	0.4 Mh/Un:	6.0000	Un/Sh:	8.3333		294.19	11,695.10	350.99		12,340.29
54.09	NBG Sets / Flanges	60.00	EA	F6319A	50	10.00	5,884	27,799	7,020		40,702
Mh:	120.00 Shifts:	2.4 Mh/Un:	2.0000	Un/Sh:	25.0000		98.06	463.31	117.00		678.37
54.10	24 x 12 Cross w/Cap	3.00	EA	F6319A	50	10.00	1,177	17,201	1,404		19,782
Mh:	24.00 Shifts:	0.5 Mh/Un:	8.0000	Un/Sh:	6.2500		392.26	5,733.77	467.99		6,594.03
54.11	24" Well	300.00	LF	F6319A	50	10.00	735	6,011	877	225,000	232,624
Mh:	15.00 Shifts:	0.3 Mh/Un:	0.0500	Un/Sh:	1,000.0000		2.45	20.04	2.92	750.00	775.41
54.12	36"x 78" HS 20 Hatch & Fram	3.00	EA	F6319A	50	10.00	735		877		1,613
Mh:	15.00 Shifts:	0.3 Mh/Un:	5.0000	Un/Sh:	10.0000		245.16		292.50		537.65
54.13	56"x 60" HS 20 Hatch & Fram	3.00	EA	F6319A	50	10.00	735		881		1,617
Mh:	15.00 Shifts:	0.3 Mh/Un:	5.0000	Un/Sh:	10.0000		245.16		293.71		538.86
54.14	56"x 112" HS 20 Hatch & Fra	3.00	EA	F6319A	50	10.00	1,226		1,462		2,688
Mh:	25.00 Shifts:	0.5 Mh/Un:	8.3333	Un/Sh:	6.0000		408.61		487.50		896.11
54.15	11'-8" x 8' x 7' Vault	3.00	EA	F6319A	50	10.00	7,355	28,890	8,775		45,020
Mh:	150.00 Shifts:	3.0 Mh/Un:	50.0000	Un/Sh:	1.0000		2,451.62	9,630.00	2,924.97		15,006.59
55.01	Concrete Cover (15' Dia.)	6.00	EA	F6319A	50	10.00	2,942	33,705	3,510		40,157
Mh:	60.00 Shifts:	1.2 Mh/Un:	10.0000	Un/Sh:	5.0000		490.32	5,617.50	584.99		6,692.82
55.02	Platform (8.44 NAVD)	3.00	EA	F6319A	50	10.00	1,471		1,755	24,000	27,226
Mh:	30.00 Shifts:	0.6 Mh/Un:	10.0000	Un/Sh:	5.0000		490.33		585.00	8,000.00	9,075.32
55.03	Landscaping Screening	3.00	LS	F6319A	50	10.00				22,500	22,500
Mh:	Shifts:	Mh/Un:		Un/Sh:						7,500.00	7,500.00
55.04	Grout / Seal / Coatings	1.00	LS	F6319A	50	10.00	7,355	16,050	8,775		32,180
Mh:	150.00 Shifts:	3.0 Mh/Un:	150.0000	Un/Sh:	0.3333		7,354.85	16,050.00	8,774.91		32,179.76
55.05	Start-up / Commissioning	1.00	LS	F6319A	50	10.00	1,471	1,070	1,755		4,296
Mh:	30.00 Shifts:	0.6 Mh/Un:	30.0000	Un/Sh:	1.6667		1,470.98	1,070.00	1,754.99		4,295.97
55.06	Warranty Allowance	1.00	LS	F6319A	50	10.00	2,942	6,420	3,510		12,872
Mh:	60.00 Shifts:	1.2 Mh/Un:	60.0000	Un/Sh:	0.8333		2,941.94	6,420.00	3,509.96		12,871.90
55.07	24" Well Credit	-1.00	LS	F6319A	50	10.00				-120,750	-120,750
Mh:	Shifts:	Mh/Un:		Un/Sh:						120,750.00	120,750.00
*****Biditem/Category		54	*****			57,757	634,650		66,225	150,750	909,382
Mh:	1,192.00 Mh/Un:	1,192.0000				57,757.04	634,650.17		66,224.93	150,750.00	909,382.14
*** 55	Electrical / I&C				Takeoff:			1.00 LS	Bid:	1.00 LS	
55.1	Control Pannels w/ Floats	3.00	EA	F6319A	50	10.00				102,000	102,000
Mh:	Shifts:	Mh/Un:		Un/Sh:						34,000.00	34,000.00
55.2	Ductbank - Civil	700.00	LF	F6319A	50	10.00	51,121	12,733	52,892		116,747
Mh:	1,084.99 Shifts:	18.1 Mh/Un:	1.5500	Un/Sh:	38.7104		73.03	18.19	75.56		166.78
*****Biditem/Category		55	*****			51,121	12,733		52,892	102,000	218,747
Mh:	1,084.99 Mh/Un:	1,084.9900				51,121.46	12,733.00		52,892.24	102,000.00	218,746.70
*** 70	24" Interconnecting Pipping				Takeoff:			1.00 LS	Bid:	1.00 LS	
70.01	24" Interconnecting Pipping	1.00	LS	F6319A	50	10.00	28,019	535	800	26,137	55,491
Mh:	600.00 Shifts:	7.5 Mh/Un:	600.0000	Un/Sh:	0.1333		28,018.64	535.00	800.00	26,137.29	55,490.93
70.02	Dewatering	1.00	LS	F6319A	50	10.00	2,076	2,690	1,484		6,250
Mh:	40.00 Shifts:	1.0 Mh/Un:	40.0000	Un/Sh:	1.0000		2,076.20	2,689.69	1,484.07		6,249.96
70.03	Excavation	300.00	CY	F6319A	50	10.00	8,481	5,350	7,007	36,000	56,838
Mh:	180.00 Shifts:	3.0 Mh/Un:	0.6000	Un/Sh:	100.0000		28.27	17.83	23.36	120.00	189.46
70.04	Set up / Down & Install	1.00	LS	F6319A	50	10.00	14,710		14,014		28,724
Mh:	300.00 Shifts:	6.0 Mh/Un:	300.0000	Un/Sh:	0.1667		14,709.69		14,014.02		28,723.71
70.05	Seal, Grout & Backfill	360.00	TON	F6319A	50	10.00	3,392	8,988	2,383		14,763
Mh:	72.00 Shifts:	1.2 Mh/Un:	0.2000	Un/Sh:	300.0000		9.42	24.97	6.62		41.01

Activity Unit Price Summary

Biditem Activity	Description	Quantity	Unit	Calendar WC	Hrs/Shift	Labor	Perm Material	Constr Matl/Exp	Equip- Ment	Sub- Contract	Total
*****Biditem/Category		70	*****			56,678	17,563	800	51,025	36,000	162,066
Mh:	1,192.00	Mh/Un:	1,192.0000			56,678.04	17,562.69	800.00	51,025.19	36,000.00	162,065.92
***	90	Utility Relocations & Removals				Takeoff:	1.00 LS		Bid:	1.00 LS	
90.01	Utility Relocations & Removal	1.00	LS	F6319A	50 10.00	47,046		3,000	30,194		80,240
Mh:	980.00	Shifts:	14.0	Mh/Un:	980.0000	Un/Sh:	0.0714	47,045.74	3,000.00	30,193.80	80,239.54
*****Biditem/Category		90	*****			47,046		3,000	30,194		80,240
Mh:	980.00	Mh/Un:	980.0000			47,045.74		3,000.00	30,193.80		80,239.54
Mh:	14,756.16	***REPORT TOTALS***				694,458	989,050	190,145	1,009,597	356,805	3,240,055

N = Activity not adjusted to bid quantity



West Avenue North - 091

Drainage Pipe & Structures

Item	Qty	Unit	Subcontractor	Material	Labor			Equipment	NewTotal	Original Total	Delta	Notes
					MH	Rate	Total					
Drainage Pipe												
8th Street												
24" RCP	222	LF		\$ 17,243.00	196	\$ 47.06	\$ 9,224.00	\$ 8,148.00	\$ 34,615.00		\$ 34,615.00	All material reflects current pricing
9th Street												
24" RCP	252	LF		\$ 14,783.00	168	\$ 47.06	\$ 7,906.00	\$ 6,984.00	\$ 29,673.00		\$ 29,673.00	All material reflects current pricing
11th Street												
24" RCP	217	LF		\$ 12,728.00	144.66	\$ 47.06	\$ 6,808.00	\$ 6,013.00	\$ 25,549.00		\$ 25,549.00	All material reflects current pricing
12th Street												
24" RCP	294	LF		\$ 17,250.00	196	\$ 47.06	\$ 9,224.00	\$ 8,148.00	\$ 34,622.00		\$ 34,622.00	All material reflects current pricing
13th Street												
24" RCP	345	LF		\$ 20,238.00	230	\$ 47.06	\$ 10,824.00	\$ 9,562.00	\$ 40,624.00		\$ 40,624.00	All material reflects current pricing
Alton Court												
24" RCP	516	LF		\$ 30,268.00	344	\$ 47.06	\$ 16,189.00	\$ 14,301.00	\$ 60,758.00		\$ 60,758.00	All material reflects current pricing All material reflects current pricing
West Avenue												
24" RCP	370	LF		\$ 21,703.00	246.66	\$ 47.06	\$ 11,608.00	\$ 10,253.00	\$ 43,564.00		\$ 43,564.00	All material reflects current pricing
48" RCP	786	LF		\$ 197,910.00	571.63	\$ 47.06	\$ 26,902.00	\$ 23,763.00	\$ 248,575.00		\$ 248,575.00	All material reflects current pricing
60" RCP	1427	LF		\$ 463,496.00	1902.66	\$ 47.06	\$ 89,543.00	\$ 79,097.00	\$ 632,136.00		\$ 632,136.00	All material reflects current pricing
Pipe Credit												
24" RCP	796	LF							\$ (102,337.04)		\$ (102,337.04)	Pipe Under Contract (Base Bid & CO 3-B)
48" RCP	2396	LF							\$ (436,774.47)		\$ (436,774.47)	Pipe Under Contract (Base Bid & CO 3-B)
Drainage Structures												
Structures 4'x2.5' - 4'x4'												
Structures Type 2, 5, 6, J7 and F	48	EA		\$ 109,914.00	1920	\$ 47.06	\$ 90,359.00	\$ 79,819.00	\$ 280,092.00		\$ 280,092.00	All material reflects current pricing
Structures 6'x4'												
Structures Type J7	7	EA		\$ 24,606.00	560	\$ 47.06	\$ 26,355.00	\$ 23,281.00	\$ 74,242.00		\$ 74,242.00	All material reflects current pricing
Structures 7'x4'												
Structures Type 1, 4 and J7	11	EA		\$ 57,934.00	990	\$ 48.76	\$ 48,272.00	\$ 46,637.00	\$ 152,843.00		\$ 152,843.00	All material reflects current pricing
Structures Credit												
P-9 Catch Basin	4	EA							\$ (19,090.64)		\$ (19,090.64)	Pipe Under Contract (Base Bid & CO 3-B)
J-9 Catch Basin	4	EA							\$ (43,549.29)		\$ (43,549.29)	Pipe Under Contract (Base Bid & CO 3-B)
J-9 Catch Basin	3	EA							\$ (41,510.97)		\$ (41,510.97)	Pipe Under Contract (Base Bid & CO 3-B)
MH J-7 Round	6	EA							\$ (52,349.80)		\$ (52,349.80)	Pipe Under Contract (Base Bid & CO 3-B)
J-7 Catch Basin	5	EA							\$ (53,560.57)		\$ (53,560.57)	Pipe Under Contract (Base Bid & CO 3-B)
J-7 Catch Basin	1	EA							\$ (11,833.75)		\$ (11,833.75)	Pipe Under Contract (Base Bid & CO 3-B)
MH J-7 Round	1	EA							\$ (12,192.98)		\$ (12,192.98)	Pipe Under Contract (Base Bid & CO 3-B)
				\$ 795,619.00	3999.61		\$ 188,228.00	\$ 166,269.00	\$ 1,150,116.00		\$ 884,093.49	
									5% Subcontractor Markup	\$		
									10% Markup	\$	115,011.60	
									1.51% Bond & Insurance	\$	13,349.81	
									TOTAL	\$	1,012,454.90	

Activity Unit Price Summary

Biditem Activity	Description	Quantity	Unit	Calendar WC	Hrs/Shift	Labor	Perm Material	Constr Matl/Exp	Equip-ment	Sub-Contract	Total
*** 100	8th Street					Takeoff:	1.00 LS		Bid:	1.00 LS	
100.01	24" RCP Installation	294.00	LF	F6319A	50 10.00	9,224	15,509	1,734	8,148		34,616
Mh:	196.00	Shifts: 2.5	Mh/Un: 0.6667	Un/Sh: 120.0000		31.37	52.75	5.90	27.71		117.74
*****Biditem/Category		100	*****			9,224	15,509	1,734	8,148		34,616
Mh:	196.00	Mh/Un: 196.0000				9,224.18	15,509.20	1,734.00	8,148.20		34,615.58
*** 110	9th Street					Takeoff:	1.00 LS		Bid:	1.00 LS	
110.01	24" RCP Installation	252.00	LF	F6319A	50 10.00	7,906	13,294	1,488	6,984		29,673
Mh:	168.00	Shifts: 2.1	Mh/Un: 0.6667	Un/Sh: 120.0000		31.37	52.75	5.90	27.71		117.75
*****Biditem/Category		110	*****			7,906	13,294	1,488	6,984		29,673
Mh:	168.00	Mh/Un: 168.0000				7,906.44	13,294.08	1,488.00	6,984.16		29,672.68
*** 120	11th Street					Takeoff:	1.00 LS		Bid:	1.00 LS	
120.01	24" RCP Installation	217.00	LF	F6319A	50 10.00	6,808	11,447	1,280	6,013		25,549
Mh:	144.66	Shifts: 1.8	Mh/Un: 0.6666	Un/Sh: 120.0221		31.37	52.75	5.90	27.71		117.74
*****Biditem/Category		120	*****			6,808	11,447	1,280	6,013		25,549
Mh:	144.66	Mh/Un: 144.6600				6,807.97	11,447.40	1,280.40	6,013.04		25,548.81
*** 130	12th Street					Takeoff:	1.00 LS		Bid:	1.00 LS	
130.01	24" RCP Installation	294.00	LF	F6319A	50 10.00	9,224	15,511	1,739	8,148		34,622
Mh:	196.00	Shifts: 2.5	Mh/Un: 0.6667	Un/Sh: 120.0000		31.37	52.76	5.91	27.71		117.76
*****Biditem/Category		130	*****			9,224	15,511	1,739	8,148		34,622
Mh:	196.00	Mh/Un: 196.0000				9,224.18	15,510.53	1,738.80	8,148.20		34,621.71
*** 140	13th Street					Takeoff:	1.00 LS		Bid:	1.00 LS	
140.01	24" RCP Installation	345.00	LF	F6319A	50 10.00	10,824	18,200	2,038	9,562		40,623
Mh:	230.00	Shifts: 2.9	Mh/Un: 0.6667	Un/Sh: 120.0000		31.37	52.75	5.91	27.71		117.75
*****Biditem/Category		140	*****			10,824	18,200	2,038	9,562		40,623
Mh:	230.00	Mh/Un: 230.0000				10,824.30	18,199.92	2,037.60	9,561.66		40,623.48
*** 150	Alton Court					Takeoff:	1.00 LS		Bid:	1.00 LS	
150.01	24" RCP Installation	516.00	LF	F6319A	50 10.00	16,189	27,221	3,047	14,301		60,758
Mh:	344.00	Shifts: 4.3	Mh/Un: 0.6667	Un/Sh: 120.0000		31.37	52.75	5.90	27.71		117.75
*****Biditem/Category		150	*****			16,189	27,221	3,047	14,301		60,758
Mh:	344.00	Mh/Un: 344.0000				16,189.41	27,221.03	3,046.80	14,300.89		60,758.13
*** 400	40 West Ave.					Takeoff:	1.00 LS		Bid:	1.00 LS	
390.01	24" RCP Installation	370.00	LF	F6319A	50 10.00	11,608	19,519	2,184	10,253		43,564
Mh:	246.66	Shifts: 3.1	Mh/Un: 0.6666	Un/Sh: 120.0130		31.37	52.75	5.90	27.71		117.74
390.09	48" RCP	786.00	LF	F6319A	50 10.00	26,902	194,289	3,621	23,763		248,574
Mh:	571.63	Shifts: 7.1	Mh/Un: 0.7273	Un/Sh: 110.0070		34.23	247.19	4.61	30.23		316.25
390.11	60" RCP Installation	1,427.00	LF	F6319A	50 10.00	89,543	457,129	6,367	79,097		632,136
Mh:	1,902.66	Shifts: 23.8	Mh/Un: 1.3333	Un/Sh: 60.0008		62.75	320.34	4.46	55.43		442.98
*****Biditem/Category		400	*****			128,054	670,936	12,171	113,113		924,274
Mh:	2,720.95	Mh/Un: 2,720.9500				128,053.58	670,935.81	12,171.30	113,113.46		924,274.15
*** 501	32c Additional Structures					Takeoff:	1.00 LS		Bid:	1.00 LS	
501.01	Structures 4'x2.5' & 4'x4'	48.00	EA	F6319A	50 10.00	90,359	101,274	8,640	79,819		280,093
Mh:	1,920.00	Shifts: 24.0	Mh/Un: 40.0000	Un/Sh: 2.0000		1,882.49	2,109.88	180.00	1,662.90		5,835.27
501.05	Structures 6'x4'	7.00	EA	F6319A	50 10.00	26,355	23,346	1,260	23,281		74,241
Mh:	560.00	Shifts: 7.0	Mh/Un: 80.0000	Un/Sh: 1.0000		3,764.98	3,335.12	180.00	3,325.79		10,605.89
501.06	Structures 7'x4' & 7'x7'	11.00	EA	F6319A	50 10.00	48,272	55,894	2,040	46,637		152,843
Mh:	990.00	Shifts: 11.0	Mh/Un: 90.0000	Un/Sh: 1.0000		4,388.38	5,081.27	185.45	4,239.71		13,894.81
*****Biditem/Category		501	*****			164,986	180,514	11,940	149,736		507,177
Mh:	3,470.00	Mh/Un: 3,470.0000				164,986.43	180,514.21	11,940.00	149,736.30		507,176.94

Activity Unit Price Summary

Biditem Activity	Description	Quantity	Unit	Calendar WC	Hrs/Shift	Labor	Perm Material	Constr Matl/Exp	Equip- Ment	Sub- Contract	Total
Mh:	7,469.61	***REPORT TOTALS***				353,216	952,632	35,437	316,006		1,657,291

N = Activity not adjusted to bid quantity



090 - South Structure Comparison

Structure Type	Unit	Dimensions	Base Bid & CO 3B	60% Drawings Qty	Delta
P-9 Catch Basin	EA	48" Round	4	0	-4
J-9 Catch Basin	EA	48" x 84"	4	0	-4
J-9 Catch Basin	EA	84" x 84"	3	0	-3
MH J-7 Round	EA	60" Round	6	0	-6
J-7 Catch Basin	EA	48" x 84"	5	0	-5
J-7 Catch Basin	EA	84" x 84"	1	0	-1
MH J-7 Round	EA	96" Round	1	0	-1
Type 1	EA	7' x 4'	0	1	1
Type 2	EA	2.5' x 4'	0	1	1
Type 4	EA	7' x 4'	0	2	2
Type 5	EA	4' x 4'	0	3	3
Type 6 J Bottom	EA	4' x 4'	0	5	5
Type J7	EA	4' x 4'	0	11	11
Type J7	EA	6' x 4'	0	7	7
Type J7	EA	7' x 4'	0	6	6
Type J7	EA	7' x 7'	0	2	2
Type F	EA	4' x 2.5'	0	28	28

Structure Type	Dimensions	Base Bid & CO 3B	60% Drawings Qty	Delta
P-9 Catch Basin	48" Round	\$ 19,090.64	\$ -	\$ (19,090.64)
J-9 Catch Basin	48" x 84"	\$ 43,549.29	\$ -	\$ (43,549.29)
J-9 Catch Basin	84" x 84"	\$ 41,510.97	\$ -	\$ (41,510.97)
MH J-7 Round	60" Round	\$ 52,349.80	\$ -	\$ (52,349.80)
J-7 Catch Basin	48" x 84"	\$ 53,560.57	\$ -	\$ (53,560.57)
J-7 Catch Basin	84" x 84"	\$ 11,833.75	\$ -	\$ (11,833.75)
MH J-7 Round	96" Round	\$ 12,192.98	\$ -	\$ (12,192.98)
Structures Type 2, 5, 6, J7 and F	4'x2.5' & 4'x4'	\$ -	\$ 280,092.81	\$ 280,092.81
Structures Type J7	6'x4'	\$ -	\$ 74,241.23	\$ 74,241.23
Structures Type 1, 4 and J7	7'x4', 7,x7'	\$ -	\$ 152,842.90	\$ 152,842.90



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City of Miami Beach
 Capital Improvement Projects Office
 1700 Convention Center Drive
 Miami Beach, FL 33139

WEST AVE 090 SOUTH

April 21, 2021
 Sent Via Email

Attn: Sabrina Baglieri

Re: West Ave 090 - South

Subj: Change Order Submission	
10-Year Storm Piping and Structures	<u>\$ 228,415</u>
Water Quality	<u>\$ 3,640,929</u>
Commodity and Subcontractor Escalation	<u>\$ 359,739</u>
RMCF Labor Escalation	<u>\$ 131,357</u>
Time Extension	1,588 Calendar Days

Dear Sabrina,

Enclosed find Ric-Man Construction Florida, Inc's (RMCF) lump sum proposals to accommodate the above referenced changes to the current contract for your review and approval. RMCF based the pricing on CES Consultant's 60% revised drawings submitted under separate cover.

These drawings incorporate all the required changes and modifications so directed by the City. The history of the changes is well documented in prior correspondence, meeting minutes and Commission Resolutions as well as Change Orders and Directives. RMCF summarizes that history below.

I- 10-Year Storm Piping and Structures - \$228,415

Subsequent to the re-start of the design elements of the project following a 1-year pause to the contract between December 2017 through December 2018, Change Order # 3B was issued for certain Sea Level Rise and ULI Resiliency enhancements including added capacity to the new Lincoln Road pump station and increasing the size of drainage piping and structures per the newly completed AECOM 10-year Stormwater Drainage Map dated May 4, 2017 as modified on January 17, 2018. (Reference Item 5 in RMCF's proposal dated February 14, 2019)

In January 2019, coincident with the pricing submitted under the AECOM Drainage Mapping described above, RMCF was requested to perform an independent drainage modeling study under the 10-year storm event criteria. We were asked to review the newly



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published AECOM report and take into account Pre and Post flooding considerations for the 147 Acre West Ave basin by examining the effects of the entire 600 Acre Miami Beach Basin on the West Avenue Basin with the intent of re-vamping the drainage design based on CES recommendations, RMCF's lead design consultant (A departure from DCP contract requirements). In March 2019 following a February 28, 2019 meeting with the City a final proposal was established for the study culminating in CO# 3A. The study specifically precluded water quality considerations focusing on the quantity (volume) of flooding in the West Ave affected areas, only.

On June 28, 2019 RMCF/CES presented the modeling product and made recommendations with multiple alternative approaches to improve flooding concerns at the West Ave Basin during a 10-Year storm event. Option 2.1B was selected on August 2, 2019 and RMCF/CES was directed to provide a cost proposal and continue with the design, accordingly. Option 2.1B did not consider the effects of the full 600 Acre impact on individual properties and/or low-lying finish floor elevations (FFE) within the West Ave 147acre basin.

A proposal for upsizing drainage piping and structures was presented on August 7, 2019 in the amount of \$1,071,000 but not acted upon by the City primarily due to two (2) parallel issues, (1) the objection by residents of placing the now 120,000 GPM WTS at the end of Lincoln Road and (2) a directive by the City Engineer on November 15, 2019 to halt all submittals to address with DERM a new issue - Water Quality improvements throughout the West Avenue Basin. It should be noted, the Final Drainage Report was submitted to the City on September 5, 2019 followed by 90 % drawings on October 1, 2019. Comments were received on October 21, 2020 and RMCF intended to submit 100% stamped drawings to DERM on November 15, 2020 to obtain the Class 2 permit and commence construction shortly thereafter.

As a result of the relocated WTS, which will be discussed below and the addition of Water Quality Improvements, also discussed below, the drainage piping and structures have been revised to accommodate those changes and new pricing developed. The relocated WTS cost is housed in the 091 - North contract.

Pricing is based on the following scope changes and additions from the previously issued CO 3B.

- Piping and structure pricing has been updated to coincide with the anticipated schedule for the work commencing October 2021 through July 4, 2023.
- Drainage distribution piping from mains to water quality settlement basins.
- Conflict structures as required by the 60% design drawings and specifically excluded in the August 7, 2019 proposal.
- Pipe sizes adjusted based on the relocation of the WTS from Lincoln Rd end to 1671 West Ave which affects the 090 drainage scheme.



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- Subcontractor commodity escalation has been included as a separate item due to the delay in construction start from 2019 to 2021/2022 where applicable through anticipated completion.

II- Water Quality Enhancements - \$3,640,929

As indicated above the issue of Water Quality came to a head on November 15, 2019 when the City directed RMCF (via email) to cease making its 100% drainage design submission to DERM. RMCF was informed that DERM will initiate required improvements to water quality in the West Avenue Basin before a Class 2 permit would be issued. Preceding this notice to hold, in an October 30, 2019 meeting with DPW, CIP, RMCF and CES, RMCF was informed that the present water quality approach during the upcoming permitting process would need to be addressed. It should be understood, the DCP nor the more recent modeling by CES for the 10-year storm events addressed water quality at the October 31, 2019 meeting. RMCF was directed to proceed with submission of the completed drainage design but perform additional studies of existing pump stations at 6th, 10th, 14th and 17th Street pump stations to determine treatment capacities for the West Avenue Basin. RMCF further documented the sequence of events in its October 31, 2019 letter to the City. Then came the November 15, 2019 stop work directive.

In the period between November 2019 and early February 2020 RMCF, CES and the City explored various options at the City's request to improve Water Quality standards at the West Avenue basin based on City interactions with DERM. On February 10, 2020 RMCF provided three (3) alternate schemes for review along with budgeted costs and a preliminary draft of the requested Technical Memorandum recommending the treatment of 30,000 GPM for water quality purposes utilizing fifteen (15) shallow wells, 3 of which are housed in South - 090. At that time, RMCF requested a design Change Order to initiate the work necessary to make a presentation to DERM. On February 18, 2020 RMCF provided a revised proposal based on input from the City along with revised Budget pricing and revised Technical Memorandum for the design work. On March 27, 2020 RMCF provided an expanded proposal for review by the City based on continuing technical and conceptual discussions. On May 4 and May 14, 2020 RMCF memorialized its final proposal requesting immediate NTP to proceed with the design work.

It is important to note, the City tabled the above requested design NTP pending resolution of the WTS relocation issue which directly affected the start of 090 South due to re-design considerations for Drainage. It was not until the October 28, 2020 Commission meeting that RMCF was provided clearance via Resolution 2020-31243 to proceed. On January 5, 2021 RMCF received formal direction from CIP to proceed with the Water Quality design development. CO # 5 in the amount of \$542,056 was subsequently issued on January 21, 2021.



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Pricing is based on the following scope changes and additions from previously issued CO 3B.

- RMCF will install, make operational and test – three (3) settlement basins 15' OD, three (3) Pumping stations 15' OD servicing three (3) 24" diameter wells with structures including all mechanical, electrical and controls to divert drainage water at three (3) locations within the West Avenue basin (9th, 12th & 13th Street) utilizing primarily Secant pile construction methodology.
- Provide control panel platforms at three (3) locations with landscaping screening as approved by the City.
- Utility relocations as needed included.
- Power will be provided by FPL along Alton Court in the form of a pole mounted transformer feeding a handhole. RMCF to route duct bank from handhole at power pole to pump station sites.
- Full MOT/road closures at work locations included. Access to residents will be coordinated on a case-by-case basis.
- General Conditions based on 150 days of extended field time to complete the work.
- Budgeted numbers have been updated for commodity increase to RMCF self- perform items and subcontractor pricing.

III- Commodity and Subcontractor Escalation - \$359,739

Construction commodities have increased 3.6% from Dec/Jan 2019 through February 2021 according to the Producer price Index sponsored by the U.S. Bureau of Labor Statistics. The Project under CO 3B was compensated for escalation through an expected completion date of June 21, 2022 (Feb 2019 update # 18). The current change order work has been adjusted through the new proposed substantial completion date of January 11, 2025 provided formal releases to vendors can be accomplished shortly in this highly marginalized market. Lumber and steel are experiencing large swings upward in pricing, as much as 17% and 6%, respectively. See attached Steel Price Forecast and Market Outlook published by HIS Markit. Steel pricing in the United States which impacts our, piping, pumping units, conduit, wire, re-bar, and a wealth of other steel products are expected to remain high throughout 2021 (when



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commitments will be made to suppliers), due to high demand but slow recovery from COVID impacts to manufacturing these products. PVC has been affected as well due to power failures in Texas impacting production there.

RMCF has analyzed the balance of work and received input from most of our commodity suppliers moving forward. In consideration of \$359,739 (see attached Spreadsheet) RMCF will accept the risk of escalation for the period of construction through July 2023 provided approval of our pricing in the form of a formal commitment is received no later than June 30, 2021 and the City agrees to pay for stored material, offsite to combat escalation charges. The volatility of commodity markets is too extreme to accept long delays in commitments to our suppliers.

In the event the schedule slips due to no fault of RMCF, we specifically reserve our rights to recover added escalation past the February 1, 2025 substantial completion date.

A possible alternative would be to negotiate an escalation clause in the upcoming Change Order to protect RMCF and the City from the volatile swings in commodity pricing we are currently experiencing.

IV- **RMCF Labor Escalation - \$131,357**

Under CO# 3B – item 23 labor rates were adjusted based on anticipated Substantial Completion of June 21, 2022. Labor rates for the current changed work have been accounted for through the new proposed substantial completion date of July 4, 2023 and are included within the individual change order proposals listed above.

According to the U.S. Bureau of Labor Statistics rates within the construction industry has experienced increases on average of 6% between 2019 and 2021, or 3% per year (0.25% / Mo). Consequently, RMCF proposes an escalation factor of 0.25% per month for the period between March 9, 2021 (the expected completion date under CO#3B) and July 4, 2023 (the current projected completion date) or 12 months. (see attached Spread sheet).

In addition, the new change order labor has been escalated from January 2023 – July 2023 the new projected completion date, amounting to 6 months of additional escalation.

VI- **Time Extension 1,588 Calendar Days**



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The original contract duration was 545 calendar days. RMCF provided a time extension request on November 20, 2020 to account for the delays to the critical path of 1,619 days.

The impacts to achieving substantial completion are well documented but summarized here as follows:

Original Contract Duration		545 Days
1- Previous CO - Hurricane Irma -		30
2- Shut down delay #1-12/18/17- 12/20/18- Resiliency ULI.		368
3- Design and Construction add. January 2019 CPM Update		409
4- 10-Year Roadway/drainage changes- 8/3/19- 10/30/19.		89
5- Shut Down #2 - WTS Relo. and Water Quality- 10/31/19 -10/28/20.		364
6- Change Order design negotiation 10/28/20 - 1/15/21.		79
7- Design Restart New WTS/Water Quality/Complete Design 1/16/21- 9/30/21.		219
8- Construction Impacts due to Water Quality additions.		60
Total Contract Days		2,163
Total Days Requested	(2,163 – 545 + 30 = 1,588)	1,588 Days

RMCF provides the detailed schedule with full details of the impacts in the form of a consolidated TIA submission, attached. It should be understood that the basis of the request is rooted in a 10/4/21 construction start driven by the issuance of a Class 2 permit by DERM. Any delay in this critical process will impact the end date. DERM has not published its intentions regarding minimum standards of compliance relative to Water Quality therefore, we specifically reserve our right to additional time and cost in the event the permitting process is extended through no fault of RMCF.

It is important to note the near criticality of the Harmonization Agreement approvals by segment. The issues of encroachment removals, payments for removals, and/or relocations within the ROW over and above the DCP criteria on private property remains an open item. This in addition to recent requests to address certain vulnerable residences (50 + N&S) which may be impacted by a 10-year flood event when considering the impact of all 600



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acres (147 acres West Ave, 453 acres east of Alton). RMCF points to recent correspondence dated March 9 (2 letters) and March 17, 2021 requiring the City's input and direction.

We trust the foregoing information is complete and while not necessarily within the budgetary limits set by the City based on aforementioned market conditions, we request approval to proceed with the completion of this important project. Please contact me with any additional information you may require during your review process.

Sincerely,

Michael R. Fischer, COO.
 Ric-Man Construction Florida, Inc.

CC:

Danny Mancini
 Tyson DiPetrillo
 Dan LaCross
 Rafael Vega
 Jose Caraballo
 Jorge Rodriguez
 Nick Karpathy – Chen Moore

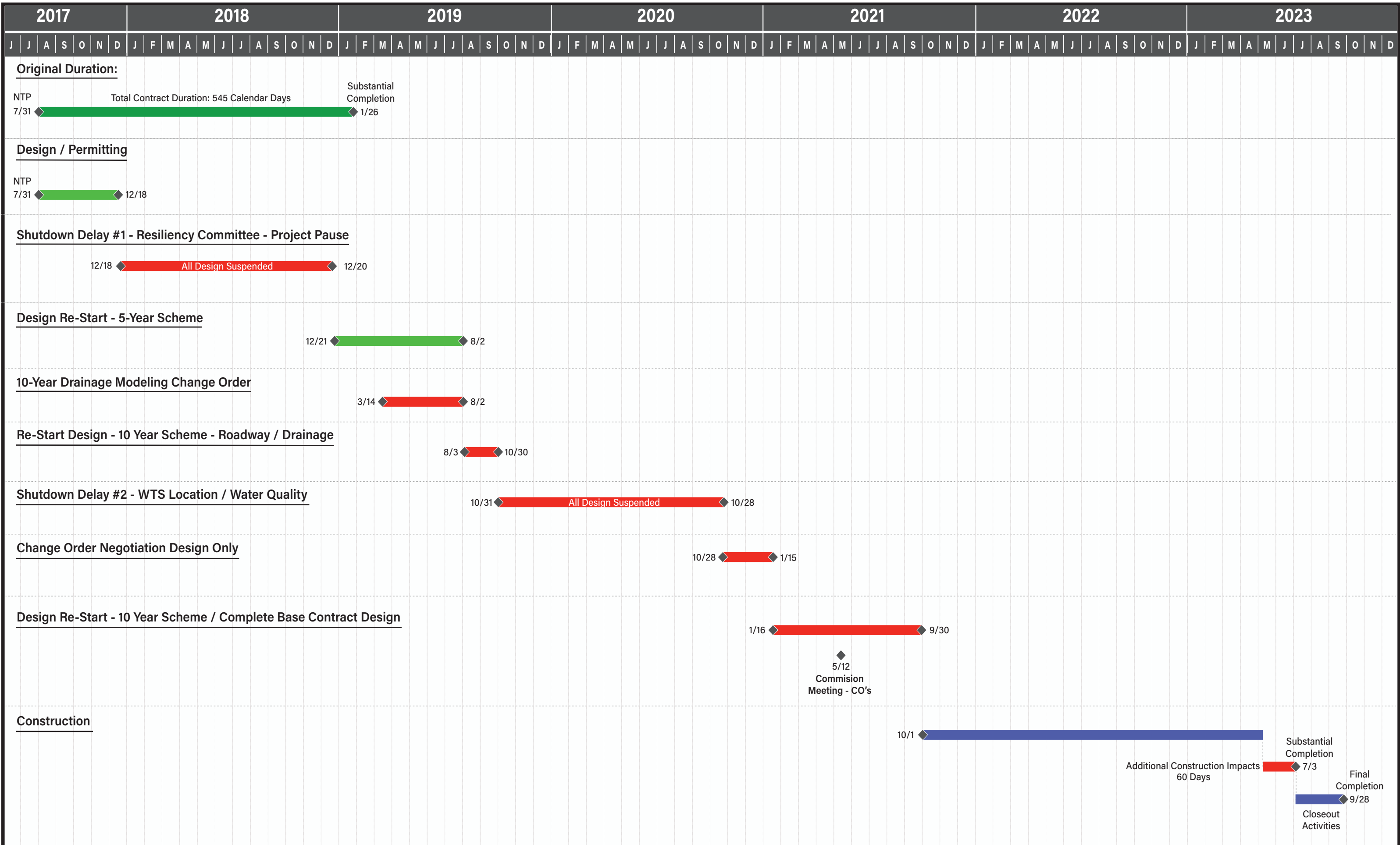
Attachments

1. 090 CPM Critical Path and Impacted Schedule, All Activities
2. February 14, 2019 Proposal Letter, Item #5
3. August 7, 2019 Proposal Letter – Model 2.1B
4. November 19, 2020 Summary of Changes
5. November 15, 2020 Jacome-Perez Email
6. October 30, 2019 - Meeting Minutes
7. October 31, 2019 - RMCF Letter
8. March 27, 2020 - Email RMCF
9. May 14, 2020 - RMCF Letter
10. 10-Year Storm Pricing Sheets w/HCSS Reports
11. Water Quality Pricing Sheets w/ HCSS Reports
12. Vendor/Subcontractor Back-up Documentation
13. Steel Price Forecast – IHS Markit
14. Commodity & Subcontractor Escalation Spread Sheet
15. Escalation RMCF Direct Labor Spread Sheet w/ Index Charts



KB 90 West Avenue Neighborhood Improvement South - Delay Summary

EXHIBIT B





Activity ID	Activity Name	OD	RD	PCT	Start	Finish	Total Float	Calendar	2021												2022												2023											
									A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S						
TIA03-1010	CMB REVIEW & APPROVE 10-YEAR DRAINAGE MODEL	10	0	100%	01-Jul-19 A	02-Aug-19 A			KB90 - 5 DAY																																			
DESIGN																																												
WATER MAIN DESIGN/PERMITTING																																												
D1-1000	NTP 1	0	0	100%	31-Jul-17 A			KB90 - 5 DAY																																				
D1-1010	SUBMIT 60% PLANS	62	0	100%	31-Jul-17 A	04-Dec-17 A		KB90 - TIA 01																																				
D1-1030	SUBMIT 90% PLANS	5	0	100%	12-Dec-17 A	18-Dec-17 A		KB90 - 5 DAY																																				
D1-1020	CMB 60% PLANS REVIEWS	5	0	100%	05-Dec-17 A	21-Dec-18 A		KB90 - 5 DAY																																				
D1-010	RE-START 60% PLANS - ALL SEGMENTS - WATER MAIN	67	0	100%	21-Dec-18 A	18-Mar-19 A		KB90 - 7 DAY																																				
D1-020	CMB 60% PLAN REVIEWS - WATER MAIN	10	0	100%	19-Mar-19 A	05-Apr-19 A		KB90 - 7 DAY																																				
D1-030	RE-START-90% PLANS - WATER MAIN - ALL SEGMENTS	18	0	100%	08-Apr-19 A	03-May-19 A		KB90 - 7 DAY																																				
D1-040	CMB 90% REVIEWS/APPROVAL - WATER MAIN - ALL SEGMENTS	5	0	100%	04-May-19 A	17-May-19 A		KB90 - 7 DAY																																				
D1-050	SUBMIT /APPROVE MATERIAL CUT SHEETS / PROCURE - WATER MAIN	3	0	100%	29-May-19 A	28-Jun-19 A		KB90 - 7 DAY																																				
D1-070	PROCURE HEALTH DEPT & DERM PERMIT - ALL SEGMENTS - WATER MAIN	30	0	100%	18-May-19 A	16-Jul-19 A		KB90 - 7 DAY																																				
D1-060	IFC PLANS - WATER MAIN - ALL SEGMENTS	5	0	100%	17-Jul-19 A	31-Jul-19 A		KB90 - 7 DAY																																				
SANITARY SEWER DESIGN/PERMITTING																																												
D2-1000	SUBMIT 60% PLANS	44	0	100%	31-Jul-17 A	06-Nov-17 A		KB90 - TIA 01																																				
D2-1020	SUBMIT 90% PLANS	10	0	100%	07-Nov-17 A	07-Dec-17 A		KB90 - 5 DAY																																				
D2-1040	SUBMIT 100% PLANS	5	0	100%	08-Dec-17 A	19-Dec-17 A		KB90 - 5 DAY																																				
D2-1050	SUBMIT/APPROVAL MATERIAL CUT SHEETS	5	0	100%	11-Dec-17 A	21-Dec-17 A		KB90 - 5 DAY																																				
D2-1060	PROCURE MDWSD/DERM PERMIT	15	0	100%	21-Nov-17 A	21-Dec-18 A		KB90 - 5 DAY																																				
D2-1010	CMB 60% PLANS REVIEWS	10	0	100%	07-Nov-17 A	21-Dec-18 A		KB90 - 5 DAY																																				
D2-1030	CMB 90% PLANS REVIEWS	5	0	100%	08-Dec-17 A	21-Dec-18 A		KB90 - 5 DAY																																				
D2-030	RE-START-90% PLANS - SANITARY SEWER DESIGN - ALL SEGMENTS	78	0	100%	21-Dec-18 A	29-Mar-19 A		KB90 - 7 DAY																																				
D2-040	CMB 90% REVIEWS/APPROVAL - SANITARY SEWER DESIGN - ALL SEGMENTS	10	0	100%	30-Mar-19 A	11-Apr-19 A		KB90 - 7 DAY																																				
D2-050	SUBMIT /APPROVE MATERIAL CUT SHEETS/PROCURE - SANITARY SEWER DESIGN	3	0	100%	29-May-19 A	28-Jun-19 A		KB90 - 7 DAY																																				
D2-070	PROCURE MDWSD / DERM PERMIT- ALL SEGMENTS - SANITARY SEWER DESIGN	30	0	100%	14-May-19 A	26-Dec-19 A		KB90 - 7 DAY																																				
D2-060	IFC PLANS - SANITARY SEWER DESIGN - ALL SEGMENTS	7	0	100%	27-Dec-19 A	27-Dec-19 A		KB90 - 7 DAY																																				
FULL ROADWAY/DRAINAGE/STREET LIGHT/SIGNALIZATION DESIGN/PERMITTING																																												
D4-1000	PREPARE DOCUMENTS FOR COMMUNITY DESIGN REVIEW MTG.	8	0	100%	31-Jul-17 A	18-Oct-17 A		KB90 - TIA 01																																				
D4-1010	CITY REVIEW COMMUNITY DESIGN REVIEW MTG.	10	0	100%	19-Oct-17 A	01-Nov-17 A		KB90 - 5 DAY																																				
D4-1020	FINAL DOCUMENTS FOR COMMUNITY DESIGN REVIEW MTG.	5	0	100%	02-Nov-17 A	08-Nov-17 A		KB90 - 5 DAY																																				
D4-1030	CITY REVIEW FINAL DOCUMENTS FOR COMMUNITY DESIGN REVIEW MTG.	5	0	100%	09-Nov-17 A	10-Nov-17 A		KB90 - 5 DAY																																				
D4-1040	SCHEDULE AND ATTEND COMMUNITY DESIGN REVIEW MTG.	5	0	100%	09-Nov-17 A	14-Nov-17 A		KB90 - 5 DAY																																				
D4-1042	CMB PROVIDES DOCUMENTATION OF COMMUNITY INPUT	7	0	100%	15-Nov-17 A	30-Nov-17 A		KB90 - 7 DAY																																				
D4-1061	PREPARE & SUBMIT HARMONIZATION DOCUMENTS	40	0	100%	12-Oct-17 A	30-Nov-17 A		KB90 - 5 DAY																																				
D4-1050	COMPILE AND ADDRESS PUBLIC INPUT	6	0	100%	01-Dec-17 A	07-Dec-17 A		KB90 - 5 DAY																																				
D4-1062	REVIEW & APPROVE HARMONIZATION DOCUMENTS	14	0	100%	01-Dec-17 A	13-Dec-17 A		KB90 - 7 DAY																																				
D4-1063	REVISE & RESUBMIT HARMONIZATION DOCUMENTS R1	5	0	100%	14-Dec-17 A	20-Dec-17 A		KB90 - 5 DAY																																				
D4-1060	SUBMIT DOCUMENTS FOR COMMISSION APPROVAL	7	0	100%	08-Dec-17 A	21-Dec-18 A		KB90 - 5 DAY																																				
D4-1080	SUBMIT 60% PLANS - CMB/MD PW/DERM/DEP	20	0	100%	09-Dec-17 A	21-Dec-18 A		KB90 - 5 DAY																																				
D4-1064	REVIEW & APPROVE HARMONIZATION DOCUMENTS R1	14	0	100%	21-Dec-17 A	21-Dec-18 A		KB90 - 7 DAY																																				
D4-010	AECOM CERTIFIED DRAINAGE REPORT	60	0	100%	21-Dec-18 A	27-Feb-19 A		KB90 - 7 DAY																																				
D4-030	ROW ENCROACHMENT PLANS - ALL SEGMENTS	90	0	100%	21-Dec-18 A	28-Mar-19 A		KB90 - 7 DAY																																				
D4-070	RE-START 60% PLANS - ALL SEGMENTS ROADWAY / DRAINAGE / STREET LIGHTS / SIGNALIZATION	26	0	100%	03-Aug-19 A	05-Sep-19 A		KB90 - 7 DAY																																				
D4-020	MEET W/ SFWD - MODEL PARAMETERS ESTABLISHED AND APPROVED	10	0	100%	02-Aug-19 A	12-Sep-19 A		KB90 - 7 DAY																																				
D4-080	CMB 60% PLAN REVIEWS - ALL SEGMENTS ROADWAY / DRAINAGE / STREET LIGHTS / SIGNALIZATION	5	0	100%	06-Sep-19 A	30-Sep-19 A		KB90 - 7 DAY																																				
D4-090	RE-START-90% PLANS - ALL SEGMENTS ROADWAY / DRAINAGE / STREET LIGHTS / SIGNALIZATION	25	0	100%	08-Sep-19 A	30-Sep-19 A		KB90 - 7 DAY																																				
D4-100	CMB 90% REVIEWS / APPROVAL - ALL SEGMENTS ROADWAY / DRAINAGE / STREET LIGHTS / SIGNALIZATION	5	1	80%	01-Oct-19 A	01-Apr-21	-693	KB90 - 7 DAY																																				

█ Remaining Level of Effort █ Remaining Work ◆ Milestone
█ Actual Work █ Critical Remaining Work



Activity ID, Activity Name, OD, RD, PCT, Start, Finish, Total Float, Calendar. Includes sections for CONSTRUCTION, SEGMENT 1 CONSTRUCTION, and SEGMENT 2 CONSTRUCTION with various activity details and bar chart representations.

Legend for bar chart: Remaining Level of Effort (green bar), Remaining Work (light green bar), Actual Work (blue bar), Critical Remaining Work (red bar), Milestone (black diamond symbol).

KB-90 WEST AVENUE NEIGHBORHOOD IMPROVEMENT SOUTH MARCH 31, 2021 UPDATE 43 + NEW DESIGN
BAR CHART - ALL ACTIVITIES



RUN DATE:19-Apr-21
DATA DATE:01-Apr-21

Activity ID	Activity Name	OD	RD	PCT	Start	Finish	Total Float	Calendar	2021							2022							2023															
									A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S
C-G4-130	FOUNDATION - 5TH ST GEN SET	5	5	0%	24-Nov-21	30-Nov-21	-235	KB90 - 5 DAY																														
C-G4-140	DUCTBANK - 5TH ST GEN SET	5	5	0%	01-Dec-21	07-Dec-21	-235	KB90 - 5 DAY																														
C-G4-150	STRUCTURE / PLATFORM - 5TH ST GEN SET	15	15	0%	08-Dec-21	28-Dec-21	-235	KB90 - 5 DAY																														
C-G4-160	SET EQUIPMENT - 5TH ST GEN SET	2	2	0%	29-Dec-21	30-Dec-21	-235	KB90 - 5 DAY																														
C-G4-165	INSTALL GAS PIPING - 5TH ST GEN SET	5	5	0%	31-Dec-21	06-Jan-22	-223	KB90 - 5 DAY																														
C-G4-170	WIRING AND TERMINATIONS - 5TH ST GEN SET	10	10	0%	31-Dec-21	13-Jan-22	-235	KB90 - 5 DAY																														
C-G4-190	PRE-START-UP - 5TH ST GEN SET	1	1	0%	14-Jan-22	14-Jan-22	-228	KB90 - 5 DAY																														
C-G4-200	LOAD BANK TESTING - 5TH ST GEN SET	2	2	0%	17-Jan-22	18-Jan-22	-228	KB90 - 5 DAY																														
C-G4-180	HR / FINISHES / FENCING / LANDSCAPING - 5TH ST GEN SET	10	10	0%	14-Jan-22	27-Jan-22	-235	KB90 - 5 DAY																														
C-G4-210	COMMISSIONING /ATS TESTING - 5TH ST GEN SET	1	1	0%	28-Jan-22	28-Jan-22	-235	KB90 - 5 DAY																														
C-G4-220	TRAINING - 5TH ST GEN SET	1	1	0%	31-Jan-22	31-Jan-22	-235	KB90 - 5 DAY																														
C-G4-230	PLACE IN OPERATION - 5TH ST GEN SET	1	1	0%	01-Feb-22	01-Feb-22	-235	KB90 - 5 DAY																														
SEGMENT 7 CONSTRUCTION																																						
C2-SEG7-1010	MOBILIZE & MATERIAL DELIVERY - SEG 7	2	2	0%	15-Jun-23	16-Jun-23	-605	KB90 - 5 DAY																														
C2-SEG7-1030	ESTABLISH MOT - SEG 7	1	1	0%	19-Jun-23	19-Jun-23	-605	KB90 - 5 DAY																														
C2-SEG7-1040	CONFIRM ENCROACHMENTS ARE REMOVED - SEG 7	1	1	0%	20-Jun-23	20-Jun-23	-605	KB90 - 5 DAY																														
C2-SEG7-1150	MILL & PAVE - SEG 7	10	10	0%	21-Jun-23	04-Jul-23	-605	KB90 - 5 DAY																														
C2-SEG7-1230	SEGMENT 7 SUBSTANTIAL COMPLETION	0	0	0%		04-Jul-23	-847	KB90 - 7 DAY																														
FINAL COMPLETION																																						
C5-1010	PUNCH LIST SUBMITTAL	3	3	0%	05-Jul-23	07-Jul-23	-603	KB90 - 5 DAY																														
C5-1020	PUNCH LIST COMPLETION	10	10	0%	10-Jul-23	21-Jul-23	-603	KB90 - 5 DAY																														
C5-1000	UTILITY ADJUSTMENTS	15	15	0%	05-Jul-23	25-Jul-23	-605	KB90 - 5 DAY																														
C5-1030	FINAL LIFT OF ASPHALT	10	10	0%	26-Jul-23	08-Aug-23	-605	KB90 - 5 DAY																														
C5-1050	FINAL STRIPING	8	8	0%	09-Aug-23	18-Aug-23	-605	KB90 - 5 DAY																														
C5-1060	SUBMISSION OF CLOSING DOCUMENTS	30	30	0%	21-Aug-23		-605	KB90 - 5 DAY																														
C5-1070	FINAL COMPLETION	0	0	0%		29-Sep-23	-605	KB90 - 5 DAY																														

Actual Work
 Remaining Level of Effort
 Remaining Work
 Milestone
 Critical Remaining Work



Activity ID	Activity Name	OD	RD	PCT	Start	Finish	Total Float	Calendar	2021							2022							2023															
									A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S	O	N	D	J	F	M	A	M	J	Jul	A	S
KB-90 WEST AVENUE NEIGHBORHOOD IMPROVEMENT SOUTH MARCH 31, 2021 UPDATE 43 + NEW DESIGN																																						
MILESTONES																																						
MS-03	SUBSTANTIAL COMPLETION (NTP 1 + 545 DAYS 1/26/2019 TIA 01 2/25/2019 + RBL 3/9/2021)	0	0	0%		04-Jul-23*	-847	KB90 - 7 DAY																														
MS-04	FINAL COMPLETION (SC + 90 DAYS 4/26/2019 TIA 01 5/23/2019 + RBL 6/4/2021)	0	0	0%		29-Sep-23*	-847	KB90 - 7 DAY																														
DESIGN																																						
FULL ROADWAY/DRAINAGE/STREET LIGHT/SIGNALIZATION DESIGN/PERMITTING																																						
HARMONIZATION PLANS																																						
D4-040	HARMONIZATION PLANS DESIGN - SEGMENT 1	88	88	0%	21-Dec-18 A	27-Jun-21	-875	KB90 - 7 DAY																														
CONSTRUCTION																																						
SEGMENT 1 CONSTRUCTION																																						
C2-SEG1-1000	HARMONIZATION PLANS & LICENSE AGREEMENT SIGNED OFF BY RESIDENTS - 100% - SEG 1	71	71	0%	28-Jun-21	04-Oct-21	-605	KB90 - 5 DAY																														
C2-SEG1-1010	MOBILIZE & MATERIAL DELIVERY - SEG 1	2	2	0%	05-Oct-21	06-Oct-21	-605	KB90 - 5 DAY																														
C2-SEG1-1030	ESTABLISH MOT - SEG 1	1	1	0%	07-Oct-21	07-Oct-21	-605	KB90 - 5 DAY																														
C2-SEG1-1050	PROTECT EXISTING TREES TO REMAIN - SEG 1	2	2	0%	08-Oct-21	11-Oct-21	-605	KB90 - 5 DAY																														
C2-SEG1-1070	DEMO CURB / GUTTER / SIDEWALK - SEG 1	5	5	0%	12-Oct-21	18-Oct-21	-605	KB90 - 5 DAY																														
C2-SEG1-1080	ESTABLISH PEDESTRIAN ACCESS - SEG 1	3	3	0%	19-Oct-21	21-Oct-21	-605	KB90 - 5 DAY																														
C2-SEG1-1090	STRIP PAVEMENT - SEG 1	3	3	0%	22-Oct-21	26-Oct-21	-605	KB90 - 5 DAY																														
C2-SEG1-1110	DEWATERING SET-UP - SEG 1	2	2	0%	27-Oct-21	28-Oct-21	-605	KB90 - 5 DAY																														
C2-SEG1-1120	INSTALL STORM DRAINS - SEG 1	12	12	0%	29-Oct-21	15-Nov-21	-605	KB90 - 5 DAY																														
C2-SEG1-1130	REPLACE SAN. MAIN AND LATERALS - SEG 1	7	7	0%	16-Nov-21	24-Nov-21	-605	KB90 - 5 DAY																														
C2-SEG1-1140	INSTALL VM LINES - SEG 1	8	8	0%	25-Nov-21	06-Dec-21	-605	KB90 - 5 DAY																														
C2-SEG1-1150	ROADWAY CONSTRUCTION ELEV 3.7 NAVD - SEG 1	12	12	0%	07-Dec-21	22-Dec-21	-605	KB90 - 5 DAY																														
C2-SEG1-1170	INSTALL STREET LIGHT CONDUIT / BOXES - SEG 1	12	12	0%	07-Dec-21	22-Dec-21	-605	KB90 - 5 DAY																														
C2-SEG1-1160	HARMONIZE PROPERTIES - EARTHWORK / YARD DRAIN & PIPING - SEG 1	4	4	0%	17-Dec-21	22-Dec-21	-605	KB90 - 5 DAY																														
C2-SEG1-1180	INSTALL NEW CURB / GUTTER / RETAINING WALLS / ETC - SEG 1	4	4	0%	23-Dec-21	28-Dec-21	-605	KB90 - 5 DAY																														
C2-SEG1-1190	INSTALL NEW SIDEWALK - SEG 1	5	5	0%	29-Dec-21	04-Jan-22	-605	KB90 - 5 DAY																														
C2-SEG1-1200	INSTALL ASPHALT BASE 1ST LIFT - SEG 1	2	2	0%	05-Jan-22	06-Jan-22	-605	KB90 - 5 DAY																														
C2-SEG1-1210	LANDSCAPING & IRRIGATION - SEG 1	5	5	0%	07-Jan-22	13-Jan-22	-605	KB90 - 5 DAY																														
C2-SEG1-1230	SEGMENT 1 SUBSTANTIAL COMPLETION	0	0	0%		13-Jan-22	-870	KB90 - 7 DAY																														
SEGMENT 2 CONSTRUCTION																																						
C2-SEG2-1010	MOBILIZE & MATERIAL DELIVERY - SEG 2	2	2	0%	14-Jan-22	17-Jan-22	-605	KB90 - 5 DAY																														
C2-SEG2-1030	ESTABLISH MOT - SEG 2	1	1	0%	18-Jan-22	18-Jan-22	-605	KB90 - 5 DAY																														
C2-SEG2-1020	SURVEY LAY-OUT - SEG 2	2	2	0%	18-Jan-22	19-Jan-22	-605	KB90 - 5 DAY																														
C2-SEG2-1040	CONFIRM ENCROACHMENTS ARE REMOVED - SEG 2	1	1	0%	20-Jan-22	20-Jan-22	-605	KB90 - 5 DAY																														
C2-SEG2-1050	PROTECT EXISTING TREES TO REMAIN - SEG 2	2	2	0%	19-Jan-22	20-Jan-22	-605	KB90 - 5 DAY																														
C2-SEG2-1070	DEMO CURB / GUTTER / SIDEWALK - SEG 2	5	5	0%	21-Jan-22	27-Jan-22	-605	KB90 - 5 DAY																														
C2-SEG2-1080	ESTABLISH PEDESTRIAN ACCESS - SEG 2	3	3	0%	28-Jan-22	01-Feb-22	-605	KB90 - 5 DAY																														
C2-SEG2-1090	STRIP PAVEMENT - SEG 2	2	2	0%	02-Feb-22	03-Feb-22	-605	KB90 - 5 DAY																														
C2-SEG2-1110	DEWATERING SET-UP - SEG 2	2	2	0%	04-Feb-22	07-Feb-22	-605	KB90 - 5 DAY																														
C2-SEG2-1120	INSTALL STORM DRAINS - SEG 2	25	25	0%	08-Feb-22	14-Mar-22	-605	KB90 - 5 DAY																														
C2-SEG2-1130	REPLACE SAN. MAIN AND LATERALS - SEG 2	12	12	0%	15-Mar-22	30-Mar-22	-605	KB90 - 5 DAY																														
C2-SEG2-1140	INSTALL VM LINES - SEG 2	8	8	0%	31-Mar-22	11-Apr-22	-605	KB90 - 5 DAY																														
C2-SEG2-1150	ROADWAY CONSTRUCTION ELEV 3.7 NAVD - SEG 2	20	20	0%	12-Apr-22	09-May-22	-605	KB90 - 5 DAY																														
C2-SEG2-1170	INSTALL STREET LIGHT CONDUIT / BOXES - SEG 2	5	5	0%	03-May-22	09-May-22	-605	KB90 - 5 DAY																														
C2-SEG2-1160	HARMONIZE PROPERTIES - EARTHWORK / YARD DRAIN & PIPING - SEG 2	20	20	0%	12-Apr-22	09-May-22	-605	KB90 - 5 DAY																														
C2-SEG2-1180	INSTALL NEW CURB / GUTTER / RETAINING WALLS / ETC - SEG 2	10	10	0%	10-May-22	23-May-22	-605	KB90 - 5 DAY																														
C2-SEG2-1190	INSTALL NEW SIDEWALK - SEG 2	10	10	0%	24-May-22	06-Jun-22	-605	KB90 - 5 DAY																														

■ Remaining Level of Effort
 ■ Remaining Work
 ■ Actual Work
 ■ Critical Remaining Work
 ◆ Milestone



3100 SW 15th Street
Deerfield Beach, Florida 33442
Office:(954)426-1221
Fax:(954)426-1226

City of Miami Beach
1700 Convention Center Drive
Miami Beach, FL 33139

February 14, 2019
Sent Via Email

Attn: Jorge Rodriguez

RE: West Ave South – 090

Subject: 10-Year Storm Drain CO – Item 5

Jorge,

Enclosed please find our formal proposal with back-up in support of our reduced price of \$1,227,983 for the 10-year Storm Drainage as submitted originally in our June 28, 2018 correspondence. The reduction in price is mainly due to the new information obtained that approximately 1,310 LF of 48" Drainage pipe is already installed between 5th and 8th St along West Ave.

As you are aware, the AECOM drainage map dated May 4, 2017 provided to RMCF on May 3, 2018 by the City to form the basis of our pricing included this piping as new. RMCF and its consultant CES confirmed via as-builts that this piping is existing.

It should be understood the piping and elevations assumed are based on the AECOM Map provided to us on May 3, 2018. Absent a fully certified drainage report, any changes in invert elevations due to pipe size changes will require an additional change in pricing.

Please review the documentation and contact me with any questions you may have.

Sincerely,

Michael R. Fischer, COO.
Ric-Man Construction Florida, Inc.

CC:

Danny Mancini
Tyson DiPetrillo
Chris Mancini
Sabrina Baglieri

Attachments:

- RMCF Spread Sheet of Costs



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- HCSS Activity Report
- CES Scope and Clarifications
- CES Pricing Sheet
- Supplier Quotations



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City of Miami Beach
 1700 Convention Center Drive
 Miami Beach, FL 33139

August 7, 2019
 Sent Via Email

Attn: Jorge Rodriguez

Re: West Avenue South 090

Subj: Model Study 2.1B Price Proposal

Dear Jorge,

Referencing RMCF's email dated July 23, 2019 and the recent directive received from the CMB in the form of an email dated August 2, 2019 wherein option 2.1B was selected as the required drainage approach for the West Avenue Project, we include a detailed breakdown of the proposal in the amount of \$1,071,000 for your review and approval.

RMCF has reviewed in detail the differences between the 10 year storm drainage piping and structures pricing for the South 090 project contained within CO #3B and as recommended in CES's June 2019 Technical Memorandum presented to the City on June 28, 2019. RMCF performed a street by street re-analysis of the proposed work. The pricing is based on Model 2.1B (South to North - Appendices 16 and 17).

The following notes and clarifications apply to the proposed Change Order:

- The \$ presented above represents additions to current approved CO #3B.
- Credits have been provided where applicable.
- Conflict structures are not included in this estimate - these issues will be priced based on finalization of the Utility Master Plan currently in progress.
- Additional cost has been added to account for Pipe sizing increases, impacts to production and equipment needs.
- Added structures and side street drainage particularly at the Alton Court interfaces to account for differences between AECOM (DCP) and CO #3B Model and the new CES Model concepts have been accounted for.
- Duration impacts **have not been** analyzed nor are a part of Change Order #4 - time extension. RMCF will do everything in its power to hold the CO # 4 dates. However, the critical path remains through the drainage work and the approval of DERM. RMCF expects to submit 60% drainage design drawings by August 30, 2019.
- Segmented Construction Approach has been included in the added costs above.

RMCF would appreciate an expedited review and approval of this Change Order since the design work has commenced and the critical path of the project is through the design, permitting and construction of the drainage system.



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Please contact me if you require any additional information.

Sincerely,

Michael R. Fischer

CC:

Danny Mancini
Tyson Di Petrillo
Sabrina Baglieri

Attachments:

- RCMF Email Dated July 23, 2019
- CMB Email Dated August 2, 2019
- RCMF Spread Sheet and HCSS Detailed Estimate.



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City of Miami Beach
Capital Improvement Projects Office
1700 Convention Center Drive
Miami Beach, FL 33139

November 19, 2020
Sent Via Email

Attn: Sabrina Baglieri

Re: West Ave 090/091

Subj: Budget Estimate for Commission Approvals
Option 3A - WTS at 1671 West Ave
Water Quality Wells and Pumping Systems

Sabrina,

Enclosed find the work sheets representing Ric-man Construction Florida, Inc. (RMCF) estimates for the upcoming work at the West Ave South (090) and North (091) projects.

As you are aware the Engineering fees for the above referenced design Change Orders were approved by the Commission as follows:

DESIGN FEES - Approved

- **091 - North Option 3A - WTS at 1671 West Ave** - \$275,000. It is noted that 50% of the value is being processed under #3 RCD by the City. The balance of \$137,500 will be funded under the Construction CO below.
- **090 - Water Quality Design**- \$542,056 will be processed via a separate RCO #4
- **091 - Water Quality Design** - \$1,001,781 will be processed via a separate RCO #4

CONSTRUCTION ESTIMATE - For Commission Approval

- 091 - North Option 1671 3A - WTS at West Ave - \$2,827,054 (Attachment 1)
- 091 - North Water Quality Construction - \$9,177,000 (Attachment 2)
- 090 - South Water Quality Construction - \$3,028,000 (Attachment 3)



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Further, it is our understanding that the Model 2.1 B 10 - year Storm Water Upgrade – RCO #5 in the amount of \$2,858,000 for 090/091 is under submission for formal Change Order Approval as of November 17, 2020. The proposal was submitted on August 7, 2019.

In summary RMCF is anticipating formal additions to the Contract in the form of Contingency Draws and Change Orders as follows:

090 South

Water Quality Design -	\$542,056
* Water Quality Construction -	\$3,028,000
Model 2.1B - 10-Year Storm Upgrades	\$1,070,000
Total 090 South	<u>\$4,640,056</u>

091 North

Water Quality Design	\$1,001,781
* Water Quality Construction	\$9,177,000
Model 2.1B – 10-Year Storm Upgrades	\$1,788,000
Option 3A WTS - 1671 West Ave	\$137,500 (Contingency Draw)
Option 3A WTS - 1671 West Ave	\$2,827,054
Total 091 North	<u>\$14,931,335</u>

It should be understood a time impact analysis is yet to be finalized based on the delays experienced since December 2019. And referencing RMCF's letter to the City dated January 29, 2020, remaining outstanding elements of change - over and above the foregoing items are:

- Bay walk – Removable sections – dictated by 1450 Lincoln RD easement terms.
- Harmonization identification for ROW and private property encroachments, completed on 11/16/20.
- Encroachment/Harmonization relief for residents as determined by the City.
- Harmonization effort and re-designs as dictated by current Resolution and future revisions.
- Inverted crown between 16th St and Lincoln at Alton Ct.
- Inverted crown at Lincoln Ct.
- Re-design Lincoln Rd West of Bay Rd due to Option 3A WTS changes.

* Pricing subject to finalization of Geotechnical survey and report of secant pile locations, a function of the Water Quality Design Change Order.



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Please contact me with any questions or additional information required.

Sincerely,

Michael R. Fischer, COO.
Ric-Man Construction Florida, Inc.

CC:

Danny Mancini
Tyson DiPetrillo
Jorge Rodriguez
Jose Caraballo

Attachments:

- #1: 091 North Option 3A at 1671 West Ave – Estimate Summary
- #2: 090/091 North & South Water Quality Construction – Estimate Summary
- January 29, 2020 RMCF Letter to City of Miami Beach
- Map of 090/091 See Cont. Pile & Well Layout (2 ea.)



Attachment 1	Item	Description	Amount	Notes
West Ave 091				
WTS Option 3A	11/15/2020			
	1	Force Main- 1671 west to 17th St	\$ 525,000.00	Currently DIP restrained- 48" (3 ea)
	2	Transition Box at Pump discharge	\$ 145,000.00	Precast with flap valves
	3	Drainage Upgrade - Lincoln to 1671	\$ 496,000.00	96" RCP- incl all roadway work and restoration
	4	Landscaping/Renovations at parking lot and 17th St	\$ 65,000.00	
	5	Pump Motor change to 150 HP	\$ 175,000.00	Includes panel changes, wiring etc
	6	Mill and pave parking lot	\$ 50,000.00	
	7	Dissipator size increase	\$ 50,000.00	To account for 17th st discharge volumes into canal
	8	Sea Wall mods at 17th st- for Dissipator	\$ 125,000.00	
	9	MOT at 17th and West ave	\$ 5,000.00	
	10	Structural and Framing for Screening w/FND, et al	\$ 610,000.00	Incl FPL vault & barrier wall
	11	Aluminum screen	\$ 122,554.00	Bubble screen 3/16"
	12	Field support costs and Supervision	\$ 291,000.00	
	13	Lincoln RD Wall Upgrade	\$	Included in Base bid- increase to S.7NAVD
	14	Engineering	\$ 2,659,554.00	
	15	Borings/SUE	\$ 137,500.00	50 % of balance - rest with contingency draw
			\$ 30,000.00	Needed to confirm Cofferdam /treme and structural design
		Total	\$ 2,827,054.00	



Attachment 2		Water Quality Proposal - West Ave - 090/091		11/17/2020	
Item	Quantity	090- South	091 North	Quantity	
Mobilization / Demobilization/Site set up	3	\$ 258,600.00	\$ 739,200.00	7	\$ 739,200.00
15' Dia Secant pile Structures	6	\$ 1,582,400.00	\$ 2,644,000.00	10	\$ 2,644,000.00
20' Diameter Secant Pile Structures	0	\$ -	\$ 2,596,000.00	4	\$ 2,596,000.00
Mechanical - Fit out/ structures/Misc items	3	\$ 378,000.00	\$ 584,200.00	7	\$ 584,200.00
Pumping units - 25 HP with Control Panels	3	\$ 375,000.00	\$ 625,000.00	5	\$ 625,000.00
Pumping Units 60 HP with Control Panels	0	\$ -	\$ 437,000.00	3	\$ 437,000.00
Platforms/Landscaping, Fencing	3	\$ 55,000.00	\$ 114,000.00	7	\$ 114,000.00
Electrical & Controls	3	\$ 135,000.00	\$ 327,900.00	7	\$ 327,900.00
100' Wells	3	\$ 244,000.00	\$ 1,109,700.00	13	\$ 1,109,700.00
Total Budget Price		\$ 3,028,000.00	\$ 9,177,000.00		\$ 9,177,000.00
Notes					
1	Budget pricing based on current 30% drawings utilizing Secant circular construction for Settling and Wet well structures- Pricing subject to change upon completion of Geotechnical report				
2	Continuous operation anticipated separate from Segmented construction approach for base price as necessary.				
3	Anticipated sequence of Construction: Dur in Cal days				
	Segment 2 North- 2 loc			74	
	Segment 2 South- 1 Loc			40	
	Segment 3 South - 1 Loc			40	
	Segment 3 North- 2 Loc			80	
	Segment 6 North- 2 Loc			80	
	Segment 5 South- 1 Loc			40	
	Segment 9 North- 1 Loc			74	
4	Well pricing based on 100' depth				
5	Segments of Roadway (full width) will be closed to thru traffic at each location- 80' L x 50' W spacing required at each location for Secant construction				
6	Critical path impacts will be evaluated for overall time extension request pending finalization of CO pricing in concert with 3A WTS CO.				
7	Pricing based exclusively on 16 well design per CES February 2020 report and subject to DERM approval.				
8	RMCF/CES assumes no liability for meeting water quality requirements in excess of the well capacity detailed in the February CES Report				
9	Electrical Service to 10. Panel locations provided by FPL within 10' of new panel locations				
10	Allowance for landscaping, screening of raised panels and passive relief system, only only.				
11	Access hatches are standard HS-20 traffic loading				



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City of Miami Beach
Capital Improvement Projects Office
1700 Convention Center Drive
Miami Beach, FL 33139

January 29, 2020
Sent Via Email

Attn: Sabrina Baglieri

Re: West Ave 090/091

Subj: CO Status and Path Forward

Dear Sabrina,

In conjunction with the upcoming Change Order Request we are preparing for the 15 well water quality issue (DERM) directed by Public Works, we provide below the status of pending changes and comment on the project overall. This information is compiled for three (3) reasons; (1) to ensure we remain on an expedited path to issuing the necessary documents for billing purposes, (2) to communicate to City leadership of the impacts in both time and cost as a result of these requests and, (3) to suggest a reasonable, doable path forward.

Pending Changes:

- **Change Order 5 North and South Non-Compensable**

Time impact through December 2019 CPM update - re-submitted on 1/8/20 for 986 and 1,265 calendar days for 090 and 091, respectively.

- **Change Order 6 North and South \$2,858,000**

Model 2.1B Drainage System Upgrades - Submitted on 8/7/19. The further upgrades in pipe sizes and structures are required pursuant to the CES 10-year model study (completed in June 2019) to AECOM's 10-year drainage map which recommended increases in pipe sizes under CO 3B. The original DCP specified pipe sizes and structures per 5-year criteria.

- **Change Order 7 North \$1,398,554+**



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Median Concept at Lincoln Rd for the pump station power and control facilities and addition of emergency generator. Added features include a Plant wall, Screening, Garden/Park concept at Lincoln Road End and the movement of the structures 200 feet or 1,000 feet to the west along Lincoln road between Lincoln Court and Bay Road or at the Alton Road intersection, respectively. - Budget pricing was submitted on 9/20/19.

- **Change Order 8 North and South \$11M- \$17M**

Addition of 15 Water Quality Wells and settling basins with pumping systems to improve water quality along the West Avenue corridor per DERM.

The range in pricing for the 15 well design is due to the various methods we are currently vetting. The primary cost is not the well itself but the 90 second retention time required before pumping into the 100-foot-deep wells translates to extensive and deep settling structures to meet DERM criteria for water quality, and protection of the wells long term functionality. (15 wells with 11 settlement structures - 9 at 2,000 GPM and 2 at 6,000 GPM = 30,000 GPM). Also explored was a single deep well with Youngquist Bros. - a deep well specialist. We discussed the possibility of a single 3,000 foot 36" well capable of handling 30,000 GPM. Their budget estimate is in the \$17M range.

RMCF and CES are looking for ways to optimize the well design by analyzing circular settlement structures using "in the wet" Secant pile or "dig and sink" methods as an alternative to conventional Cofferdams w/ tremie seals for the rectangular structure design. The current settlement structures (11EA) are 30' deep with a footprint between 31' and 40' long x 11' wide-all contained within the ROW. The size and complexity of a sealed cofferdam at 11 locations is daunting.

- **Change Order 9 North \$ TBD**

Inverted crown at Lincoln Ct as requested by DPW to re-design road elevations to deal with the dip and its effects on the low property at 1441 Lincoln Ct.

- **Change Order 10 North \$ TBD**



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Inverted crown between 16th St and Lincoln at Alton Ct to adjust elevations and drainage design to accommodate the new commercial development along Alton court outside of DCP requirements.

- Change Order 11 North and South \$TBD

Harmonization Effort - resolution of drainage issues and encroachment (licensing Agreements) – reference CIP memo dated 1/16/20.

New requirements over and above agreements under the DCP and CO 3B include:

1. Mapping Encroachments within ROW on Harmonization drawings.
2. FFE studies of individual properties above and below new crown of roadway.
3. Developing criteria for identifying potential flooding scenarios based on new crown elevation of roadway and its effect on individual properties such as pools, elevator entry, garage entry, green areas, storage facilities, parking lots, electrical rooms, etc.
4. Individual analysis and information gathering of individual property Storm Water existing drainage conditions, rain leaders, wells, piping, etc.
5. Future costs to relocate/remove encroachments within ROW and add or correct drainage within properties based on Licensing Agreements and past City practices or waivers outside of DCP requirements.
6. Adjust harmonization designs to permit encroachments within and without ROW such as parking, structures, gates, fencing walkways, trees, etc. or other elements to stay within the ROW or properties and the added work, if any, associated therewith.

Notwithstanding the implications of water quality issues City wide, it is important to understand and communicate that the current pending Change Order status is approaching another \$20M+ to put all these change requests into effect.

As we approach 100% billing capacity for the current design concepts RMCF and CES are continuing to design and develop these added concepts (as directed by the City) without a formal CO from which to bill under. A method of dealing with this reality should be determined to ensure momentum on these issues is not compromised in any way.

Also considering the delays we are about to experience with gaining full segment approval from homeowners due to harmonization (Licensing Agreements), drainage, flooding concerns and directives for dealing with single and multiple family hook-ups, we recommend a limited NTP to commence the installation of the Lincoln Road Pump Station and Generator Sets at 5th, 6th, 10th, 14th and 17th St while the harmonization and water quality issues are worked out.



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The logic here is that all these installations are within City ROW (6th may be an exception) and the Lincoln Road PS location will not change. Impacts to private property will not be affected i.e. road raising and harmonization issues. Access will be provided at all times. Proceeding without a Class 2 permit at the Pump Station would require DERM permission but, considering the 15 well water quality concession negotiated by the City, a conditional permit may be arranged. In this way the City and its residents may see progress shortly as opposed to a longer drawn out approval process.

We are happy to meet with you, David, Nelson and Roy at any time to review these matters and look to your guidance on timing and approach.

Regards,

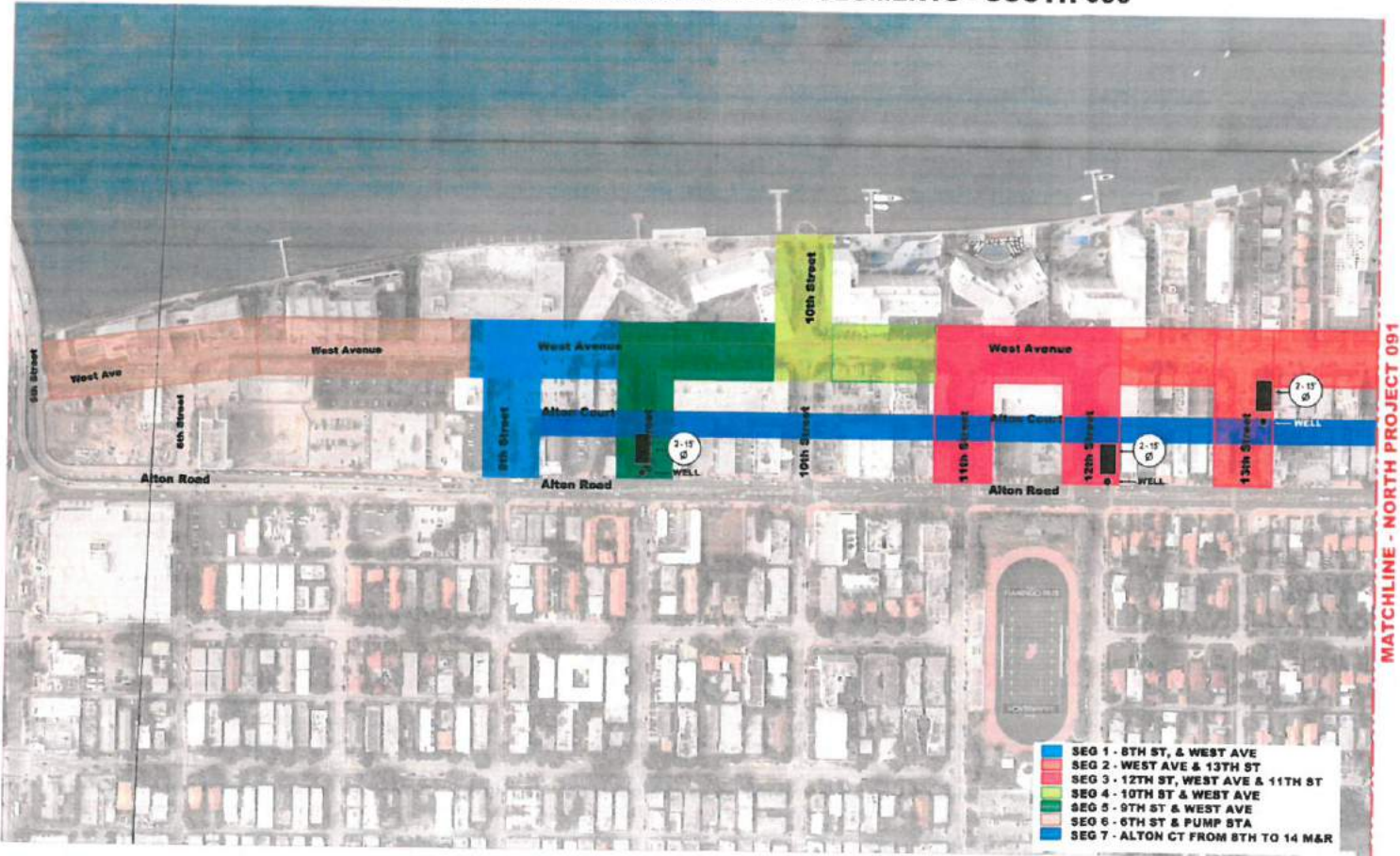
Michael R. Fischer, COO.
Ric-Man Construction Florida, Inc.

CC;
Danny Mancini
Tyson DiPetrillo
Nelson Perez-Jacome
David Martinez
Roy Coley
Jose Caraballo - CES
Jorge Rodriguez

WEST AVE - PROPOSED CONSTRUCTION SEGMENTS - NORTH 091



WEST AVE - PROPOSED CONSTRUCTION SEGMENTS - SOUTH 090





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Michael Fischer

From: Perez-Jacome, Nelson <NelsonPerez-Jacome@miamibeachfl.gov>
Sent: Friday, November 15, 2019 4:19 PM
To: Tyson DiPetrillo
Cc: Evora, Mariana; Pena, Giancarlo; Soto, Luis; Michael Fischer; Jose A. Caraballo, P.E.; Baglieri, Sabrina; Rodriguez, Jorge
Subject: Re: 100% Drainage Design Submittal

Hi Tyson,

We appreciate all the work the team has put in to date. However, last week I had a conversation with Danny and Mike regarding certain changes to the scope of the contract. Specifically, changes that would address DERMs permitting requirements and improve water quality for the basin.

Our team at city is working out the conceptual details so we can provide them to you and your design engineer to further elaborate. **Please hold off on any formal submittals, as we will not proceed to permitting without these changes.**

Thank you.

Nelson Perez-Jacome, PE
City Engineer
PUBLIC WORKS DEPARTMENT
MIAMIBEACH
1700 Convention Center Drive, Miami Beach, FL 33139
Tel: 305.673.7080 www.miamibeachfl.gov

On Nov 15, 2019, at 4:10 PM, Tyson DiPetrillo <tdipetrillo@ric-manfl.com> wrote:

[THIS MESSAGE COMES FROM AN EXTERNAL EMAIL - USE CAUTION WHEN REPLYING AND OPENING LINKS OR ATTACHMENTS]

Good afternoon Team-

RMCF has addressed the 90% drainage comments received and submitted the 100% Drainage Design (Permit Set) via e-builder for approval. We are prepared to bring the hard copies for CMBPW stamps and pick-up the signed permit application to make a formal submission to DERM and ERP...please advise when the PW team is available to review and stamp the drawings, thank you.

Tyson DiPetrillo

Project Manager

<image001.jpg> *<image002.jpg>*

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tdipetrillo@ric-manfl.com

CES Consultants, Inc.
West Avenue Phase II, Miami Beach



Meeting Type: Drainage Meeting

Date: Wednesday, October 30th, 2019

Attendees: Nelson Perez-Jacome – CMB PW
Luis Soto – CMB PW
Mariana Evora – CMB PW
Sabrina Baglieri – CMB CIP
Tyson DiPetrillo – RMCF
Jose Caraballo – CES
Erik M. Alcantara – CES

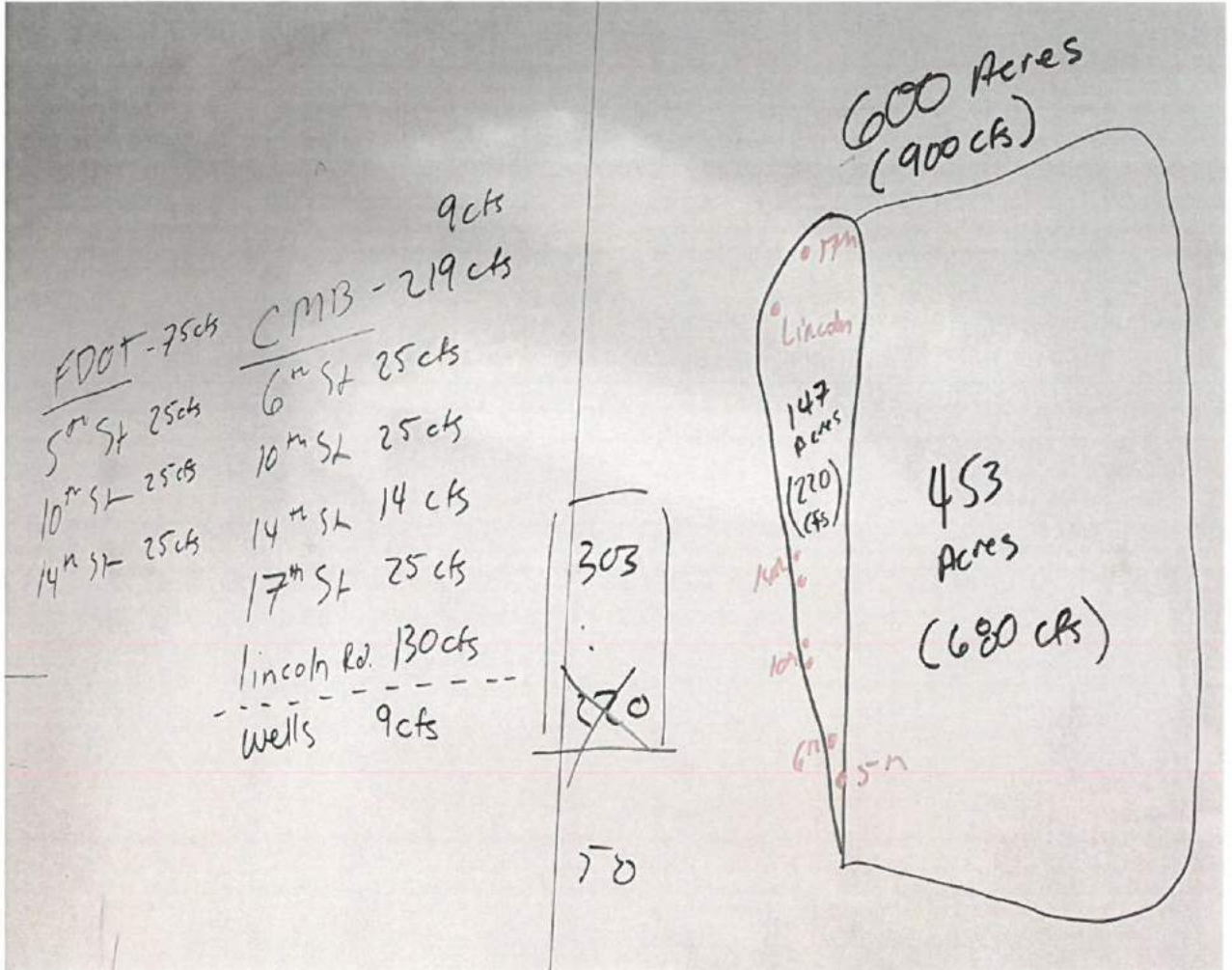
Location: City of Miami Beach – Public Works Department
1700 Convention Center Drive, Miami Beach, FL 33139

Discussion Items:

- 1) Meeting to discuss drainage design and the approach towards DERM permitting
- 2) Current Issues:
 - i. RMCF / CES were directed through the DCP to provide yard drains for all properties within the project area.
 - ii. A resolution from the CMB Commission established providing yard drains for those residential properties which will at the end of the project have a FFE below the crown of the road. RMCF / CES received this directive and proceeded to design the drainage system under this directive. RMCF / CES performed additional surveying services to capture all FFE within the project area and compare them with the proposed crown of the road. Once this was established, RMCF / CES performed additional investigation of existing private property drainage permits to further reduce the number of properties that will require yard drains. The final tally was 68 properties. The RMCF / CES analysis did not distinguish between commercial and residential properties, only a comparison between FFE and Crown.
 - iii. A new directive has been issued today to include a yard drain to all properties within the West Avenue Basin. RMCF / CES pointed out that the West Avenue project does not have enough water quality to handle the Right of Way and all private properties. CMB requested that we combine all treatment capacity from all nearby pump stations.

3) Resolution to Issues:

- a. CMB and RMCF / CES were all in agreement that the model and subsequent design provides sufficient conveyance for the 10-year / 24-hour storm event for the entire West Avenue basin (106 Acres for West Avenue and 41 Acres for Alton Road). The issue at hand and the reason for the meeting is to discuss the water quality approach during permitting.
- b. During the meeting, RMCF/CES were instructed to evaluate water quality for the entire project area.
 - i. RMCF / CES were instructed to combine all of the water quality treatment capacity (6th Street, 10th Street, 14th Street, and 17th Street; CMB and FDOT pump stations) so as to prove that in a worst case scenario, there is enough treatment capacity to manage the water quality for the entire West Avenue Basin (Right of way and all private property parcels). CMB will provide information regarding the basin for each pump station. In the event that there is not sufficient information to define the basins for each pump station, CMB will provide RMCF / CES with a letter defining each basin for each pump station. Everybody was in agreement that the information required is for the basins as per the design of each pump station, and not the influence of everything to the east of Alton Road (The Flamingo Basin Area). Everything to the east of Alton Road will be included in future improvements.
 - ii. RMCF / CES were instructed to incorporate yard drains to all properties within the project area. Additionally, CMB requested to include yard drains at all sides of a property that face a right of way. It was made clear in the meeting that CMB does not intend to provide a yard drain to all properties. They will only provide yard drains for those properties impacted negatively by these stormwater improvements. The reason for all the yard drains is to present DERM with the worst case scenario, and assure them that there will be enough water quality for any unforeseen cases.
 - iii. CMB directed RMCF to address the CMB PW comments, incorporate all yard drains (as discussed above), and address the water quality (as defined above) and quickly submit to DERM to begin to receive feedback. They also requested to conduct as many meetings with DERM as DERM will permit to keep an open dialogue and information flowing in both directions.
 - iv. CMB also mentioned that they have a meeting with DERM today about a separate topic. But, they will discuss this project with DERM and relay any new directive to the RMCF / CES team.
 - v. CMB requested that the RMCF / CES team provide an elevation for the HGL for each property.
 - vi. CMB requested that RMCF / CES prepare an additional permit application with a CMB signature line for Eric Carpenter.
 - vii. All of these requests are outside of our original scope of work and as such RMCF / CES will execute



Water quality notes from CMB



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City of Miami Beach
 1700 Convention Center Drive
 Miami Beach, FL 33139

October 31, 2019
 Sent Via Email & U.S. Mail

Attn: Sabrina Baglieri

Re: West Avenue 090/091

Subj: Water Quality and DERM Class 2 Drainage Permit

Dear Sabrina,

Ric-Man Construction Florida, Inc. (RMCF) and its Lead Design Consultant, CES met with CIP and Public Works on October 29, 2019 and again on October 30, 2019 to discuss the submission of the 90% drawings to DERM to commence the Class 2 Drainage permit process. The minutes of the October 30 meeting are attached as well as a letter from CES dated October 31, 2019 detailing the deliverables needed by CES to complete the calculations requested by the City on water quality for the West Avenue project. Details were reviewed relative to comments made by the City and changes proposed/requested involving water quality on the 90% drawings as well as general corrections/comments to the drawings which have been deemed necessary before making the formal Permit application to DERM.

As the City is aware, the contract DCP removed any responsibility for Drainage design from RMCF's contract. Pump Station capacity, treatment structure sizing, piping sizes and routing were provided based on a drainage report supplied by others. The DCP clearly stated "The CMB will be responsible for this report and any changes that are required during the permit process" (DCP21 - Para 5). Moreover, the City continued "The size of the proposed storm water trunk lines along West Ave, Bay Rd and Lincoln Rd is fixed and shall not change unless approved by the City Engineer after the project is awarded" (DCP21 - Para - 5). The Water Quality issue was locked in as detailed under Para 6 - "Storm Water Pump Stations" of the DCP wherein it states on page 26 of the DCP "The treatment structure designed to treat a minimum of 50 CFS" solidifies the water quality requirements RMCF was obligated to provide at that time.

RMCF's sole responsibility relative to Drainage was to finalize the drainage profile to create a positive system with slopes designed to provide a minimum velocity of 2 feet per second based on full pipe flow at a value of 0.012 (Manning's Equation). Consequently, drainage volume and water quality were carved out of RMCF's original Design Build scope. As we now know the criteria specified by the City in the DCP was based on a 5-year design storm event formulated by its consultant AECOM (Later revised to 10-year for RMCF pricing).

Subsequent to the "Pause" (December 2017 - December 2018) which was initiated by the City to study additional measures and recommendations from the Commission sponsored ULI effort, RMCF was requested to provide a full and complete hydrologic/hydraulic (H&H) model based on a 10-year, 24 hour storm event and provide recommendations to the City for any changes to the current proposed design In March 2019. **In RMCF's proposal under Appendix 1 "Project Requirements**



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and Assumptions," Item 8 – water quality modeling or design was excluded (See Attachment). The City accepted RMCF's proposal in the form of Change Order 3A for both 090 and 091. In June 2019 RMCF issued its Technical Report with several options or alternatives the City could undertake to deal with volume of water, only. **Water quality analyses were not included in the study.** The City elected Alternate 2.1B in August of 2019 and RMCF provided proposals for the changes to the AECOM 10-year Model dated February 20, 2019 (the subject of items 5 and 17 of CO 3B for 090 and 091) resulting in a proposal dated August 7, 2019 for added upsizing of drainage pipe sizes, and additional structures. This proposal is pending a formal Change Order.

RMCF and CES are proceeding in good faith to assist the City in addressing the "water quality" issues which have now come to light based on DERM representations to RMCF, CES and the City in various forums.

Consequently, RMCF hereby notifies the City that pursuant to Contract Article 11 "Changes in the Work" the effort underway and potential resultant design and construction changes constitutes extra work. As such RMCF specifically reserves its right to added time and cost, the full implications of which, are not known at this time.

Current anticipated/known changes include:

- Water quality calculations and analysis as documented in CES Memo dated October 30, 2019.
- Design and Construction of a Jockey Pump and Well System at the Lincoln Road Pump Station.
- Capacity increase of the CDS Treatment Units – includes equipment and depth changes at the structures.

As additional work items become known RMCF will notify the City accordingly.

Please contact me with any questions you may have

Sincerely,

Michael R. Fischer, COO.
 Ric-Man Construction Florida, Inc.

CC:

Danny Mancini
 Tyson DiPetrillo
 Jose Caraballo
 Jorge Rodriguez

Attachments:

- Meeting Minutes dated 10/30/19
- CES Letter dated 10/31/19



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- DCP Pages 21 and 26
- CES March 2019 Modeling Proposal.

Michael Fischer

From: Michael Fischer
Sent: Friday, March 27, 2020 3:34 PM
To: Perez-Jacome, Nelson
Cc: Evora, Mariana; Baglieri, Sabrina; Rodriguez, Jorge; Danny Mancini; Tyson DiPetrillo
Subject: West Ave Wells Proposal Detail
Attachments: Water Quality- Proposal Detail - West Ave.docx

Nelson

Per our meeting yesterday enclosed find an expanded proposal for design of the Water Quality Well systems pursuant to RMCF's February 10, 2020 detailed submission as revised on February 18, 2020 and modified on March 5, 2020. As discussed RMCF will wait for formal direction from CIP to proceed with the design development .

Upon release to design we anticipate 90 days to complete the effort but will submit 30% and 60% designs to DERM as deemed necessary by the City to secure approvals by the Agencies on our approach. At the 30% mark (approximately 45 days from NTP) RMCF will provide a firm lump sum price along with schedule impacts via CPM analysis for the construction of the well systems.

Please advise on the acceptability of our proposal and provide direction to move forward as soon as practicable.

Regards,

Michael R. Fischer, COO.



RIC-MAN Construction Florida, Inc.

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rds

Mike

City of Miami Beach

**Design / Build Services for West Avenue Improvements
Phase II North and South of 14th Street**

2016-090-KB

2016-091-KB

Water Quality Drainage Wells Design

Scope of Services

March 27, 2020

Prepared By:



880 SW 145th Avenue, Suite 106
Pembroke Pines, Florida 33027

INTRODUCTION

At the request of the City of Miami Beach, CES Consultants, Inc. (CES) is pleased to submit this proposal to perform the design of 11 water quality facilities throughout the West Avenue project area. The design is based on discussions with City staff, an analysis performed by the RMCF DB Team, and a directive provided by the City of Miami Beach.

The design will expand on the conceptual design prepared during the analysis phase of this effort. The water quality design is for 11 individual stormwater lift stations that will pump stormwater into 15 shallow drainage wells. The shallow drainage well depth will be approximately 100 feet, and the pumps will simply produce a pressure similar to four (4) feet of head.

The system will collect a portion of the stormwater from the main lines on West Avenue and Bay Road and convey it to an underground settling tank. These tanks will be designed to retain the stormwater for 90 seconds, at which point, the stormwater flows into a wet well. A single pump will be located inside each wet well and pump the stormwater into drainage wells. The discharge piping will have a passive relief system to assure that the pressure equivalent to four (4) feet of head is not exceeded.

Each of the 11 systems that will be located throughout the project area. Each system will have unique features due to the variation in above and below ground features at each location, as well as, the varying connection points along the main system on West Avenue and Bay Road. Due to these factors, each system will require a complete design.

DESCRIPTION OF SERVICES

Services to be provided shall include, but are not limited to, the following activities:

1. Perform soil borings at each location.
2. Development of complete engineering plans for each of the 11 systems. Plans will be submitted to CMB at 30%, 60% and 90% for review, including informal reviews with DERM. IFC package will be prepared once all permits are issued.
3. Preparation of permit package, and all necessary meetings and revisions to attain a permit. **Permit fees are not included.**
4. Preparation of IFC plans once all permits are issued by the regulatory agencies.
5. Revision to the stormwater model to incorporate this water quality component.
6. Revision to the drainage report to incorporate this water quality component.
7. Revision to stormwater drainage plans. Adjustment to the stormwater plan to make connections to the water quality systems.
8. Revision to landscaping plans. Adjustment to the landscaping plan to make space for the control panels.

**City of Miami Beach
D/B Services for West Avenue Improvements
2016-090-KB; 2016-091-KB
Water Quality Drainage Wells Design
Scope of Services**

9. Revision to potable watermain plans. Relocating a segment of watermain along Lincoln Road to make space for the water quality system.
10. Revision to sanitary sewer plans. Relocating a segment of sanitary sewer along Lincoln Road to make space for the water quality system.
11. Engineering Services During Construction

GEOTECHNICAL INVESTIGATION

CES Consultants, Inc. shall prepare a listing of the specific geotechnical investigation requirements specific to the scope of work. The Design Consultant will manage the geotechnical task. The goals and objectives of the geotechnical investigation may include the following:

1. Identify soil types within the project area
2. Identify the characteristics and properties of the soils present
3. Use available soil characteristics, properties and potential project geometrics to identify possible geotechnical concerns
4. Provide geotechnical recommendations for engineering design
5. Evaluate groundwater conditions

Upon completion of the geotechnical investigation, a report will be prepared and submitted with the 30%. The report shall include the following:

1. Brief description of soil conditions observed in the field and in the laboratory
2. Conclusions and recommendations regarding:
 - a. Primary geotechnical engineering concerns and mitigating measures, as applicable
 - b. Site preparation and grading including treatment of weak, porous, compressible and expansive surface soils and the construction of fills.
 - c. Preparation of subgrade and aggregate base for pavement areas
 - d. Pavement sections (if required)

One (1) soil boring to a depth of 100 feet below the top of ground elevation at the location of the proposed wet well. If additional soil borings are required, CES will request additional funds to obtain soil information.

DESIGN AND PLANS PERMITTING

CES Consultants, Inc. will prepare and submit design plans to CMB for the following phases:

1. 30% Design Submittal

For the development of this sub-task, CES Consultants, Inc. will provide the following services:

- Perform a water quality analysis of the site.
- Participate in one (1) informal meeting with DERM to discuss conceptual design.
- Develop alternative options to satisfy the water quality needs.
- Develop conceptual drawings of the system, and identify locations for installation.

City of Miami Beach
D/B Services for West Avenue Improvements
2016-090-KB; 2016-091-KB
Water Quality Drainage Wells Design
Scope of Services

- Revise the drainage model utilizing ICPR4.
- Perform engineering calculations to define the size of structures and pumping requirements.
- Preparation of system curve and pump selection.
- Perform a utility conflict evaluation and coordination. Identify possible conflicts and necessary resolutions.
- Develop 30% plans for each of the 11 independent water quality systems.

The water quality system design to be presented will include the following drawings sheets (min. 35 sheets per system; 385 total sheets) for each of the 11 systems:

- **General:**
 - **G1 - Cover and Index**
 - **G2 - General Notes**
- **Civil:**
 - **C1 - Existing Conditions and Demolition Plan**
 - **C2 - Proposed Site Plan**
 - **C3 - Proposed Section Plan**
 - **C4 - Grading and Restoration Plan**
 - **C5 - Standard Details**
 - C6 - Well Drill Plan (Not part of this submittal)
- **Mechanical:**
 - **M1 - Mechanical Notes**
 - **M2 - General Plan**
 - **M3 - General Profile**
 - **M4 - Settling Tank Plan and Sections**
 - **M5 - Wet Well Plan and Sections**
 - **M6 - Drainage Well Plan and Sections**
 - **M7 - Drainage Pipe and Force Main Profiles**
 - **M8 - Passive Relief System Profile**
 - **M9 - Mechanical Details**
- **Structural:**
 - **S1 - Structural Notes**
 - **S2 - General Plan**
 - **S3 - General Profile**
 - **S4 - Settling Tank Plan**
 - S5 - Settling Tank Section (Not part of this submittal)
 - **S6 - Wet Well Plan**
 - S7 - Wet Well Sections (Not part of this submittal)
 - **S8 - Drainage Well Plan and Sections**
 - S9 - Control Slab (Not part of this submittal)
 - S10 - Secant Piles Details (Not part of this submittal)
 - **S11 - Structural General Details**
- **Electrical:**
 - **E1 - Electrical Notes**
 - **E2 - General Plan and Grounding**
 - E3 - Equipment Layout and Sections (Not part of this submittal)
 - E4 - One-Line Diagram and Schedules (Not part of this submittal)

**City of Miami Beach
D/B Services for West Avenue Improvements
2016-090-KB; 2016-091-KB
Water Quality Drainage Wells Design
Scope of Services**

- E5 – Controls Diagram (Not part of this submittal)
- E6 – RTU Installation (Not part of this submittal)
- **E7 – Electrical Details**

2. 30% Deliverables:

Provide 30% Design Plans as follows:

- One (1) Copy, 11" x 17" Design Plans.
- One (1) Copy of Draft Drainage Report
- One (1) Draft Geotechnical Report
- Electronic Submittal of Design Plans, Drainage Report, and Geotechnical Report (Uploaded to E-Builder)

3. 60% Design Submittal

For the development of this sub-task, CES Consultants, Inc. will provide the following services:

- Review and incorporate comments from CMB.
- Participate in one (1) informal meeting with DERM to discuss progress and direction of design.
- Develop a well drill plan.
- Prepare structural settling tank and wet well section plans.
- Develop secant pile details.
- Develop control panel slab.
- Finalize electrical equipment selection.
- Develop electrical equipment layout and sections.
- Develop controls diagram, one-line diagram, electrical schedule, and RTU installation.
- Develop 60% plans for each of the 11 independent water quality systems.

The water quality system design to be presented will include the following drawings sheets for each of the 11 systems:

- **General:**
 - **G1 - Cover and Index**
 - **G2 - General Notes**
- **Civil:**
 - **C1 - Existing Conditions and Demolition Plan**
 - **C2 - Proposed Site Plan**
 - **C3 - Proposed Section Plan**
 - **C4 - Grading and Restoration Plan**
 - **C5 - Standard Details**
 - **C6 - Well Drill Plan**
- **Mechanical:**
 - **M1 - Mechanical Notes**

City of Miami Beach
D/B Services for West Avenue Improvements
2016-090-KB; 2016-091-KB
Water Quality Drainage Wells Design
Scope of Services

- M2 - General Plan
- M3 - General Profile
- M4 - Settling Tank Plan and Sections
- M5 - Wet Well Plan and Sections
- M6 - Drainage Well Plan and Sections
- M7 - Drainage Pipe and Force Main Profiles
- M8 – Passive Relief System Profile
- M9 – Mechanical Details
- **Structural:**
 - S1 – Structural Notes
 - S2 – General Plan
 - S3 – General Profile
 - S4 – Settling Tank Plan
 - S5 – Settling Tank Section
 - S6 – Wet Well Plan
 - S7 – Wet Well Sections
 - S8 – Drainage Well Plan and Sections
 - S9 – Control Slab
 - S10 – Secant Piles Details
 - S11 – Structural General Details
- **Electrical:**
 - E1 – Electrical Notes
 - E2 – General Plan and Grounding
 - E3 – Equipment Layout and Sections
 - E4 – One-Line Diagram and Schedules
 - E5 – Controls Diagram
 - E6 – RTU Installation
 - E7 – Electrical Details

4. 60% Deliverables:

Provide 60% Design Plans as follows:

- One (1) Copy, 11" x 17" Design Plans.
- One (1) Copy of the Revised Drainage Report
- One (1) Signed and Sealed Geotechnical Report
- Electronic Submittal of Design Plans, Drainage Report, and Geotechnical Report (Uploaded to E-Builder)

5. 90% Design Submittal

For the development of this sub-task, CES Consultants, Inc. will provide the following services:

- Review and incorporate comments from CMB.
- Finalize all aspects of design in preparation for permitting.
- Participate in one (1) informal meeting with DERM to discuss progress and direction of design.

City of Miami Beach
D/B Services for West Avenue Improvements
2016-090-KB; 2016-091-KB
Water Quality Drainage Wells Design
Scope of Services

- Develop 90% plans for each of the 11 independent water quality systems.

The water quality system design to be presented will include the following drawings sheets for each of the 11 systems:

- **General:**
 - G1 - Cover and Index
 - G2 - General Notes
- **Civil:**
 - C1 - Existing Conditions and Demolition Plan
 - C2 - Proposed Site Plan
 - C3 - Proposed Section Plan
 - C4 - Grading and Restoration Plan
 - C5 - Standard Details
 - C6 - Well Drill Plan
- **Mechanical:**
 - M1 - Mechanical Notes
 - M2 - General Plan
 - M3 - General Profile
 - M4 - Settling Tank Plan and Sections
 - M5 - Wet Well Plan and Sections
 - M6 - Drainage Well Plan and Sections
 - M7 - Drainage Pipe and Force Main Profiles
 - M8 – Passive Relief System Profile
 - M9 – Mechanical Details
- **Structural:**
 - S1 – Structural Notes
 - S2 – General Plan
 - S3 – General Profile
 - S4 – Settling Tank Plan
 - S5 – Settling Tank Section
 - S6 – Wet Well Plan
 - S7 – Wet Well Sections
 - S8 – Drainage Well Plan and Sections
 - S9 – Control Slab
 - S10 – Secant Piles Details
 - S11 – Structural General Details
- **Electrical:**
 - E1 – Electrical Notes
 - E2 – General Plan and Grounding
 - E3 – Equipment Layout and Sections
 - E4 – One-Line Diagram and Schedules
 - E5 – Controls Diagram
 - E6 – RTU Installation
 - E7 – Electrical Details

6. 90% Deliverables:

**City of Miami Beach
D/B Services for West Avenue Improvements
2016-090-KB; 2016-091-KB
Water Quality Drainage Wells Design
Scope of Services**

Provide 90% Design Plans as follows:

- One (1) Copy, 11" x 17" Design Plans
- One (1) Signed and Sealed Drainage Report
- Completed permit applications
- Electronic Submittal of Design Plans and Drainage Report (Uploaded to E-Builder)

ASSUMPTIONS

This scope of work and deliverables are based on the following assumptions:

- At the end of each design deliverable (30%, 60%, and 90%), CMB will review the plans and forward review comments to the RMCF DB Team within 14 calendar days.
- The design team will use the existing project survey provided by CMB.
- Permitting fees are not part of this scope of work or fee proposal.
- This scope of work and fee is based on the design of 11 independent water quality systems and a total of 15 drainage wells with a depth of 100 feet.



3100 SW 15th Street
Deerfield Beach, Florida 33442
Office:(954)426-1221
Fax:(954)426-1226

City of Miami Beach
Capital Improvement Projects Office
1700 Convention Center Drive
Miami Beach, FL 33139

May 14, 2020
Sent Via Email

Attn: Sabrina Baglieri

Re: West Avenue 090 - South
West Avenue 091 - North

Subj: Water Quality Design Fee

Sabrina,

Enclosed find the revised Scope of Services proposal from CES based on comments received during our May 4, 2020 negotiation session. The write up has been expanded to include a more detailed scope of work, a Permitting Section (7), IFC Deliverable Section (8) and an expanded Assumption Section (9).

RMCF provided a draft Scope with drawings on February 10, 2020, a formal proposal with preliminary conceptual designs and well locations on February 18, 2020, a breakout proposal for 30% design development on March 5, 2020, an initial negotiation meeting on March 26, 2020 followed by an expanded proposal submission on March 27, 2020 and a final formal proposal on May 4, 2020 precipitated by the Commission's approval to proceed with the design development. Our price proposal remains as follows:

090 - \$542,056
091 - \$1,001,781

Notwithstanding the potential relocation of the Lincoln Road Pump Station to 1671 West Ave and pending a full Commission vote on June 26, 2020, RMCF strongly recommends the City release RMCF to proceed with at least the South Water Quality design effort since the south will not be affected by the relocation of the pump station. We also recommend proceeding with the North since the drainage south of Lincoln Road will not be affected. We will ensure no overlap of design when and if the pump station is in fact relocated. The effort will save time overall.

Please contact me if you have any questions or require additional information. We request the issuance of a formal Change order and NTP to commence this important effort.

Sincerely,

Michael R. Fischer, COO.
Ric-Man Construction Florida, Inc.



3100 SW 15th Street
Deerfield Beach, Florida 33442
Office:(954)426-1221
Fax:(954)426-1226

CC:

Danny Mancini
Tyson DiPetrillo
Jose Caraballo
Jorge Rodriguez
Nelson Jacome Perez

Attachments:

- May 13, 2020 CES Scope of Services
- RMCF Formal Pricing Submitted on 5/4/20

City of Miami Beach

**Design / Build Services for West Avenue Improvements
Phase II North and South of 14th Street**

2016-090-KB

2016-091-KB

Water Quality Drainage Wells Design

Scope of Services

May 13, 2020

Prepared By:



880 SW 145th Avenue, Suite 106
Pembroke Pines, Florida 33027



City of Miami Beach
D/B Services for West Avenue Improvements
2016-090-KB; 2016-091-KB
Water Quality Drainage Wells Design
Scope of Services

INTRODUCTION

At the request of the City of Miami Beach, CES Consultants, Inc. (CES) is pleased to submit this proposal to perform the design of 11 water quality facilities throughout the West Avenue project area. The design is based on discussions with City staff, an analysis performed by the RMCF DB Team, and a directive provided by the City of Miami Beach.

The design will expand on the conceptual design prepared during the analysis phase of this effort. The water quality design is for 11 individual stormwater lift stations that will pump stormwater into 15 shallow drainage wells. The shallow drainage well depth will be approximately 100 feet, and the pumps will simply produce a pressure similar to four (4) feet of head.

The system will collect a portion of the stormwater from the main lines on West Avenue and Bay Road and convey it to an underground settling tank. These tanks will be designed to retain the stormwater for 90 seconds, at which point, the stormwater flows into a wet well. A single pump will be located inside each wet well and pump the stormwater into drainage wells. The discharge piping will have a passive relief system to assure that the pressure equivalent to four (4) feet of head is not exceeded.

Each of the 11 systems that will be located throughout the project area. Each system will have unique features due to the variation in above and below ground features at each location, as well as, the varying connection points along the main system on West Avenue and Bay Road. Due to these factors, each system will require a complete design.

It is important to note that each of the 11 individual systems requires a unique design for the sedimentation tank, the wet well, the passive relief system, and the associated piping. The uniqueness is due to variations in depth of the drainage systems, variations of above ground features, and the variations in existing utilities. All of these factors introduce complexities that require specific designs. Additionally, these individual designs require modifications to some existing utilities, and redesign of items that have completed designs. For example, we have identified the need to redesign the sanitary sewer line and the water main along Lincoln Road between the street end and West Avenue. We also need to modify the already completed stormwater drainage design in order to connect these water quality systems to the main drainage line. These individual designs, in conjunction with the redesign of other utilities, requires a significant amount of manpower and a significant amount of engineering to assure that the system will work safely and effectively.

DESCRIPTION OF SERVICES

Services to be provided shall include, but are not limited to, the following activities:



City of Miami Beach
D/B Services for West Avenue Improvements
2016-090-KB; 2016-091-KB
Water Quality Drainage Wells Design
Scope of Services

1. Perform soil borings at each location.
2. Development of complete engineering plans for each of the 11 systems. Plans will be submitted to CMB at 30%, 60% and 90% for review, including informal reviews with DERM.
3. Preparation of permit package, and all necessary meeting and revisions to attain a permit. Permit fees are not included.
4. Preparation of IFC plans once a permit is issued by the regulatory agencies.
5. Revision to the stormwater model to incorporate this water quality component.
6. Revision to the drainage report to incorporate this water quality component.
7. Revision to stormwater drainage plans. Adjustment to the stormwater plan to make connections to the water quality systems.
8. Revision to landscaping plans. Adjustment to the landscaping plan to make space for the control panels.
9. Revision to potable watermain plans. Relocating a segment of watermain along Lincoln Road to make space for the water quality system.
10. Revision to sanitary sewer plans. Relocating a segment of sanitary sewer along Lincoln Road to make space for the water quality system.
11. Engineering Services During Construction

GEOTECHNICAL INVESTIGATION

CES Consultants, Inc. shall prepare a listing of the specific geotechnical investigation requirements specific to the scope of work. The Design Consultant will manage the geotechnical task. The goals and objectives of the geotechnical investigation may include the following:

1. Identify soil types within the project area
2. Identify the characteristics and properties of the soils present
3. Use available soil characteristics, properties and potential project geometrics to identify possible geotechnical concerns
4. Provide geotechnical recommendations for engineering design
5. Evaluate groundwater conditions

Upon completion of the geotechnical investigation, a report will be prepared and submitted with the 30%. The report shall include the following:

1. Brief description of soil conditions observed in the field and in the laboratory
2. Conclusions and recommendations regarding:
 - a. Primary geotechnical engineering concerns and mitigating measures, as applicable
 - b. Site preparation and grading including treatment of weak, porous, compressible and expansive surface soils and the construction of fills.
 - c. Preparation of subgrade and aggregate base for pavement areas
 - d. Pavement sections (if required)

One (1) soil boring to a depth of 100 feet below the top of ground elevation at the location of the proposed wet well. If additional soil borings are required, CES will request additional funds to obtain soil information.



City of Miami Beach
D/B Services for West Avenue Improvements
2016-090-KB; 2016-091-KB
Water Quality Drainage Wells Design
Scope of Services

DESIGN AND PLANS PERMITTING

CES Consultants, Inc. will prepare and submit design plans to CMB for the following phases:

1. 30% Design Submittal

For the development of this sub-task, CES Consultants, Inc. will provide the following services:

- Perform a water quality analysis of the site.
- Participate in one (1) informal meeting with DERM to discuss conceptual design.
- Develop alternative options to satisfy the water quality needs.
- Develop conceptual drawings of the system, and identify locations for installation.
- Revise the drainage model utilizing ICPR4.
- Perform engineering calculations to define the size of structures and pumping requirements.
- Preparation of system curve and pump selection.
- Perform a utility conflict evaluation and coordination. Identify possible conflicts and necessary resolutions.
- Develop 30% plans for each of the 11 independent water quality systems.

The water quality system design to be presented will include the following drawings sheets for each of the 11 systems:

- **General:**
 - G1 - Cover and Index
 - G2 - General Notes
- **Civil:**
 - C1 - Existing Conditions and Demolition Plan
 - C2 - Proposed Site Plan
 - C3 - Proposed Section Plan
 - C4 - Grading and Restoration Plan
 - C5 - Standard Details
 - C6 - Well Drill Plan (Not part of this submittal)
- **Mechanical:**
 - M1 - Mechanical Notes
 - M2 - General Plan
 - M3 - General Profile
 - M4 - Settling Tank Plan and Sections
 - M5 - Wet Well Plan and Sections
 - M6 - Drainage Well Plan and Sections
 - M7 - Drainage Pipe and Force Main Profiles
 - M8 - Passive Relief System Profile
 - M9 - Mechanical Details
- **Structural:**
 - S1 - Structural Notes
 - S2 - General Plan
 - S3 - General Profile



City of Miami Beach
D/B Services for West Avenue Improvements
2016-090-KB; 2016-091-KB
Water Quality Drainage Wells Design
Scope of Services

- **S4 – Settling Tank Plan**
- S5 – Settling Tank Section (Not part of this submittal)
- **S6 – Wet Well Plan**
- S7 – Wet Well Sections (Not part of this submittal)
- **S8 – Drainage Well Plan and Sections**
- S9 – Control Slab (Not part of this submittal)
- S10 – Secant Piles Details (Not part of this submittal)
- **S11 – Structural General Details**
- **Electrical:**
 - **E1 – Electrical Notes**
 - **E2 – General Plan and Grounding**
 - E3 – Equipment Layout and Sections (Not part of this submittal)
 - E4 – One-Line Diagram and Schedules (Not part of this submittal)
 - E5 – Controls Diagram (Not part of this submittal)
 - E6 – RTU Installation (Not part of this submittal)
 - **E7 – Electrical Details**

2. 30% Deliverables:

Provide 30% Design Plans as follows:

- One (1) Copy, 11" x 17" Design Plans.
- One (1) Copy of Draft Drainage Report
- One (1) Draft Geotechnical Report
- Electronic Submittal of Design Plans, Drainage Report, and Geotechnical Report (Uploaded to E-Builder)

3. 60% Design Submittal

For the development of this sub-task, CES Consultants, Inc. will provide the following services:

- Review and incorporate comments from CMB.
- Participate in one (1) informal meeting with DERM to discuss progress and direction of design.
- Develop a well drill plan.
- Prepare structural settling tank and wet well section plans.
- Develop secant pile details.
- Develop control panel slab.
- Finalize electrical equipment selection.
- Develop electrical equipment layout and sections.
- Develop controls diagram, one-line diagram, electrical schedule, and RTU installation.
- Develop 60% plans for each of the 11 independent water quality systems.

The water quality system design to be presented will include the following drawings sheets for each of the 11 systems:

- **General:**
 - G1 - Cover and Index
 - G2 - General Notes
- **Civil:**
 - C1 - Existing Conditions and Demolition Plan
 - C2 - Proposed Site Plan
 - C3 - Proposed Section Plan
 - C4 - Grading and Restoration Plan
 - C5 - Standard Details
 - C6 - Well Drill Plan
- **Mechanical:**
 - M1 - Mechanical Notes
 - M2 - General Plan
 - M3 - General Profile
 - M4 - Settling Tank Plan and Sections
 - M5 - Wet Well Plan and Sections
 - M6 - Drainage Well Plan and Sections
 - M7 - Drainage Pipe and Force Main Profiles
 - M8 - Passive Relief System Profile
 - M9 - Mechanical Details
- **Structural:**
 - S1 - Structural Notes
 - S2 - General Plan
 - S3 - General Profile
 - S4 - Settling Tank Plan
 - S5 - Settling Tank Section
 - S6 - Wet Well Plan
 - S7 - Wet Well Sections
 - S8 - Drainage Well Plan and Sections
 - S9 - Control Slab
 - S10 - Secant Piles Details
 - S11 - Structural General Details
- **Electrical:**
 - E1 - Electrical Notes
 - E2 - General Plan and Grounding
 - E3 - Equipment Layout and Sections
 - E4 - One-Line Diagram and Schedules
 - E5 - Controls Diagram
 - E6 - RTU Installation
 - E7 - Electrical Details

4. 60% Deliverables:

Provide 60% Design Plans as follows:

- One (1) Copy, 11" x 17" Design Plans.
- One (1) Copy of the Revised Drainage Report



City of Miami Beach
D/B Services for West Avenue Improvements
2016-090-KB; 2016-091-KB
Water Quality Drainage Wells Design
Scope of Services

- One (1) Signed and Sealed Geotechnical Report
- Electronic Submittal of Design Plans, Drainage Report, and Geotechnical Report (Uploaded to E-Builder)

5. 90% Design Submittal

For the development of this sub-task, CES Consultants, Inc. will provide the following services:

- Review and incorporate comments from CMB.
- Finalize all aspects of design in preparation for permitting.
- Participate in one (1) informal meeting with DERM to discuss progress and direction of design.
- Develop 90% plans for each of the 11 independent water quality systems.

The water quality system design to be presented will include the following drawings sheets for each of the 11 systems:

- **General:**
 - G1 - Cover and Index
 - G2 - General Notes
- **Civil:**
 - C1 - Existing Conditions and Demolition Plan
 - C2 - Proposed Site Plan
 - C3 - Proposed Section Plan
 - C4 - Grading and Restoration Plan
 - C5 - Standard Details
 - C6 - Well Drill Plan
- **Mechanical:**
 - M1 - Mechanical Notes
 - M2 - General Plan
 - M3 - General Profile
 - M4 - Settling Tank Plan and Sections
 - M5 - Wet Well Plan and Sections
 - M6 - Drainage Well Plan and Sections
 - M7 - Drainage Pipe and Force Main Profiles
 - M8 - Passive Relief System Profile
 - M9 - Mechanical Details
- **Structural:**
 - S1 - Structural Notes
 - S2 - General Plan
 - S3 - General Profile
 - S4 - Settling Tank Plan
 - S5 - Settling Tank Section
 - S6 - Wet Well Plan
 - S7 - Wet Well Sections
 - S8 - Drainage Well Plan and Sections
 - S9 - Control Slab
 - S10 - Secant Piles Details



City of Miami Beach
 D/B Services for West Avenue Improvements
 2016-090-KB; 2016-091-KB
 Water Quality Drainage Wells Design
 Scope of Services

- S11 – Structural General Details
- **Electrical:**
 - E1 – Electrical Notes
 - E2 – General Plan and Grounding
 - E3 – Equipment Layout and Sections
 - E4 – One-Line Diagram and Schedules
 - E5 – Controls Diagram
 - E6 – RTU Installation
 - E7 – Electrical Details

6. 90% Deliverables:

Provide 90% Design Plans as follows:

- One (1) Copy, 11" x 17" Design Plans
- One (1) Signed and Sealed Drainage Report
- Completed permit applications
- Electronic Submittal of Design Plans and Drainage Report (Uploaded to E-Builder)

7. Permitting

For the development of this sub-task, CES Consultants, Inc. will provide the following services:

- Preparation of signed and sealed plans with CMB approval.
- Preparation of signed and sealed drainage report.
- Participate in one (1) meeting with DERM at the 30%, 60%, and 90% design phases.
- Participate in three (3) meetings with DERM once the permit application is submitted. (This will include a meeting with a brief presentation of the project.).

8. IFC Deliverables:

IFC (Issued For Construction) plans are those that are issued once all necessary permits have been acquired. For the development of this sub-task, CES Consultants, Inc. will provide the following services.

- One (1) Copy, 11" x 17" Design Plans
- One (1) Signed and Sealed Drainage Report
- All necessary active permits
- Electronic Submittal of permitted Design Plans and Drainage Report (Uploaded to E-Builder)



City of Miami Beach
D/B Services for West Avenue Improvements
2016-090-KB; 2016-091-KB
Water Quality Drainage Wells Design
Scope of Services

9. Assumptions

For the completion of this effort, CES Consultants, Inc. has the following limitations and assumptions:

- Based on conversations with experienced drainage well contracts, we are assuming a capacity of 500 GPM per foot of head for each drainage well. Utilizing this historical data, we are estimating a total capacity of 2,000 GPM per well (4 feet of head).
- Due to space limitations within the right of way, we have maximized the number of drainage wells that can be incorporated into the project to 15 wells. This scope of work assumes 15 total drainage wells.
- We are estimating a total of six (6) meetings with DERM. In order to maximize the effectiveness of these meetings, we will participate in one (1) meeting per phase (30%, 60%, and 90%), and three (3) meetings once the permit application has been submitted.

Michael Fischer

From: Michael Fischer
Sent: Monday, May 04, 2020 12:18 PM
To: 'Baglieri, Sabrina'; Rodriguez, Jorge
Cc: Tyson DiPetrillo
Subject: Water Quality CO
Attachments: Alternate 2- Wells For Water Quality- cost.xlsx; West Ave WELL design direct Cost.xlsx

Sabrina

Enclosed find RMCF work sheets in support of the Change Request.
The submission from CES on 2/10/20 has not changed
Total cost is:

090 \$542,056
091 \$ 1,001,781

Total \$ 1,543,837

ALTERNATE 2 - CYLINDRICAL		Feb-20		West Ave Project		Alternate 2 Water Quality Wells - Cylindrical settlement and Separate pumping structure with shallow wells		Budget Pricing	
Description	South 090 RMCF	South -090 CES	Total -090	North 091 RMCF	North 091 CES	Total 091	Comments		
Design and Construction Inspection		\$ 5476,112.00			\$	883,458.00			
Pre-design investigation- revise drainage model									
Revise drainage report									
Storm Water WM re-designs									
Concept development	\$ 8,408.00								
30%,60%,90% Design - civil, elect, mach/1				\$ 13,480.00					
Subsurface investigations	\$ 3,332.00				\$ 4,696.00				
Surveying, Utility Interferences	\$ 3,548.00				\$ 6,240.00				
Permitting - DERV, SWMD, etc.									
NOT development									
Construction Inspection, well certification									
Meetings, Misc expenses									
As-built documentation									
Estimating/Pricing/Scoping	\$ 8,666.00				\$ 16,458.00				
Subtotal	\$ 23,954.00	\$ 476,112.00		\$ 40,894.00	\$	883,458.00			
Ins & Bond- 3%	\$ 719.00	\$ 14,283.00			\$ 1,227.00				
Subtotal	\$ 24,673.00	\$ 490,395.00			\$ 42,111.00				
RMCF Mark-up 10/5	\$ 2,468.00	\$ 24,520.00			\$ 4,211.00				
Subtotal Design and Coordination	\$ 27,141.00	\$ 514,915.00			\$ 46,322.00				
Total Change Request		\$ 542,056.00			\$	1,001,781.00			

Spread sheet item 3- Design /Constructability reviews
 Spread Sheet item #1- Survey field Support
 Spread Sheet item #4- permitting Support

Spread Sheet Item # 2- Estimating/Pricing/ Scoping

West Avenue Phase II Storm Drainage - South Contract (090) - Drainage Wells														Total Leadline Labor					
TITLE	Principal	Project Manager/ENG	QA/QC	Engineering Manager	Senior Civil Engineer	Structural Engineer	Electrical Engineer	Hydraulic Engineer	Project Engineer	Civil Engineer	Build Engineer	Design / CAD Manager	CAD Designer	Inspector	Public Relations Coordinator	Accounting	Admin	Total Hours	Total Leadline Labor
CONTRACT DATES																			
<p align="center">Change Order Design and Permitting Services for the Storm Drainage System (Drainage Wells)</p>																			
1 Water Quality Analysis	4																		
2 Preliminary Creation and Development of Well Cells	16								16										
3 Revise IOPR Drainage Model	11				16				40										
4 Revise Drainage Elevation	11				16				40										
5 Perform Engineering Calculations	2				16				40										
6 Utility Conflicts Evaluation and Coordination	1				16				40										
7 Storm Drainage Redesign	12				16				40										
8 Precision and e-level elev. Well Design	12				16				40										
Package to CMB for Review	2				16				40										
9a Civil Design	2				16				40										
9b Structural Design	2				16				40										
9c Mechanical Design	2				16				40										
9d Electrical Design	2				16				40										
9e Program and submit 10% Well Design Package to CMB for Review	2				16				40										
10a Civil Design	2				16				40										
10b Structural Design	2				16				40										
10c Mechanical Design	2				16				40										
10d Electrical Design	2				16				40										
11a Permitting	12				16				40										
11b Submittal	12				16				40										
11c SEIRM Class II Permit Preparation and Submittal	6				16				40										
11d SFWDW EPF Permit Illustration and Submittal	6				16				40										
11e Coordination with Permitting Agencies	4				16				40										
11f Well Construction Inspections	8				16				40										
SUB-TOTAL	32				16				16										
12 Allowed Project Coordination Meetings				18															
13 Geotechnical Investigation - Legman Engineering																			
SUB-TOTAL	172			18	16				16										
GRAND TOTAL	172			18	16				16										
TOTAL HOUR PER TITLE:																			
TOTAL PER TITLE:																			

West Avenue Phase II Storm Drainage - North Contract (091) - Drainage Wells

CES

TITLE	Principal	Project Manager	QA/QC	Engineering Manager	Senior Civil Engineer	Structural Engineer	Mechanical Engineer	Hydraulic Engineer	Project Engineer	Civil Engineer	Software Engineer	CAD Manager / Designer	CAD Designer	Inspector	Public Relations Coordinator	Accounting	Admin	Total Hours	Total Leader/Labor
CHARGE ORDER																			
Design and Permitting Services for the Storm Drainage System (Drainage Wells)																			
1	Water Quality Analysis	1																	
2	Preliminary Evaluation and Development of Well Concepts	16		16	24			69	25	16								276	24,328.00
3	Finalize ICFM Drainage Model	18		2	25			49		16								337	30,206.40
4	Finalize Drainage Report	16		2	25			49		16								337	30,206.40
5	Permit Engineering Calculations	4		2	8			49		16								84	7,581.60
6	Utility, Curbside Evaluation and Coordination	8		2	8			49		16								84	7,581.60
7	Storm Drainage Redesign	12		2	8			49		16								128	11,520.00
8	Water Main Redesign	12		2	8			49		16								128	11,520.00
9	Prepare and submit 60% Well Design Package to CMR for Review	4		2	8			49		16								84	7,581.60
10	81a Civil Design	2		2	32			69		16								128	11,520.00
11	81b Structural Design	2		2	32	200		69		16								128	11,520.00
12	81c Mechanical Design	2		2	32			69		16								128	11,520.00
13	81d Electrical Design	2		2	32			69		16								128	11,520.00
14	Prepare and submit 60% Well Design Package to CMR for Review	2		2	24			69		16								128	11,520.00
15a	Site Design	2		2	16			69		16								128	11,520.00
15b	Structural Design	2		2	16			69		16								128	11,520.00
15c	Mechanical Design	2		2	16			69		16								128	11,520.00
15d	Electrical Design	2		2	16			69		16								128	11,520.00
16	Permitting	2		2	16			69		16								128	11,520.00
17a	PERM Class V Permit Preparation and Submittal	16		2	16			69		16								128	11,520.00
17b	PERM Class II Permit Modification and Submittal	13		2	8			69		16								128	11,520.00
18	SPURD ETP Permit Modification and Submittal	17		2	8			69		16								128	11,520.00
19	Coordination with Permitting Agencies	10		2	8			69		16								128	11,520.00
20	Final Certification Inspections	10		2	8			69		16								128	11,520.00
SUB-TOTAL																			
13. Inland Project Coordination Meetings																			
SUB-TOTAL																			
14. Geotechnical Investigation - Levee																			
SUB-TOTAL																			
TOTAL HOURS PER TITLE:																			
TOTAL FEE PER TITLE:																			



West Avenue South - 090

Drainage

Item	Qty	Unit	Subcontractor	Material	Labor			Equipment	NewTotal	Original Total	Delta	Notes
					MH	Rate	Total					
13th Street												
24" RCP	150	LF	\$ -	\$ 2,022.00	37.1	\$ 49.49	\$ 1,836.00	\$ 1,543.00	\$ 5,401.00		\$ 5,401.00	
Haul out of Muck	41	CY	\$ -	\$ 500.00	10.02	\$ 53.59	\$ 537.00	\$ 670.00	\$ 1,707.00		\$ 1,707.00	
Dewatering	150	LF		\$ 668.00	5.1	\$ 50.59	\$ 258.00	\$ 118.00	\$ 1,044.00		\$ 1,044.00	
Mud Work (New Connection to Structure)	1	EA		\$ 209.00	75	\$ 50.65	\$ 3,799.00	\$ 714.00	\$ 4,722.00		\$ 4,722.00	
Miscellaneous Items	1	LS	\$ -	\$ 11,565.00	120	\$ 49.48	\$ 5,938.00	\$ 4,989.00	\$ 22,492.00		\$ 22,492.00	
12th Street												
24" RCP	96	LF	\$ -	\$ 4,187.00	69.82	\$ 49.48	\$ 3,455.00	\$ 2,903.00	\$ 10,545.00		\$ 10,545.00	
Haul out of Muck	29	CY	\$ 750.00		18.16	\$ 53.63	\$ 974.00	\$ 1,214.00	\$ 2,938.00		\$ 2,938.00	
Dewatering	96	LF		\$ 1,335.00	9.6	\$ 50.63	\$ 486.00	\$ 222.00	\$ 2,043.00		\$ 2,043.00	
Precast Type J 7 (MH-12TH)	1	EA	\$ -	\$ 5,524.00	90	\$ 49.43	\$ 4,449.00	\$ 4,240.00	\$ 14,213.00		\$ 14,213.00	
Mud Work	1	EA		\$ 70.00	50	\$ 50.66	\$ 2,533.00	\$ 476.00	\$ 3,079.00		\$ 3,079.00	
Miscellaneous Items	1	LS	\$ -	\$ 11,565.00	120	\$ 49.48	\$ 5,938.00	\$ 4,989.00	\$ 22,492.00		\$ 22,492.00	
9th Street												
24" RCP	56	LF	\$ -	\$ 2,427.00	40.72	\$ 49.48	\$ 2,015.00	\$ 1,693.00	\$ 6,135.00		\$ 6,135.00	
Haul out of Muck	17	CY	\$ 500.00		10.64	\$ 53.57	\$ 570.00	\$ 712.00	\$ 1,782.00		\$ 1,782.00	
Dewatering	56	LF		\$ 770.00	5.6	\$ 50.71	\$ 284.00	\$ 129.00	\$ 1,183.00		\$ 1,183.00	
Precast Type J 7 (MH-9TH)	1	EA	\$ -	\$ 5,524.00	90	\$ 49.43	\$ 4,449.00	\$ 4,240.00	\$ 14,213.00		\$ 14,213.00	
Mud Work	1	EA		\$ 70.00	50	\$ 50.66	\$ 2,533.00	\$ 476.00	\$ 3,079.00		\$ 3,079.00	
Miscellaneous Items	1	LS	\$ -	\$ 11,565.00	120	\$ 49.48	\$ 5,938.00	\$ 4,989.00	\$ 22,492.00		\$ 22,492.00	
West Avenue (14th St. - 8th St.)												
24" RCP	82	LF	\$ -	\$ 3,543.00	59.63	\$ 49.49	\$ 2,951.00	\$ 2,478.00	\$ 8,972.00		\$ 8,972.00	
Haul out of Muck	25	CY	\$ 750.00		24.46	\$ 53.60	\$ 1,311.00	\$ 1,636.00	\$ 3,697.00		\$ 3,697.00	
Dewatering	82	LF		\$ 4,815.00	16.4	\$ 50.67	\$ 831.00	\$ 379.00	\$ 6,025.00		\$ 6,025.00	
Precast Type 4 J 7'x 4' (ST-12C, ST-12D)	2	EA	\$ -	\$ 11,047.00	80	\$ 49.49	\$ 3,959.00	\$ 3,326.00	\$ 18,332.00		\$ 18,332.00	
Mud Work	2	EA		\$ 139.00	50	\$ 50.66	\$ 2,533.00	\$ 476.00	\$ 3,148.00		\$ 3,148.00	
Miscellaneous Items	1	LS	\$ -	\$ 11,565.00	120	\$ 49.48	\$ 5,938.00	\$ 4,989.00	\$ 22,492.00		\$ 22,492.00	
			\$ 2,000.00	\$ 89,110.00	1272.25		\$ 63,515.00	\$ 47,601.00	\$ 202,226.00		\$ 202,226.00	
										Subcontractor Markup	\$ 100.00	
										Markup	\$ 20,022.60	
										Bond & Insurance	\$ 6,066.78	
										TOTAL	\$ 228,415.38	

Activity Unit Price Summary

Biditem Activity	Description	Quantity	Unit	Calendar		Labor	Perm Material	Constr Matl/Exp	Equip- ment	Sub- Contract	Total
				WC	Hrs/Shift						
*** 500	50	13th Street				Takeoff:	1.00 LS		Bid:	1.00 LS	
500.10	24" RCP Installation	51.00	LF	F6319A	50 10.00	1,836	1,932	90	1,543		5,401
Mh:	37.10	Shifts: 0.5	Mh/Un: 0.7275	Un/Sh: 110.1512		36.00	37.88	1.76	30.26		105.90
500.11	Haul Out Muck	16.00	CY	F6319A	50 10.00	537		500	670		1,707
Mh:	10.02	Shifts:	Mh/Un: 0.6263	Un/Sh:		33.57		31.25	41.88		106.70
500.12	Dewatering	51.00	LF	F6319A	50 10.00	258	668		118		1,044
Mh:	5.10	Shifts: 0.1	Mh/Un: 0.1000	Un/Sh: 500.0000		5.07	13.09		2.31		20.47
500.22	Mud Work (New connection to	3.00	EA	F6319A	50 10.00	3,799	209		714		4,722
Mh:	75.00	Shifts: 1.5	Mh/Un: 25.0000	Un/Sh: 2.0000		1,266.42	69.55		238.13		1,574.10
500.23	Miscellaneous Items	1.00	LS	F6319A	50 10.00	5,938	11,565		4,989		22,493
Mh:	120.00	Shifts: 1.5	Mh/Un: 120.0000	Un/Sh: 0.6667		5,938.44	11,565.37		4,988.69		22,492.50
*****Biditem/Category		500	*****			12,369	14,373	590	8,034		35,367
Mh:	247.22	Mh/Un: 247.2200				12,369.23	14,373.40	590.00	8,034.04		35,366.67
*** 510	51	12th Street				Takeoff:	1.00 LS		Bid:	1.00 LS	
510.10	24" RCP Installation	96.00	LF	F6319A	50 10.00	3,455	4,007	180	2,903		10,545
Mh:	69.82	Shifts: 0.9	Mh/Un: 0.7273	Un/Sh: 110.0917		35.99	41.74	1.88	30.24		109.85
510.11	Haul Out Muck	29.00	CY	F6319A	50 10.00	974		750	1,214		2,938
Mh:	18.16	Shifts:	Mh/Un: 0.6262	Un/Sh:		33.57		25.86	41.88		101.31
510.12	Dewatering	96.00	LF	F6319A	50 10.00	486	1,335		222		2,043
Mh:	9.60	Shifts: 0.2	Mh/Un: 0.1000	Un/Sh: 500.0000		5.07	13.91		2.31		21.28
510.20	Precast Type J7 7"x 4" (MH-1	1.00	EA	F6319A	50 10.00	4,449	5,524		4,240		14,213
Mh:	90.00	Shifts: 1.0	Mh/Un: 90.0000	Un/Sh: 1.0000		4,449.10	5,523.74		4,239.71		14,212.55
510.22	Mud Work	1.00	EA	F6319A	50 10.00	2,533	70		476		3,079
Mh:	50.00	Shifts: 1.0	Mh/Un: 50.0000	Un/Sh: 1.0000		2,532.82	69.55		476.25		3,078.62
510.23	Miscellaneous Items	1.00	LS	F6319A	50 10.00	5,938	11,565		4,989		22,493
Mh:	120.00	Shifts: 1.5	Mh/Un: 120.0000	Un/Sh: 0.6667		5,938.44	11,565.37		4,988.69		22,492.50
*****Biditem/Category		510	*****			17,835	22,501	930	14,044		55,310
Mh:	357.58	Mh/Un: 357.5800				17,835.42	22,500.68	930.00	14,044.07		55,310.17
*** 540	54	9th Street				Takeoff:	1.00 LS		Bid:	1.00 LS	
540.01	24" RCP Installation	56.00	LS	F6319A	50 10.00	2,015	2,337	90	1,693		6,135
Mh:	40.72	Shifts: 0.5	Mh/Un: 0.7271	Un/Sh: 110.0196		35.98	41.74	1.61	30.23		109.56
540.02	Haul Out Muck	17.00	CY	F6319A	50 10.00	570		500	712		1,782
Mh:	10.64	Shifts:	Mh/Un: 0.6259	Un/Sh:		33.55		29.41	41.86		104.82
540.03	Dewatering	56.00	LF	F6319A	50 10.00	284	770		129		1,183
Mh:	5.60	Shifts: 0.1	Mh/Un: 0.1000	Un/Sh: 500.0000		5.07	13.76		2.31		21.13
540.21	Precast Type J7 6"x 4" (MH-9	1.00	EA	F6319A	50 10.00	4,449	5,524		4,240		14,213
Mh:	90.00	Shifts: 1.0	Mh/Un: 90.0000	Un/Sh: 1.0000		4,449.10	5,523.74		4,239.71		14,212.55
540.22	Mud Work	1.00	EA	F6319A	50 10.00	2,533	70		476		3,079
Mh:	50.00	Shifts: 1.0	Mh/Un: 50.0000	Un/Sh: 1.0000		2,532.82	69.55		476.25		3,078.62
540.23	Miscellaneous Items	1.00	LS	F6319A	50 10.00	5,938	11,565		4,989		22,493
Mh:	120.00	Shifts: 1.5	Mh/Un: 120.0000	Un/Sh: 0.6667		5,938.44	11,565.37		4,988.69		22,492.50
*****Biditem/Category		540	*****			15,790	20,266	590	12,238		48,884
Mh:	316.96	Mh/Un: 316.9600				15,789.55	20,266.31	590.00	12,238.28		48,884.14
*** 560	56	West Ave. (14th St. - 8th St.)				Takeoff:	1.00 LS		Bid:	1.00 LS	
560.01	24" RCP Installation	82.00	LF	F6319A	50 10.00	2,951	3,422	121	2,478		8,971
Mh:	59.63	Shifts: 0.7	Mh/Un: 0.7272	Un/Sh: 110.0671		35.98	41.73	1.47	30.22		109.41
560.02	Haul Out Muck	25.00	CY	F6319A	50 10.00	1,311		750	1,636		3,697
Mh:	24.46	Shifts:	Mh/Un: 0.9784	Un/Sh:		52.45		30.00	65.43		147.88
560.03	Dewatering	82.00	LF	F6319A	50 10.00	831	4,815		379		6,024
Mh:	16.40	Shifts: 0.3	Mh/Un: 0.2000	Un/Sh: 250.0000		10.13	58.72		4.62		73.47
560.21	Catch Basin Type 4J 7'x 4' (ST	2.00	EA	F6319A	50 10.00	3,959	11,047		3,326		18,332
Mh:	80.00	Shifts: 1.0	Mh/Un: 40.0000	Un/Sh: 2.0000		1,979.48	5,523.74		1,662.90		9,166.11
560.22	Mud Work	2.00	EA	F6319A	50 10.00	2,533	139		476		3,148
Mh:	50.00	Shifts: 1.0	Mh/Un: 25.0000	Un/Sh: 2.0000		1,266.41	69.55		238.13		1,574.09
560.23	Miscellaneous Items	1.00	LS	F6319A	50 10.00	5,938	11,565		4,989		22,493
Mh:	120.00	Shifts: 1.5	Mh/Un: 120.0000	Un/Sh: 0.6667		5,938.44	11,565.37		4,988.69		22,492.50
*****Biditem/Category		560	*****			17,523	30,989	871	13,283		62,666

Activity Unit Price Summary

Biditem Activity	Description	Quantity	Unit	Calendar		Labor	Perm Material	Constr Matl/Exp	Equip- Ment	Sub- Contract	Total
				WC	Hrs/Shift						
Mh:	350.49	Mh/Un:	350.4900			17,523.02	30,989.20	870.60	13,282.76		62,665.58
Mh:	1,272.25	***REPORT TOTALS***				63,517	88,130	2,981	47,599		202,227

N = Activity not adjusted to bid quantity

Activity Unit Price Summary

Biditem Activity	Description	Quantity	Unit	Calendar WC	Hrs/Shift	Labor	Perm Material	Constr Matl/Exp	Equip- ment	Sub- Contract	Total	
*** 10	General Conditions					Takeoff:	1.00 LS		Bid:	1.00 LS		
10.1	Mobilization	1.00	LS	F6319A	50	10.00		63,588			63,588	
Mh:	Shifts:	Mh/Un:		Un/Sh:				63,588.00			63,588.00	
10.2	General Conditions	60.00	DAY	F6319A	50	10.00	99,487	64,580	3,600		167,667	
Mh:	1,920.00	Shifts:	Mh/Un:	32.0000	Un/Sh:		1,658.11	1,076.33	60.00		2,794.45	
	*****Biditem/Category 10 *****						99,487	128,168	3,600		231,255	
Mh:	1,920.00	Mh/Un:	1,920.0000				99,486.72	128,168.00	3,600.00		231,254.72	
*** 31	Template					Takeoff:	1.00 LS		Bid:	1.00 LS		
31.01	Excavate and Haul	102.00	CY	F6319A	50	10.00	4,033		5,466	500	9,998	
Mh:	84.00	Shifts:	1.2	Mh/Un:	0.8235	Un/Sh:	85.0000	39.53	53.59	4.90	98.02	
31.02	Concrete Template (5% Waste)	69.00	CY	F6319A	50	10.00	4,369	9,630	5,921		19,920	
Mh:	91.00	Shifts:	1.3	Mh/Un:	1.3188	Un/Sh:	53.0769	63.31	139.57	85.82	288.70	
31.03	Forms - Sonotube	66.00	EA	F6319A	50	10.00	22,179		4,280	30,063	56,522	
Mh:	462.00	Shifts:	6.6	Mh/Un:	7.0000	Un/Sh:	10.0000	336.04	64.85	455.50	856.39	
31.04	Forms - Exterior	3.00	EA	F6319A	50	10.00	4,033		3,852	5,466	13,350	
Mh:	84.00	Shifts:	1.2	Mh/Un:	28.0000	Un/Sh:	2.5000	1,344.17	1,284.00	1,821.99	4,450.16	
31.05	Blocking	1.00	LS	F6319A	50	10.00	1,008			1,367	2,375	
Mh:	21.00	Shifts:	0.3	Mh/Un:	21.0000	Un/Sh:	3.3333	1,008.12		1,366.50	2,374.62	
31.06	Survey	1.00	LS	F6319A	50	10.00			5,850		5,850	
Mh:		Shifts:		Mh/Un:		Un/Sh:			5,850.00		5,850.00	
31.07	Pump Concrete	1.00	LS	F6319A	50	10.00				2,140	2,140	
Mh:		Shifts:		Mh/Un:		Un/Sh:				2,140.00	2,140.00	
31.08	Haul Old Template Debris	1.00	LS	F6319A	50	10.00	2,016		4,025	2,733	8,774	
Mh:	42.00	Shifts:	0.6	Mh/Un:	42.0000	Un/Sh:	1.6667	2,016.25	4,025.00	2,732.99	8,774.24	
	*****Biditem/Category 31 *****						37,637	9,630	18,007	53,156	500	118,929
Mh:	784.00	Mh/Un:	784.0000				37,636.62	9,630.00	18,007.00	53,155.78	500.00	118,929.40
*** 32	Drill and PLace Grout					Takeoff:	1.00 LS		Bid:	1.00 LS		
32.01	Drill and Place Grout	72.00	EA	F6319A	50	10.00	97,249		249,096		346,345	
Mh:	2,160.00	Shifts:	24.0	Mh/Un:	30.0000	Un/Sh:	3.0000	1,350.68	3,459.67		4,810.34	
32.02	Grout	450.00	CY	F6319A	50	10.00		69,818			69,818	
Mh:		Shifts:		Mh/Un:		Un/Sh:		155.15			155.15	
32.03	Rebar	78,750.00	LBS	F6319A	50	10.00		37,919		23,625	61,544	
Mh:		Shifts:		Mh/Un:		Un/Sh:		0.48		0.30	0.78	
32.04	Spoils Disposal	450.00	CY	F6319A	50	10.00			5,062		5,062	
Mh:		Shifts:		Mh/Un:		Un/Sh:			11.25		11.25	
32.05	Concrete Pump	450.00	CY	F6319A	50	10.00			6,420		6,420	
Mh:		Shifts:		Mh/Un:		Un/Sh:			14.27		14.27	
	*****Biditem/Category 32 *****						97,249	107,736	5,062	255,516	23,625	489,188
Mh:	2,160.00	Mh/Un:	2,160.0000				97,248.60	107,736.16	5,062.00	255,516.00	23,625.00	489,187.76
*** 33	Mass Excavation and Tremie					Takeoff:	1.00 LS		Bid:	1.00 LS		
33.01	Excavation	444.00	CY	F6319A	50	10.00	10,734		13,665		24,398	
Mh:	240.00	Shifts:	3.0	Mh/Un:	0.5405	Un/Sh:	148.0000	24.17	30.78		54.95	
33.02	Excavation (Last 4')	66.00	CY	F6319A	50	10.00	4,651		5,921		10,573	
Mh:	104.00	Shifts:	1.3	Mh/Un:	1.5758	Un/Sh:	50.7692	70.47	89.72		160.19	
33.03	Clean Sides	1.00	LS	F6319A	50	10.00	3,220		4,099		7,320	
Mh:	72.00	Shifts:	0.9	Mh/Un:	72.0000	Un/Sh:	1.1111	3,220.06	4,099.48		7,319.54	
33.04	Tremie Pour	150.00	CY	F6319A	50	10.00	13,954	20,063	17,764		51,780	
Mh:	312.00	Shifts:	3.9	Mh/Un:	2.0800	Un/Sh:	38.4615	93.02	133.75	118.43	345.20	
33.05	Tremie Rebar/Bottom Slab	26,250.00	LBS	F6319A	50	10.00		14,044		7,875	21,919	
Mh:		Shifts:		Mh/Un:		Un/Sh:		0.54		0.30	0.84	
33.06	Dewater and Seal	1.00	LS	F6319A	50	10.00	5,367		6,832		12,199	
Mh:	120.00	Shifts:	1.5	Mh/Un:	120.0000	Un/Sh:	0.6667	5,366.76	6,832.49		12,199.25	
33.07	Leveling Course	30.00	CY	F6319A	50	10.00	5,713	4,013	7,743		17,469	
Mh:	119.00	Shifts:	1.7	Mh/Un:	3.9667	Un/Sh:	17.6471	190.42	133.75	258.12	582.29	
33.08	Trucking	1.00	LS	F6319A	50	10.00			5,738		5,738	
Mh:		Shifts:		Mh/Un:		Un/Sh:			5,738.00		5,738.00	
33.09	Tremie Pump and Level Cours	1.00	LS	F6319A	50	10.00			1,926		1,926	
Mh:		Shifts:		Mh/Un:		Un/Sh:			1,926.00		1,926.00	

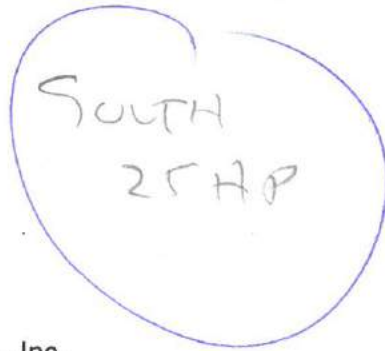
Activity Unit Price Summary

Biditem Activity	Description	Quantity	Unit	Calendar WC	Hrs/Shift	Labor	Perm Material	Constr Matl/Exp	Equip-Ment	Sub-Contract	Total	
33.10	Poly Tube Injection / Seal	1.00	LS	F6319A	50	10.00	5,350				5,350	
Mh:	Shifts:	Mh/Un:		Un/Sh:			5,350.00				5,350.00	
*****Biditem/Category		33	*****			43,638	43,469	5,738	57,952	7,875	158,672	
Mh:	967.00	Mh/Un:	967.0000			43,637.81	43,468.75	5,738.00	57,952.28	7,875.00	158,671.84	
***	51	Template				Takeoff:	1.00	LS	Bid:	1.00	LS	
51.01	Excavate and Haul	102.00	CY	F6319A	50	10.00	4,033		5,466	500	9,998	
Mh:	84.00	Shifts:	1.2	Mh/Un:	0.8235	Un/Sh:	85.0000		39.53	53.59	4.90	98.02
51.02	Concrete Template (5% Waste	69.00	CY	F6319A	50	10.00	4,369	9,630	5,921		19,920	
Mh:	91.00	Shifts:	1.3	Mh/Un:	1.3188	Un/Sh:	53.0769	63.31	139.57	85.82	288.70	
51.03	Forms - Sonotube	66.00	EA	F6319A	50	10.00	22,179		4,280	30,063	56,522	
Mh:	462.00	Shifts:	6.6	Mh/Un:	7.0000	Un/Sh:	10.0000	336.04	64.85	455.50	856.39	
51.04	Forms - Exterior	3.00	EA	F6319A	50	10.00	4,033		3,852	5,466	13,350	
Mh:	84.00	Shifts:	1.2	Mh/Un:	28.0000	Un/Sh:	2.5000	1,344.17	1,284.00	1,821.99	4,450.16	
51.05	Blocking	1.00	LS	F6319A	50	10.00	1,008			1,367	2,375	
Mh:	21.00	Shifts:	0.3	Mh/Un:	21.0000	Un/Sh:	3.3333	1,008.12		1,366.50	2,374.62	
51.06	Survey	1.00	LS	F6319A	50	10.00			5,850		5,850	
Mh:		Shifts:		Mh/Un:		Un/Sh:			5,850.00		5,850.00	
51.07	Pump Concrete	1.00	LS	F6319A	50	10.00			2,140		2,140	
Mh:		Shifts:		Mh/Un:		Un/Sh:			2,140.00		2,140.00	
51.08	Haul Old Template Debris	1.00	LS	F6319A	50	10.00	2,016		4,025	2,733	8,774	
Mh:	42.00	Shifts:	0.6	Mh/Un:	42.0000	Un/Sh:	1.6667	2,016.25	4,025.00	2,732.99	8,774.24	
*****Biditem/Category		51	*****			37,637	9,630	18,007	53,156	500	118,929	
Mh:	784.00	Mh/Un:	784.0000			37,636.62	9,630.00	18,007.00	53,155.78	500.00	118,929.40	
***	52	Drill and PLace Grout				Takeoff:	1.00	LS	Bid:	1.00	LS	
52.01	Drill and Place Grout	72.00	EA	F6319A	50	10.00	128,584		329,357		457,941	
Mh:	2,855.99	Shifts:	31.7	Mh/Un:	39.6665	Un/Sh:	2.2689	1,785.88	4,574.40		6,360.29	
52.02	Grout	486.00	CY	F6319A	50	10.00		81,435			81,435	
Mh:		Shifts:		Mh/Un:		Un/Sh:		167.56			167.56	
52.03	Rebar	85,050.00	LBS	F6319A	50	10.00		45,512		25,515	71,027	
Mh:		Shifts:		Mh/Un:		Un/Sh:		0.54		0.30	0.84	
52.04	Spoils Disposal	450.00	CY	F6319A	50	10.00			5,625		5,625	
Mh:		Shifts:		Mh/Un:		Un/Sh:			12.50		12.50	
52.05	Concrete Pump	486.00	CY	F6319A	50	10.00			6,420		6,420	
Mh:		Shifts:		Mh/Un:		Un/Sh:			13.21		13.21	
*****Biditem/Category		52	*****			128,584	126,948	5,625	335,777	25,515	622,448	
Mh:	2,855.99	Mh/Un:	2,855.9900			128,583.65	126,947.58	5,625.00	335,776.98	25,515.00	622,448.21	
***	53	Mass Excavation and Tremie				Takeoff:	1.00	LS	Bid:	1.00	LS	
53.01	Excavation	486.00	CY	F6319A	50	10.00	8,945		11,387		20,332	
Mh:	200.00	Shifts:	2.5	Mh/Un:	0.4115	Un/Sh:	194.4000	18.40	23.43		41.84	
53.02	Excavation (Last 8')	141.00	CY	F6319A	50	10.00	9,936		12,649		22,586	
Mh:	222.18	Shifts:	2.8	Mh/Un:	1.5757	Un/Sh:	50.7742	70.47	89.71		160.18	
53.03	Clean Sides	1.00	LS	F6319A	50	10.00	3,936		5,010		8,946	
Mh:	88.00	Shifts:	1.1	Mh/Un:	88.0000	Un/Sh:	0.9091	3,935.62	5,010.49		8,946.11	
53.04	Tremie Pour	96.00	CY	F6319A	50	10.00	6,798	14,894	8,654		30,347	
Mh:	152.00	Shifts:	1.9	Mh/Un:	1.5833	Un/Sh:	50.5263	70.81	155.15	90.15	316.11	
53.05	Tremie Rebar / Bottom Slab	16,800.00	LBS	F6319A	50	10.00		8,988		5,040	14,028	
Mh:		Shifts:		Mh/Un:		Un/Sh:		0.54		0.30	0.84	
53.06	Dewater and Seal	1.00	LS	F6319A	50	10.00	4,651		5,921		10,573	
Mh:	104.00	Shifts:	1.3	Mh/Un:	104.0000	Un/Sh:	0.7692	4,651.20	5,921.48		10,572.68	
53.07	Leveling Course	21.00	CY	F6319A	50	10.00	3,360	2,809	4,555		10,724	
Mh:	70.00	Shifts:	1.0	Mh/Un:	3.3333	Un/Sh:	21.0000	160.02	133.75	216.90	510.67	
53.08	Trucking	1.00	LS	F6319A	50	10.00			5,738		5,738	
Mh:		Shifts:		Mh/Un:		Un/Sh:			5,738.00		5,738.00	
53.09	Tremie Pump and Level Cours	1.00	LS	F6319A	50	10.00			1,926		1,926	
Mh:		Shifts:		Mh/Un:		Un/Sh:			1,926.00		1,926.00	
53.10	Poly Tube Injection / Seal	1.00	LS	F6319A	50	10.00				5,000	5,000	
Mh:		Shifts:		Mh/Un:		Un/Sh:				5,000.00	5,000.00	

Activity Unit Price Summary

Biditem Activity	Description	Quantity	Unit	Calendar WC	Hrs/Shift	Labor	Perm Material	Constr Matl/Exp	Equip- Ment	Sub- Contract	Total	
*****Biditem/Category		70	*****			56,678	17,563	800	51,025	36,000	162,066	
Mh:	1,192.00	Mh/Un:	1,192.0000			56,678.04	17,562.69	800.00	51,025.19	36,000.00	162,065.92	
***	90	Utility Relocations & Removals				Takeoff:	1.00 LS		Bid:	1.00 LS		
90.01	Utility Relocations & Removal	1.00	LS	F6319A	50	10.00	47,046	3,000	30,194		80,240	
Mh:	980.00	Shifts:	14.0	Mh/Un:	980.0000	Un/Sh:	0.0714	47,045.74	3,000.00	30,193.80	80,239.54	
*****Biditem/Category		90	*****			47,046		3,000	30,194		80,240	
Mh:	980.00	Mh/Un:	980.0000			47,045.74		3,000.00	30,193.80		80,239.54	
Mh:	14,756.16	***REPORT TOTALS***					694,458	989,050	190,145	1,009,597	356,805	3,240,055

N = Activity not adjusted to bid quantity



Xylem Water Solutions USA, Inc.
Flygt Products

15132 Park of Commerce Blvd./102
 Jupiter, FL 33478
 Tel (561) 848-1200
 Fax (561) 848-1299

To: Ric-Man Construction FL, Inc.
 Attention: Michael Fischer

Date: April 16, 2021

Subject: 9 St 25HP Well Pump
 Quote Number: 9ST25WP

We are pleased to offer the following equipment:

Qty	Description
1	Flygt Model NP-3171.095 LT 10" volute Submersible pump equipped with a 460 Volt / 3 phase / 60 Hz 25 HP 1160 RPM motor, 614 impeller, 1 x 50 Ft. length of submersible cable, FLS leakage detector, volute is prepared for Flush Valve, Explosion proof
1	START UP, FLYGT, NO TAX 1-TP MODELS: 3000, 7000, 8000
1	CONNECTION, DISCH 10" X 10" CI
1	½ X 316SS Standard Mounting plates (For 10" Base Elbow)
30	CHAIN 5/16" 316SS SWL2750# (1 X 30')
1	KIT, CHAIN FITTING 316SS+ FLYGT
8	ROD, THREADED 3/4"-10X12" 316SS
4	PPAC AC100PLUS ADHESIVE+ ANCHORING SYSTEM
50	TS3163 FEET 3" GUIDE RAIL 316SS (2 X 10' + 2 X 15')
1	BRACKET, GUIDE BAR UPPER 3" 316
1	3" 316SS Intermediate Guide Bar Bracket (10" Riser Pipe)
1	HOLDER, CABLE HEAVY DUTY 316SS
1	56" X 112" Frame Opening Drainage Well Hatches Galv Steel DT-AHD
1	52" X 60" Frame Opening Wet Well Hatch Galv Steel DT-AHD
1	36" X 78" Frame Opening Settling Tank Hatch Galv Steel DT-AHD
1	Storm Water Manhole Cover USF385 Ring
4	SENSOR, ENM-10 0.95-1.1 65'
1	Simplex Control Panel 460V 3Ph 25hp NEMA 3R12 316 SS enclosure w/ MultiSmart Primary control & LTU 801 pressure transducer and back up Float control & Gen receptacle
1	Motor/ Float Connection Box
1	SHIPPING AND HANDLING-NO TAX

Price: **\$129,718.50** plus taxes, freight included

Exclusions: WE DO NOT SUPPLY, PIPING, VALVES, GUIDE BARS, PRESSURE GAUGES, DISCONNECTS, JUNCTION BOXES, KELLUMS GRIPS, SURGE PROTECTION EQUIPMENT, SPARE PARTS, LABOR OR ANY OTHER ITEM NOT SPECIFICALLY LISTED ABOVE.

PLEASE MAKE PURCHASE ORDERS OUT TO: **XYLEM WATER SOLUTIONS USA, INC.**

Validity: THIS QUOTE IS VALID FOR NINETY (90) DAYS UNLESS LONGER TIME AGREED TO IN WRITING.



Xylem Water Solutions USA, Inc.
Flygt Products

15132 Park of Commerce Blvd./102
Jupiter, FL 33478
Tel (561) 848-1200
Fax (561) 848-1299

Taxes: State, local, and other applicable taxes are not included in this quotation.

Freight Terms: DAP; Jobsite - Full Freight Allowed (per Incoterms 2020)

Shortages: Xylem will not be responsible for apparent shipment shortages or damages incurred in shipment that are not reported within two weeks from delivery to jobsite. Damages should be noted on the receiving slip and the truck driver advised of the damages. Please contact our office as soon as possible to report damages or shortages so that replacement items can be shipped and the appropriate claims made.

Payment Terms: 100% NET 90 DAYS AFTER SHIPMENT DATE.
(Note: Partial billing will be made on partial shipments)

Xylem's payment shall not be dependent upon Purchaser being paid by any third party unless Owner denies payment due to reasons solely attributable to items related to the equipment being provided by FLYGT.

Schedule: Please consult your local Flygt branch for submittals and fabrication lead-times.

Back Charges: Buyer shall not make purchases nor shall Buyer incur any labor that would result in a back charge to Seller without prior written consent of an authorized employee of seller.

Terms & Conditions: *This order is subject to the Standard Terms and Conditions of Sale – Xylem Americas effective on the date the order is accepted which terms are available at <http://www.xylem.com/en-us/Pages/terms-conditions-of-sale.aspx> and incorporated herein by reference and made part of the agreement between the parties.*

We thank you for your interest in our equipment and look forward to being of service to you in the near future.

IN THE ABSENCE OF A FORMAL ISSUED PURCHASE ORDER, A SIGNED COPY OF THIS PROPOSAL IS ACCEPTABLE AS A BINDING CONTRACT.

Xylem Water Solutions USA, Inc.

Company Name: _____

Address: _____

Accepted By: _____

Print Name: _____

Date: _____



Xylem Water Solutions USA, Inc.
Flygt Products

15132 Park of Commerce Blvd./102
Jupiter, FL 33478
Tel (561) 848-1200
Fax (561) 848-1299

To: Ric-Man Construction FL, Inc.
Attention: Michael Fischer

Date: April 16, 2021

Subject: 12 St 25HP Well Pump
Quote Number: 12ST25WP

We are pleased to offer the following equipment:

Qty	Description
1	Flygt Model NP-3171.095 LT 10" volute Submersible pump equipped with a 460 Volt / 3 phase / 60 Hz 25 HP 1160 RPM motor, 614 impeller, 1 x 50 Ft. length of submersible cable, FLS leakage detector, volute is prepared for Flush Valve, Explosion proof
1	START UP, FLYGT, NO TAX 1-TP MODELS: 3000, 7000, 8000
1	CONNECTION, DISCH 10" X 10" CI
1	½ X 316SS Standard Mounting plates (For 10" Base Elbow)
30	CHAIN 5/16" 316SS SWL2750# (1 X 30')
1	KIT, CHAIN FITTING 316SS+ FLYGT
8	ROD, THREADED 3/4"-10X12" 316SS
4	PPAC AC100PLUS ADHESIVE+ ANCHORING SYSTEM
50	TS3163 FEET 3" GUIDE RAIL 316SS (2 X 10' + 2 X 15')
1	BRACKET, GUIDE BAR UPPER 3" 316
1	3" 316SS Intermediate Guide Bar Bracket (10" Riser Pipe)
1	HOLDER, CABLE HEAVY DUTY 316SS
1	56" X 112" Frame Opening Drainage Well Hatches Galv Steel DT-AHD
1	52" X 60" Frame Opening Wet Well Hatch Galv Steel DT-AHD
1	36" X 78" Frame Opening Settling Tank Hatch Galv Steel DT-AHD
1	Storm Water Manhole Cover USF385 Ring
4	SENSOR, ENM-10 0.95-1.1 65'
1	Simplex Control Panel 460V 3Ph 25hp NEMA 3R12 316 SS enclosure w/ MultiSmart Primary control & LTU 801 pressure transducer and back up Float control & Gen receptacle
1	Motor/ Float Connection Box
1	SHIPPING AND HANDLING-NO TAX

Price: \$129,718.50 plus taxes, freight included

Exclusions: WE DO NOT SUPPLY, PIPING, VALVES, GUIDE BARS, PRESSURE GAUGES, DISCONNECTS, JUNCTION BOXES, KELLUMS GRIPS, SURGE PROTECTION EQUIPMENT, SPARE PARTS, LABOR OR ANY OTHER ITEM NOT SPECIFICALLY LISTED ABOVE.

PLEASE MAKE PURCHASE ORDERS OUT TO: **XYLEM WATER SOLUTIONS USA, INC.**

Validity: THIS QUOTE IS VALID FOR NINETY (90) DAYS UNLESS LONGER TIME AGREED TO IN WRITING.



Xylem Water Solutions USA, Inc.
Flygt Products

15132 Park of Commerce Blvd./102
Jupiter, FL 33478
Tel (561) 848-1200
Fax (561) 848-1299

Taxes: State, local, and other applicable taxes are not included in this quotation.

Freight Terms: DAP; Jobsite - Full Freight Allowed (per Incoterms 2020)

Shortages: Xylem will not be responsible for apparent shipment shortages or damages incurred in shipment that are not reported within two weeks from delivery to jobsite. Damages should be noted on the receiving slip and the truck driver advised of the damages. Please contact our office as soon as possible to report damages or shortages so that replacement items can be shipped and the appropriate claims made.

Payment Terms: 100% NET 90 DAYS AFTER SHIPMENT DATE.
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Schedule: Please consult your local Flygt branch for submittals and fabrication lead-times.

Back Charges: Buyer shall not make purchases nor shall Buyer incur any labor that would result in a back charge to Seller without prior written consent of an authorized employee of seller.

Terms & Conditions: *This order is subject to the Standard Terms and Conditions of Sale – Xylem Americas effective on the date the order is accepted which terms are available at <http://www.xylem.com/en-us/Pages/terms-conditions-of-sale.aspx> and incorporated herein by reference and made part of the agreement between the parties.*

We thank you for your interest in our equipment and look forward to being of service to you in the near future.

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Xylem Water Solutions USA, Inc.

Company Name: _____

Address: _____

Accepted By: _____

Print Name: _____

Date: _____



Xylem Water Solutions USA, Inc.
Flygt Products

15132 Park of Commerce Blvd./102
Jupiter, FL 33478
Tel (561) 848-1200
Fax (561) 848-1299

To: Ric-Man Construction FL, Inc.
Attention: Michael Fischer

Date: April 16, 2021

Subject: 13 St 25HP Well Pump
Quote Number: 13ST25WP

We are pleased to offer the following equipment:

Qty	Description
1	Flygt Model NP-3171.095 LT 10" volute Submersible pump equipped with a 460 Volt / 3 phase / 60 Hz 25 HP 1160 RPM motor, 614 impeller, 1 x 50 Ft. length of submersible cable, FLS leakage detector, volute is prepared for Flush Valve, Explosion proof
1	START UP, FLYGT, NO TAX 1-TP MODELS: 3000, 7000, 8000
1	CONNECTION, DISCH 10" X 10" CI
1	½ X 316SS Standard Mounting plates (For 10" Base Elbow)
30	CHAIN 5/16" 316SS SWL2750# (1 X 30')
1	KIT, CHAIN FITTING 316SS+ FLYGT
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1	Motor/ Float Connection Box
1	SHIPPING AND HANDLING-NO TAX

Price: \$129,718.50 plus taxes, freight included

Exclusions: WE DO NOT SUPPLY, PIPING, VALVES, GUIDE BARS, PRESSURE GAUGES, DISCONNECTS, JUNCTION BOXES, KELLUMS GRIPS, SURGE PROTECTION EQUIPMENT, SPARE PARTS, LABOR OR ANY OTHER ITEM NOT SPECIFICALLY LISTED ABOVE.

PLEASE MAKE PURCHASE ORDERS OUT TO: XYLEM WATER SOLUTIONS USA, INC.

Validity: THIS QUOTE IS VALID FOR NINETY (90) DAYS UNLESS LONGER TIME AGREED TO IN WRITING.



Xylem Water Solutions USA, Inc.
Flygt Products

15132 Park of Commerce Blvd./102
Jupiter, FL 33478
Tel (561) 848-1200
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Shortages: Xylem will not be responsible for apparent shipment shortages or damages incurred in shipment that are not reported within two weeks from delivery to jobsite. Damages should be noted on the receiving slip and the truck driver advised of the damages. Please contact our office as soon as possible to report damages or shortages so that replacement items can be shipped and the appropriate claims made.

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Xylem Water Solutions USA, Inc.

Company Name: _____

Address: _____

Accepted By: _____

Print Name: _____

Date: _____



EXHIBIT B

234 NE 3rd Street Suite 1101
Miami, FL 33132
(305) 992-5415 Office
www.AtlanticCoastDrilling.com

April 15, 2021

WELL PROPOSAL

Attn: Rafael Vega Job Name:
To: RIC-MAN Construction Job Address: Location: along West Ave. from Lincoln Rd.
3100 SW 15th Street, down to 8th street. Miami Beach, FL
Deerfield Beach, Fl 33442 Temp. dewatering well
954-426-1221

We hereby propose to furnish all necessary materials and labor- complete in accordance with Florida Department of Environmental Protection (FDEP) requirements and South Florida building codes as follows:

Installation of: Fifteen (15) – 24” dia. Temp. Dewatering Well (class V) at \$23,000.00 (Each)
Up to 100’ feet, additional depth at \$195.00 per foot.

TOTAL: \$345,000.00

Price Includes:

- 1. Mobilization of drill rig equipment, tools, & labor. Two (2) Man Drilling Crew.
2. Containment of Development water
3. Made in America Steel Pipe (New, No Mids, No Mill SPECS.)
4. Each well will be capped with a lid.
5. Well Completion reports.
6. Specific capacity drawdown test concurrent with well development.

Exclusions:

- 1). Structure over well, manhole ring and covers, lateral piping to the well, & pumps.
2). Civil plans, Site access, MOT & locations / well layout should be completed by a surveyor.
3). Underground clearances, aside from 811 Call Sunshine.
4). Site restorations, disposition of well cuttings.
5). Payment performance bonds.
6). Permit Fees, FDEP, County & City well construction permits.
7). Reasonable Assurance Report by PG for FDEP review.

Note: Atlantic Coast Drilling cannot guarantee Well Capacity

This proposal is good for 30 days - These prices are For Your Eyes Only
Payment to be made upon Requisition - Interest accrues @ 1 1/2% monthly on unpaid balance

Acceptance of Proposal

The above prices, specifications and conditions are satisfactory;
payment will be made as outlined above.

Atlantic Coast Drilling, Inc.
Marcos Aleman -President

Authorized
Signature:
Print & Date:

Authorized
Signature: Marcos Aleman
Date: 04/15/2021

Terms and Conditions: All work to be completed in workmanlike manner according to standard practices. Any alteration or deviation from above specifications involving extra cost will be executed only upon written orders, and will become extra charge over and above this estimate. Client agrees to pay all collection costs on all unpaid balances. Atlantic Coast Drilling Inc. shall not be held responsible for capacity of well due to geographic formation, ACD shall not be held responsible damage to underground utilities or structures not identified prior to work commencement. ACD cannot be held responsible for delays caused by bad weather, supplier shorts, strikes, or acts of God. This contract may be terminated at the option of ACD for any reason.

WQ South, ELECTRICAL AVUTE
 SOUTH FL ELECTRIC ←

4/19/21

	Wire, Conduit install total	Pump Install Cost	Total
North			
Lin BR	\$97,200.00	\$34,000.00	\$131,200.00
Lin Wst	\$12,994.20	\$34,000.00	\$46,994.20
16th Bay rd	\$28,938.60	\$34,000.00	\$62,938.60
16th Wst	\$6,386.04	\$34,000.00	\$40,386.04
15th Terr - BR	\$11,387.52	\$34,000.00	\$45,387.52
15th Terr - Wst	\$8,136.94	\$34,000.00	\$42,136.94
14th Ct	\$19,449.00	\$34,000.00	\$53,449.00
			<u>922,193</u> (091)
South			
13th St	\$7,574.40	\$34,000.00	\$41,574.40
12th St	\$8,629.20	\$34,000.00	\$42,629.20
9th St	\$8,438.40	\$34,000.00	\$42,438.40
			<u>126,641</u> (090)
			\$549,134.30



[← Commodity Coverage - Metals](#)

Steel Price Forecast and Market Outlook

Steel price forecast for 2021

The spike in steel prices is extraordinary. Many products are up 50–100% since late summer 2020, with the bulk of the increases occurring in November and December 2020. Sheet price in the United States has more than doubled since mid-2020 and just set a new all-time-record high.

Looking at some global prices, Chinese hot-rolled coil (HRC) averaged \$465 per metric ton in the fourth quarter of 2019 (pre-COVID-19). It dropped to \$440 for the second quarter and briefly approached \$420. By late December 2020, Chinese HRC price reached \$775 (an 85% increase) but quickly retreated 10%. European HRC was at \$506 in the fourth quarter of 2019, stayed below \$450 over much of the summer in 2020, then shot up to \$840 in January 2021. This is an increase of more than 90%. The United States was at \$505 in August; now in mid-January, there are unofficial reports at \$1,240, a 146% increase.

[Learn more](#), visit [Commodity Coverage – Metals](#)

Prices are spiking to unsustainable peaks in 2021

Steel prices will spike in the first quarter but following months. All products are rising rapidly construction and industrial recovery from COVID outpaced sluggish capacity restarts, so supply is temporarily tight.

Welcome! How can we help you today?



Mills have restarted in most regions, so shortages will not last and prices will retreat quickly over the second quarter.

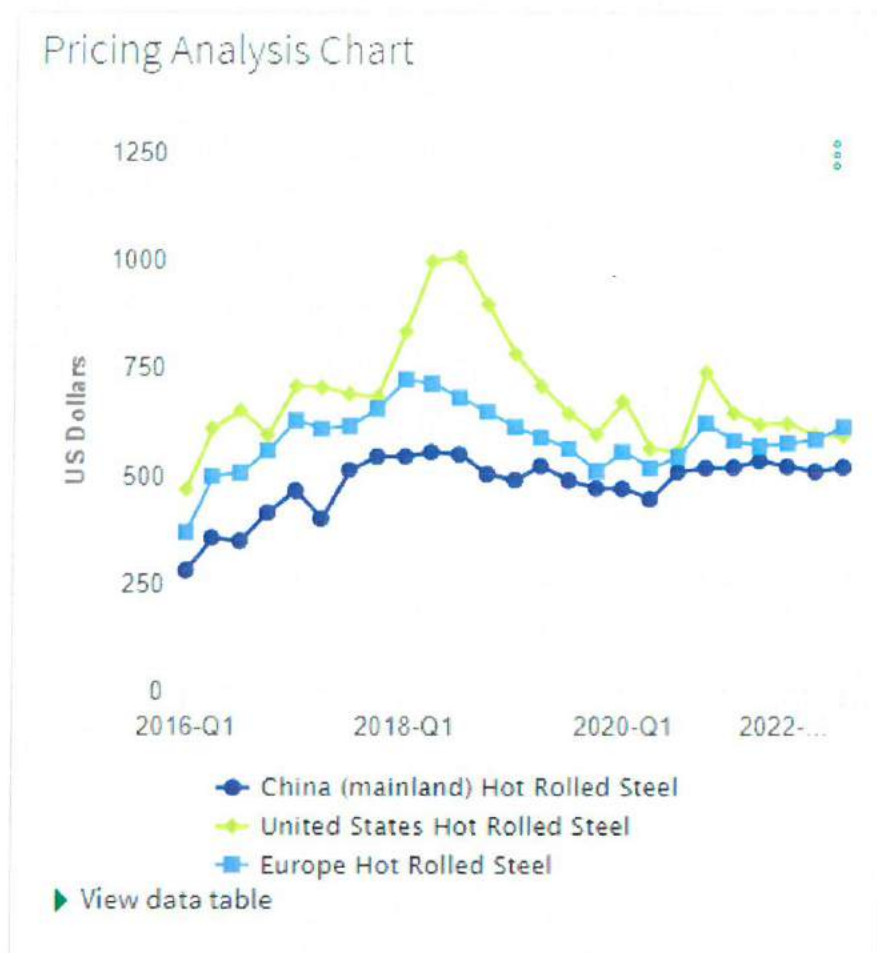
Sheet prices are spiking in the United States at one of the fastest rates in history, despite ample (but idle) capacity. Despite the high prices, buyers should worry more about supply than price for the first quarter of 2021, but should avoid locking prices for the remainder of the year. Other products and regions have high prices for the first quarter of 2021 but are not experiencing shortages.

- The buying advice for steel is “wait.” Prices spiked in the fourth quarter of 2020 and are carrying over into January. Prices are above fundamentals and will fall back in the second and third quarters. The exception is sheet, which is on allocation in the United States. Ensuring availability is more of a concern than price. Furnace restarts will alleviate supply and then price by the second quarter. Lead times are long in Europe but there is no allocation so far.
- Downside risk is high if the second wave of COVID-19 grows worse. However, if manufacturing and construction are idled, then steel demand and prices will fall.
- Upside risk from Australian cyclones is worth watching. Ore mines are at full capacity, so any disruption would be magnified. If cyclones disrupt delivery, ore would spike and with it, steel prices.

Bottom line: Steel forecast for 2021

We continue to hold that steel prices will peak globally in the first quarter of 2021 and then retreat. Sheet is on allocation in the United States and tight in Europe, so work to ensure supply even if you have to pay too much in first quarter 2021.





Experts



Mark Ulmer

The group specializes in monitoring...

Coal, Metals and Mi
Oil & Gas Upstream

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Laura Hodges

Ms. Hodges is responsible for the managem...

Economics
Country / Territory

[VIEW PROFILE](#)



John Anton

Mr. Anton has expertise in the ferrous metals...

Coal, Metals and Mi
Commodity Price F

[VIEW PROFILE](#)



Amanda Eglinton

Ms. Eglinton has been a part of the Pricing an...

Commodities
Sourcing and Supp

Welcome! How can we help you today?



Commodity Price Watch Monthly

15 Apr 2020 - Pricing and Purchasing | Scheduled Update

Commodity Price Monthly

Steel

Change from previous forecast: The forecast is lowered with only slight adjustments across products.

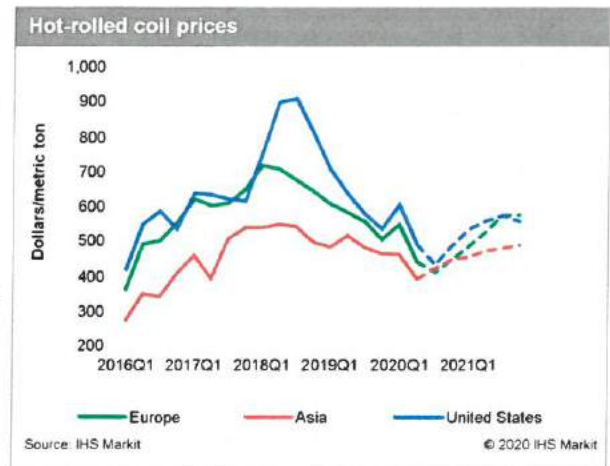
The general trend: Steel prices fall in the second quarter of 2020 but do not reach bottom until the third quarter. Prices challenge their 2015–16 lows but generally do not fall quite so far because input costs are now higher. Mills lose money nonetheless, so prices start to recover late in 2020 only because firms are forced to idle capacity.

Risk: Risk aligns on the downside and centers on the possibility that the global pandemic hits economies outside mainland China harder. The most immediate risk is to delivery, not price. Mills have closed in many countries, so alternate sources may become



mandatory. The market is mentioning upside risk that we acknowledge but believe is overblown. The fear is that deep production cuts will set up shortages once demand comes roaring back. We do not think demand roars back, but if it does then the risk is real.

Iron ore: Iron ore prices have eased from March to April, falling around \$5/metric ton (5.6%) as demand concerns finally hit the market. Prices for iron ore have outperformed many other raw materials in 2020, however, owing to a combination of supply and demand factors. On the supply side, iron ore shipments through the first quarter, from both Australia and Brazil, have fallen 9.9% year on year (y/y) because of strong seasonal rains. As a result, iron ore inventories at Chinese ports have fallen to around 115 million metric tons (MMt), just above the 2019 low of 114 MMt at the height of the iron ore supply crunch last year. In terms of demand, we saw the temporary shutdown of Chinese manufacturing, but blast furnace capacity utilization in mainland China fell only 7 percentage points to 73% at the lowest point of the shutdown. As mainland China opened up again through March, iron ore demand has increased with blast furnace utilization returning to 77% in mid-April.



Shipments and domestic iron ore production are improving with the second quarter, typically the year's strongest, which has helped pull prices down to around \$82/metric ton and should pull prices lower. With the rest of the world's steel production at a standstill in the second quarter, we are forecasting prices to fall to \$72/metric ton. Steady Chinese steel production, however, will prevent prices crashing to 2016 levels as we have seen in other commodities.

Scrap: Scrap prices have tanked over the past month as the steel industries throughout the West shut down. Turkish prices for heavy melt scrap (HMS) 80:20, the most heavily traded grade, fell 32.5% to \$210/metric ton before rebounding a little to \$238 on opportunistic buying. The Turkish response to COVID-19 has been less draconian and thus steel plants are still operating. Elsewhere, scrap prices look much worse. US buying has dried up so much that quoted prices on actual transactions are hard to find. There are indications that prices have fallen to \$140 or lower. These prices are designed to be so low that people stop bringing scrap to yards because no one is buying.

Electric arc mills in Europe and the US are either closed or set to close until social isolation measures are lifted. This creates an interesting dynamic in scrap markets because a few mills will continue to operate. These mills will continue to consume inventory at a time when little scrap generation is taking place. Manufacturing is no longer producing bushelling scrap, demolition has ceased, reducing heavy melt supply and a financial crisis will discourage consumers from trading in old vehicles to buy a new one, thereby reducing shredded scrap supply. This may provide some support to prices during this crisis. We are however forecasting demand to dominate and forecast prices of US HMS to average \$163/metric ton in the second quarter with US bushel prices to fall to \$212/metric ton, \$2 above our US shredded scrap forecast.

Coking coal: Prices have fallen as expected moving into April, as COVID-19 caused the shutdown of the majority of blast furnace capacity in Europe, Brazil, North America, and now, more critically for coking coal, India. There is also concern in the market that the Chinese fiscal stimulus will not drive growth in Chinese steel production over the 1 billion metric tons produced in 2019. We are forecasting imports into mainland China to fall by 6 MMt y/y in 2020 and as Indian steel is shut down, a similar volume will be lost there too. Coking coal production has in fact suffered in the first quarter, falling 4.8% y/y, which explained the rally in prices above \$160. Supply is now improving again which, combined with a near-shutdown of Western demand at least in the second quarter, has caused prices to fall to around \$132/metric ton for benchmark coking coal. We are forecasting prices to average \$124/metric ton in the second quarter before rallying again to around \$147 in the third quarter as more steel capacity comes back online.

Sheet: Sheet and plate have almost the same outlook. Sheet prices are dropping, and most regions have more downside to go. Association of Southeast Asian Nations (ASEAN) prices are down to \$380/metric ton, and it is likely mainland China will hit the same lows. We expect mills to sell sheet below cost in every region but the United States, and even profits



there will be very low. Because of the losses, an effective floor is placed under sheet. Otherwise we would likely fall to near late 2015 levels. Mainland China was hit first with the COVID-19 outbreak and so has been the first to recover. We thus expect a rapid rebound in mainland China, but a slow recovery to prices and production in almost every other region, including Europe and the United States.

Demand for both sheet and plate will be impacted severely by the crash in petroleum prices. New drilling will be curtailed and possibly face a temporary halt. Pipeline projects have longer construction duration, so should not be halted for a (hopefully) temporary disruption. However, as energy company cash flow becomes strained, there could be slowdowns even for long-term projects. Sheet suffers additional harm from hits to consumer demand, which may be the last sector to recover. Shipments to automotive and appliances will likely be weak for all of 2020, although rising off the floor by the fourth quarter.

Plate: Prices will drop sharply, limited only by cost of production. Like sheet, we expect mills to sell below cost in every region but the United States, and even there profits will be very low. Because of the losses there is an effective price floor. Otherwise we would likely fall to near late 2015 levels. Mainland China, hit first with the COVID-10 outbreak, has been the first to recover. We thus expect a fairly rapid rebound in mainland China but a slow recovery to prices and production in almost every other region, including Europe and the United States.

Demand for both sheet and plate will be impacted severely by the crash in petroleum prices. New drilling will be curtailed and possibly temporarily stop. Pipeline projects have a longer construction period, so should not be halted for a (hopefully) temporary disruption. However, as more energy companies' cash flow becomes strained there could be slowdowns even for long-term projects. Plate is stronger than sheet in that construction is a major end market, so there should be benefit as government stimulus programs are instituted.

Bar and rod: Bar and rod prices are weak but will fall even more as demand contracts because of COVID-19. Mainland China will hit bottom in the second quarter, but the rest of the world will not until the third quarter. Prices will be the lowest since late 2015/early 2016 and will be downside limited only because mills will be losing money and so will be forced to cut output. Grades that serve construction will recover more strongly than grades serving machinery and consumer durables. Government stimulus normally goes toward construction, so rebar will benefit more than merchant bar.

Steel pipe: The outlook for pipe prices has been revised lower on falling steel input costs and much weaker oil and gas sector demand. We had previously anticipated pipe prices were at or near bottom early in the first quarter, but now forecast prices to move lower over the second and third quarters as competition picks up among suppliers and buyers benefit from improved leverage in the weaker demand environment. At this time, we do not expect pipe prices to fall to the lows experienced during the 2015/16 downturn; however, pricing risk is squarely on the downside over the next two quarters.

IHS Markit steel price forecast, April 2020

	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	Forecast change*	
										2020	2021
Steel raw materials prices											
Iron ore, \$/dmtu											
# 1 busheling scrap US, \$/long ton											
Shredded scrap US, \$/long ton											
Shredded scrap Europe, \$/metric ton											
Heavy melt scrap US, \$/long ton											
Heavy melt scrap Europe, \$/metric ton											

IHS Markit steel price forecast, April 2020

	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2020	2021	Forecast change*
Heavy melt steel scrap China, \$/metric ton												
Metallurgical coal Australia, \$/metric ton												
Metallurgical coal China, \$/metric ton												
Steel flat product prices												
Hot-rolled coil US, \$/short ton												
Hot-rolled coil Europe, \$/metric ton												
Hot-rolled coil China, \$/metric ton												
Cold-rolled coil US, \$/short ton												
Cold-rolled coil Europe, \$/metric ton												
Cold-rolled coil China, \$/metric ton												
Galvanized sheet US, \$/short ton												
Plate, cut to length US, \$/short ton												
HDG steel Europe, \$/metric ton												
HDG steel China, \$/metric ton												
Discrete plate, Europe, \$/metric ton												
Discrete plate, Asia, \$/metric ton												
Steel long product prices												
Merchant bar US, \$/short ton												
Merchant bar Europe, \$/metric ton												
Merchant bar Asia, \$/metric ton												
Special quality bar US, \$/short ton												
Rebar US, \$/short ton												
Rebar Europe, \$/metric ton												
Rebar China, \$/metric ton												
Wire rod US, \$/short ton												
Wire rod Europe, \$/metric ton												
Wire rod (mesh quality) China, \$/metric ton												
Structurals US, \$/short ton												
Structural steel Europe, \$/metric ton												
Structural steel Asia, \$/metric ton												

* Up and down arrow signals if the price forecast is more than 5% higher or lower than the previous forecast. Please note that the forecast is available for download in the Costs and Prices Research section of Connect. Data presented in the Commodity Price Watch are often interim updates to our forecast, and as such may differ from the forecast in the spreadsheet tables.

**Historical price sources: Argus

Source: IHS Markit

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Nonferrous metals

Changes to the forecast: The base metal forecasts have been lowered over the near term to reflect the rapid deterioration in conditions since January. All prices hit a low in the second quarter; all but copper are lower in the first quarter of 2021 than the average price recorded in the first quarter of 2020.

Aluminum: Lack of any meaningful production cuts to date make aluminum look the weakest of all base metals through 2021. London Metal Exchange (LME) prices have fallen under \$1,500 per metric ton, more than \$200 below our estimate of average smelter operating costs and therefore unsustainable in our view. This said, primary smelter production has not seen any sizable cuts since January. We expect announcements shortly.

There are signs that prices may finally be nearing a bottom. Futures prices show a widening contango, which makes carry trades (buying spot metal and selling it forward) increasingly attractive, especially with low interest rates minimizing financing costs. Scrap discounts are also narrowing as a lack of scrap generation and scrap collection tightens conditions, which may soon prompt secondary producers into the market for primary metal. The bottom line, however, is that while we believe the downside is limited, aluminum looks well supplied with only a slow rise in prices over the near term. We see little risk in a buy as needed strategy over the next quarter.

Copper: The market will record a surplus in 2020 because of plunging consumption in the first half of the year. While this shift in the market has undercut prices, our caution is that a quick supply-side reaction on top of an existing weakness in mine production sets prices up for a rebound in the second half of the year once the global economy reboots.

Even though LME prices recently dropped as low as \$4,618 per metric ton in March, based on mine operating costs, we believe a sustained floor is probably closer to \$4,700 to \$4,800 per metric ton. Prices have recently moved closer to \$5,000 per metric ton on the wave of temporary mine and port closures, which are disrupting the flow of concentrates into the market. Visible inventory has risen since January but is still lower than it was at this time last year. **Even modest physical consumption growth, if accompanied by a degree of inventory restocking later this year, will tighten the market. Our bottom line is that we see prices above \$5,600 by the end of this year and above \$5,800 per metric ton in early 2021.** Current prices look attractive.

Nickel: The forecast for prices in the second quarter of 2020 has been lowered to reflect recent softness. However, we believe prices have already bottomed out and will slowly move higher over the second quarter and second half of 2020 as Chinese demand improves and production is curtailed. Prices fell to nearly \$11,000/metric ton in late March, but stabilized and inched higher in early April. While upside risk to prices is limited given the current weakness in global demand, supply disruptions are large and mounting. Indonesia, the largest source of nickel ore to mainland China, implemented a ban on ore exports that took effect in January 2020, and other key producing countries are temporarily closing mines and facing other supply disruptions due to the COVID-19 outbreak, helping to put a floor under prices above the level reached during the 2015/16 market downturn. Tightening supply and slowly improving demand in mainland China will cause prices to move higher over the second quarter and the second half of the year. Our view is that prices below \$12,000/metric ton on the LME present a good buying opportunity.

Zinc: Prices under \$2,000/metric ton are buying opportunity. While zinc demand will decline in the coming months, supply-side disruptions limit further price declines in the second quarter. With Peru now implementing martial law to



contain the spread of COVID-19, mine production from a country representing about 10% of global supply remains challenged in 2020. Visible inventory on the London and Shanghai exchanges started April at 207,000 metric tons, which is well below the historical five-year average of 425,000 metric tons. The coverage ratio (inventory expressed in weeks of consumption) currently stands at 2.8 weeks in December, well below the five-year average of 4.6 weeks. Low inventory will continue to create upside price risk through year-end. Global consumption registered 1.6% y/y growth in January, its sixth consecutive monthly increase. The pace will decelerate in the coming months and IHS Markit expects near-zero growth in apparent global consumption for 2020. Prices average \$1,819/metric ton in the second half of 2020 with potential delays, mine closures, and slower Chinese refined zinc capacity restarts being an upside risk to the near-term outlook.

IHS Markit nonferrous price forecast, April 2020

	2019Q4	2020Q1	2020Q2	2020Q3	2020Q4	2021Q1	2021Q2	2021Q3	2021Q4	2020	2021	Forecast change*
Aluminum												
Aluminum Midwest US Delivery, cents/lb												
Aluminum LME, \$/metric ton												
Aluminum SHFE, yuan/metric ton												
Copper												
Copper COMEX, cents/lb												
Copper LME, \$/metric ton												
Copper SHFE, yuan/metric ton												
Zinc												
Zinc Special High Grade, cents/lb												
Zinc LME, \$/metric ton												
Zinc SHFE, yuan/metric ton												
Other												
Nickel LME, \$/metric ton												
Nickel SHFE spot price, yuan/metric ton												
Tin LME, \$/metric ton												
Lead LME, \$/metric ton												
Stainless steel												
Stainless sheet (304) US, \$/short ton												
Stainless sheet (304) Europe, \$/metric ton												
Stainless sheet (304) China, \$/metric ton												
Ferro-alloys												
Molybdenum, United States, \$/lb												
Charge chrome, Europe, \$/lb												
Cobalt, United States \$/lb												

* Up and down arrow signals if the price forecast is more than 5% higher or lower than the previous forecast. Please note that the forecast is available for download in the Costs and Prices Research section of Connect. Data presented in the Commodity Price Watch are often interim updates to our forecast, and as such may differ from the forecast in the spreadsheet tables.

**Historical price sources: MEPS (stainless steel)

Source: IHS Markit



		West Ave South -090		4/17/2021			
		Commodity and Subcontractor Escalation					
Item		New Total	CO 38 total	Delta Material	Delta Subcontract	Total Impact	Notes
Quoted Escalator							
DI Pipe		\$ 473,490.00	\$ 359,455.00	\$ 114,035.00			US Pipe
Taxes - 7%				\$ 7,982.00			
3.6% Escalator							
Precast Structures		\$ 192,194.00	\$ 185,448.00	\$ 6,746.00			See Producer Price Index Graph
Trench drains		\$ 15,010.00	\$ 14,489.00	\$ 521.00			
Aggregates		\$ 284,373.00	\$ 274,491.00	\$ 9,882.00			
Landscaping/Irrigation		\$ 275,544.00	\$ 267,900.00	\$ 7,644.00			
Pipe Commodities		\$ 41,440.00	\$ 40,000.00	\$ 1,440.00			
PVC Pipe, Fittings		\$ 44,785.00	\$ 43,229.00	\$ 1,556.00			
Taxes 7% on \$27,789				\$ 1,945.00			
Subcontractor Adjustments							
Asphalt					\$ 14,634.00		See Quote Comparison and Proportioning to 090
Electrical- So FI Elect					\$ 159,019.00		See unit Pricing spread sheet from So FI Elect
Total				\$ 151,751.00	\$ 179,653.00		
OH+ 10/5				\$ 15,175.00	\$ 8,683.00		
Subtotal				\$ 166,926.00	\$ 182,336.00		
3% Bond & Ins				\$ 5,007.00	\$ 5,470.00		
				\$ 171,933.00	\$ 187,806.00	\$ 359,739.00	

4/14/21

South Florida Electrical Consultant, Inc.

WEST AVENUE - SOUTH PROJECT - SIGNALIZATION AND LIGHTING QUANTITIES

SIGNALIZATION						
ITEM NUMBER	DESCRIPTION	UNI	QTY EST.	INCREASE	AMOUNT	
0630-2-12	CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE FOR SIGNALS, INCLUDES OPEN TRENCH INSTALLATION	LF	3000	\$2.64	\$7,020.00	
0635-2-11	PULL & JUNCTION BOXES, F&I, 13" X 24" FOR SIGNALS	EA	40	\$27.83	\$1,113.20	
0649-31-103	MAST ARM, F&I, WIND SPEED-150, SINGLE ARM, W/O LUMINAIRE	EA	6	\$9,100.00	\$54,600.00	
0670-5-120	TRAFFIC CONTROLLER ASSEMBLY, F&I, 170	AS	2	\$2,500.00	\$5,000.00	
Not included:						
Vehicle Detection system						
LIGHTING						
ITEM NUMBER	DESCRIPTION	UNI	QUANTITY	AMOUNT		
0715-1-12	LIGHTING CONDUCTORS, F&I, INSULATED, NO. 6	LF	29300	\$0.90	\$26,370.00	
0715-1-14	LIGHTING CONDUCTORS, F&I, INSULATED, NO 1	LF	900	\$0.98	\$882.00	
0630-2-12	CONDUIT, FURNISH & INSTALL, INCLUDES OPEN TRENCH INSTALLATION	LF	22797	\$2.64	\$60,184.08	
0635-2-11	PULL & JUNCTION BOXES, F&I, 13" X 24" FOR LIGHTING	EA	106	\$27.83	\$2,949.98	
Notes: Pole cable distribution not included						
				DELTA	\$159,019.26	



U.S. Pipe & Foundry Company, LLC
 Two Chase Corporate Drive, Suite 200 Birmingham, AL 35244



Sales Manager: Allred, Sean

Phone: 727-249-8809

Email: sallred@uspipe.com

Attn: Chris Bottome

Date: 9/17/2019

Quote #: 162963

Revision #: 0

Bid Date: 9/30/2019

City, St: FL

Engineer:

Addendums:

Location:

Project: West Ave. South

RFQ ID:

The EXPIRATION date for this quote is: 10/17/2019

	Qty	Description	Length	Weight	Price	Total Price
1	20 FT	04" TYTON DIP CL52 20' NOM BCL/AC (D)		261	\$17.29	\$345.80
2	445 FT	06" TYTON DIP CL52 20' NOM BCL/AC (D)		9,056	\$13.38	\$5,954.10
3	245 FT	08" TYTON DIP CL52 20' NOM BCL/AC (D)		7,007	\$18.80	\$4,606.00
4	4024 FT	12" TYTON DIP CL52 20' NOM BCL/AC (D)		190,335	\$31.10	\$125,146.40
5	2401 FT	20" TYTON DIP CL52 20' NOM BCL/AC (D)		213,689	\$58.52	\$140,506.52
6	1 EA	04" FIELD LOK 350 GASKET (I)		1	\$36.40	\$36.40
7	23 EA	06" FIELD LOK 350 GASKET (I)		14	\$51.68	\$1,188.64
8	13 EA	08" FIELD LOK 350 GASKET (I)		14	\$69.99	\$909.87
9	200 EA	12" FIELD LOK 350 GASKET (I)		420	\$101.65	\$20,330.00
10	120 EA	20" FIELD LOK 350 GASKET (I)		503	\$329.29	\$39,514.80
				Quote Totals:	421,299	\$338,538.53

30 #10 359,955



U.S. Pipe & Foundry Company, LLC
 Two Chase Corporate Drive, Suite 200 Birmingham, AL 35244



Sales Manager: Allred, Sean

Phone: 727-249-8809

Email: sallred@uspipe.com

Attn: Chris Bottome

Date: 3/30/2021

Quote #: 162963

Revision #: 1

Bid Date: 9/30/2019

City, St: FL

Engineer:

Addendums:

Location:

Project: West Ave. South

RFQ ID:

The EXPIRATION date for this quote is: 9/26/2021

	Qty	Description	Length	Weight	Price	Total Price
1	20 FT	04" TYTON DIP CL52 20' NOM BCL/AC (D)		261	\$25.10	\$502.00
2	445 FT	06" TYTON DIP CL52 20' NOM BCL/AC (D)		9,056	\$19.28	\$8,579.60
3	245 FT	08" TYTON DIP CL52 20' NOM BCL/AC (D)		7,007	\$27.21	\$6,666.45
4	4024 FT	12" TYTON DIP CL52 20' NOM BCL/AC (D)		190,335	\$45.17	\$181,764.08
5	2401 FT	20" TYTON DIP CL52 20' NOM BCL/AC (D)		213,689	\$85.44	\$205,141.44
6	1 EA	04" FIELD LOK 350 GASKET (I)		1	\$41.60	\$41.60
7	23 EA	06" FIELD LOK 350 GASKET (I)		14	\$59.06	\$1,358.38
8	13 EA	08" FIELD LOK 350 GASKET (I)		14	\$79.99	\$1,039.87
9	200 EA	12" FIELD LOK 350 GASKET (I)		420	\$116.18	\$23,236.00
10	120 EA	20" FIELD LOK 350 GASKET (I)		503	\$376.34	\$45,160.80
Quote Totals:				421,299		\$473,490.22



Item	4/13/2021	90	91	Comments
	Hours	Cost	Hours	Cost
West Ave 090/091				
Escalation RMCF Direct labor				
Base Contract	23,762	\$ 1,019,810.00	50,573	\$ 2,157,261.00
CO3B				
#11/23- labor escalation		\$ 66,028.00		\$ 114,825.00
#5/17- 10 year Storm water	7,361	\$ 372,194.00	12,150	\$ 610,694.00
#16- Alton Ct	1028	\$ 16,865.00		
#15- Rear to Front			939	\$ 45,862.00
#6/18	0	\$ -	2453	\$ 141,781.00
# 1/14- Gen sets	3433	\$ 199,037.00	3433	\$ 200,101.00
#14- Lincoln Rd PS			323	\$ 16,865.00
#2- Alton CT	95	\$ 6,141.00		
#4- 6th St Side walk	53	\$ 3,120.00		
#3- Alton CT re-surfacing	385	\$ 37,714.00		
Sub Totals	36,117	\$ 1,720,909.00	69,871	\$ 3,287,389.00
30 Months at 3% per year (0.25% per month)= 7.5%) -091				June 2022- January 2025
27 Months at 3% per year (0.25% per Month=6.75%- 090		\$ 116,161.00		March 9,2021 - July 4,2023
New CO Escalation				
24 Months at 3% per year= 6%- 091	14,347	\$ 747,978.00	42,242	\$ 2,152,147.00
6 months at 3% per year (0.25% per month = 1.5%)- 090		\$ 11,370.00		\$ 129,128.00
Total Escalation		\$ 127,531.00		\$ 375,682.00
3% Bond & Ins		\$ 3,826.00		\$ 11,270.00
Grand Total		\$ 131,357.00		\$ 386,952.00

Employment, Hours, and Earnings from the Current Employment Original Data Value

Series Id: CES2000000003
 Seasonally Adjusted
 Series Title: Average hourly earnings of all employees, construction,
 Super Sector: Construction
 Industry: Construction
 NAICS Code: 23
 Data Type: AVERAGE HOURLY EARNINGS OF ALL
 Years: 2011 to 2021

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2011	25.46	25.44	25.34	25.38	25.35	25.35	25.36	25.46	25.49	25.49	25.44	25.49
2012	25.50	25.55	25.66	25.65	25.69	25.71	25.75	25.77	25.86	25.84	25.95	25.95
2013	25.96	26.03	25.98	26.03	26.04	26.09	26.17	26.19	26.17	26.18	26.25	26.38
2014	26.41	26.76	26.48	26.56	26.61	26.67	26.66	26.73	26.81	26.86	26.92	26.87
2015	27.07	27.12	27.24	27.28	27.32	27.34	27.36	27.44	27.35	27.52	27.67	27.62
2016	27.66	27.75	27.87	27.97	28.08	28.12	28.20	28.20	28.21	28.42	28.35	28.43
2017	28.53	28.52	28.61	28.61	28.73	28.89	28.95	29.00	29.16	29.12	29.22	29.30
2018	29.39	29.54	29.49	29.66	29.71	29.78	29.95	30.02	30.19	30.25	30.28	30.46
2019	30.33	30.43	30.50	30.63	30.70	30.74	30.76	30.88	30.89	31.00	31.12	31.16
2020	31.23	31.36	31.37	31.38	31.50	31.63	31.74	31.82	31.82	31.87	31.97	32.09
2021	32.22	32.33										

$\frac{32.33}{30.33} = 6\% \text{ Inc in } 3\frac{1}{2} \text{ YEAR}$