

CITY OF CORONA
Department of Water and Power
WRF3 Sewer Lift Station
CONTRACT CHANGE ORDER NO. 5

PROJECT DESCRIPTION: Construct a sewer lift station.

PROJECT NO: NIB 21-012CA, 2018-11

PURCHASE ORDER NO: P21893

CONTRACTOR: Pacific HydroTech Corporation

JL NO: 69880572

DESCRIPTION OF CHANGES AND/OR EXTRA WORK:

1. Delete 690 lineal feet of 1.5" reclaimed waterline.
2. Additional cost of removing unforeseen slurry encasement on existing 24" gravity sewerline while constructing new sewer manhole 6A.
3. Additional cost of removing large cobbles at the base of the 27 feet deep excavation to build the new concrete lift station structure.
4. Delete sewer manholes on the new 24" gravity sewerline installation.
5. Change 24" sewerline pipe material from PVC to VCP.

The Contractor is hereby directed to make the herein described changes from the plans and specifications and/or perform the following described work not included in the Plans and Specifications for this project.

ITEM	DESCRIPTION	U/M	QUANTITY	UNIT PRICE	TOTAL
1	<i>Deletion of 690 lineal feet of 1.5" reclaimed waterline.</i>	LS	1.00	(\$23,077.32)	(\$23,077.32)
2	Additional cost of removing unforeseen slurry encasement on existing 24" gravity sewerline while constructing new sewer manhole 6A.	LS	1.00	\$2,081.04	\$2,081.04
3	Additional cost of removing large cobbles at the base of the 27 feet deep excavation to build the new concrete lift station structure.	LS	1.00	\$8,291.31	\$8,291.31
4	<i>Deletion of two sewer manholes on the new 24" gravity sewerline installation.</i>	LS	1.00	(\$26,265.03)	(\$26,265.03)
5	24" gravity sewerline pipe material change from PVC to VCP since PVC was not available to purchase.	LS	1.00	\$11,302.23	\$11,302.23
TOTAL ESTIMATED PRICE FOR THIS CHANGE ORDER:					(\$27,667.77)

This document shall become an amendment to the Contract and all provisions of the Contract will apply hereto. This Change Order constitutes a complete and final resolution of all claims of the Contract for additional time or additional compensation related to or affected by work that is the subject of this Change Order. Quantities of items other than Lump Sum are not to exceed the amounts indicated.

JUSTIFICATION:

A time extension of 87 working days, from project completion date of July 29, 2022, is granted to be complete the project. The time extension of 45 days granted in CCO # 1 corrected an administrative error in the purchase order and did not affect the original completion date.

Item 1	<i>Credit to City. City direction the 1.5" Reclaim Water Line was revised to an 8" Potable Water alignment providing a credit for the deletion in scope of work for the Reclaimed Water Line including materials and pavement work associated with the removed installation work.</i>
Item 2	On June 23, 2022, unforeseen slurry encasement around existing 24" gravity sewer main was found when potholing to prepare for the excavation at Manhole 6A. Direction to proceed with T&M for the demolition of the encasement.
Item 3	Response to RFI 014, additional cost for Pac Hydro to complete the following listed as additional work: Overex 1' below finish grade, place geotextile fabric on native soil, backfill with 1' of 3/4" crushed rock (per Submittal 105), settle crushed rock with a vibrating pate, "burrito" wrap the crushed rock with the geotextile fabric (all encompassing).
Item 4	<i>Credit to City. Alternative routing for the 24" Gravity Sewer Line due to existing utility conflicts. The reroute deleted two sewer manholes and the credit incorporates the cost for the additional 24" SDR PVC Pipe and trench backfill materials.</i>

Item 5	On September 17, 2021 a Letter was submitted to the City by Pac Hydro in regards to lead times on purchasing 24" PVC sewer pipe material availability. Options were provided and the alternative to use 24" VCP pipe material. On September 21, 2021 a response letter was submitted by AKM stating the City agrees to pay up to \$11,302.23 for the revised VCP material.
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CONTRACT VARIANCE SUMMARY

CCO #	Amount	%	Time Working Days	Date Approved
1	\$9,359.75	0.18%	45	5/5/2021
2	\$130,394.49	2.50%	84	6/9/2021
3	\$28,082.74	0.54%	0	6/23/2021
4	\$318,490.00	6.12%	0	6/24/2021
5	(\$27,667.77)	-0.53%	87	7/29/2022
Total	\$458,659.21	8.81%	171	Number of days impacting the schedule.
Original Contract Amount:		\$5,208,096.00	Revised Contract Amount: \$5,666,755.21	
Date Started: 01/4/2021		Original Completion Date:	2/8/2022	Revised Completion Date: 7/29/2022


AUTHORIZATION BY CITY:


Recommended for approval by:


 _____ Date: 7/29/2022
 Steve Patterson
 Consultant Construction Manager


 _____ Date: 8/1/2022
 Serena Hinojosa
 Project Manager

Approved by:


 _____ Date: 8/1/2022
 Mohammed Ibrahim, P.E.
 Senior Engineer


 _____ Date: 8/2/2022
 Savat Khamphou
 Public Works Director & City Engineer


 _____ Date: 8/8/2022
 Tom Moody
 Director of Utilities

ACCEPTANCE BY CONTRACTOR:

We, the undersigned Contractor, have given careful consideration to the above described changes and/or extra work and hereby agree that said work is the subject of this Change Order. Quantities of items other than Lump Sum are not to exceed the amounts indicated.

Accepted by: Greg Chehey Title: Project Manager
 (Please print name and title)

Signature:  Date: 7/29/2022



PACIFIC HYDROTECH CORPORATION
314 E. 3RD ST, PERRIS, CA 92570
(951) 943-8803 FAX (951) 943-1093

August 2, 2021

City of Corona
755 Public Safety Way
Corona, CA 92880

Attn: Vernon Weisman

Reference: WRF-3 Lift Station Project
Project No. 2018-11

Subject: 1.5" RW Line Credit

Mr. Weisman:

Per site discussions, and City direction, the 1.5" RW line has been changed to PW, and the routing has been amended so this line is connected to the new 8" PW service as shown in the alternative routing drawing.

Per the attached drawing, PHC has chose to proceed with the routing per Option 01.

Please review the proposed credit for this work below:

1-1/2" RW Line Credit \$(23,077.32)

Scope of work detailed above includes all necessary tax and mark up, including bonds and insurance.

See attached for breakdown, and backup documents.

Sincerely,
PACIFIC HYDROTECH CORPORATION

Dustin Chehey
Project Coordinator

RW Line Credit**RW Line Credit****Installation of 1.5" RW Line Credit**

Qty	Item	UM	Rate	Total
-1	Install & Backfill RW Line Credit	690 LF	\$ 22.40	\$ (15,456.00)
				Installation of 1.5" RW Line Credit \$ (15,456.00)

MATERIAL

Qty	Item	UM	Rate	Total
-1	1.5" Copper Pipe & Fittings	690 LF	\$ 5.57	\$ (3,843.30)
-1	Sand Bedding	LS	\$ 300.00	\$ (300.00)
-1	1.5" RW Pressure Reducer	1 QTY	\$ 786.13	\$ (786.13)
1	1.5" PW RP Backflow (NEW)	1 QTY	\$ 1,018.24	\$ 1,018.24
1	1.5" RP Backflow Enclosure (NEW)	1 QTY	\$ 639.87	\$ 639.87
				MATERIAL \$ (3,271.32)

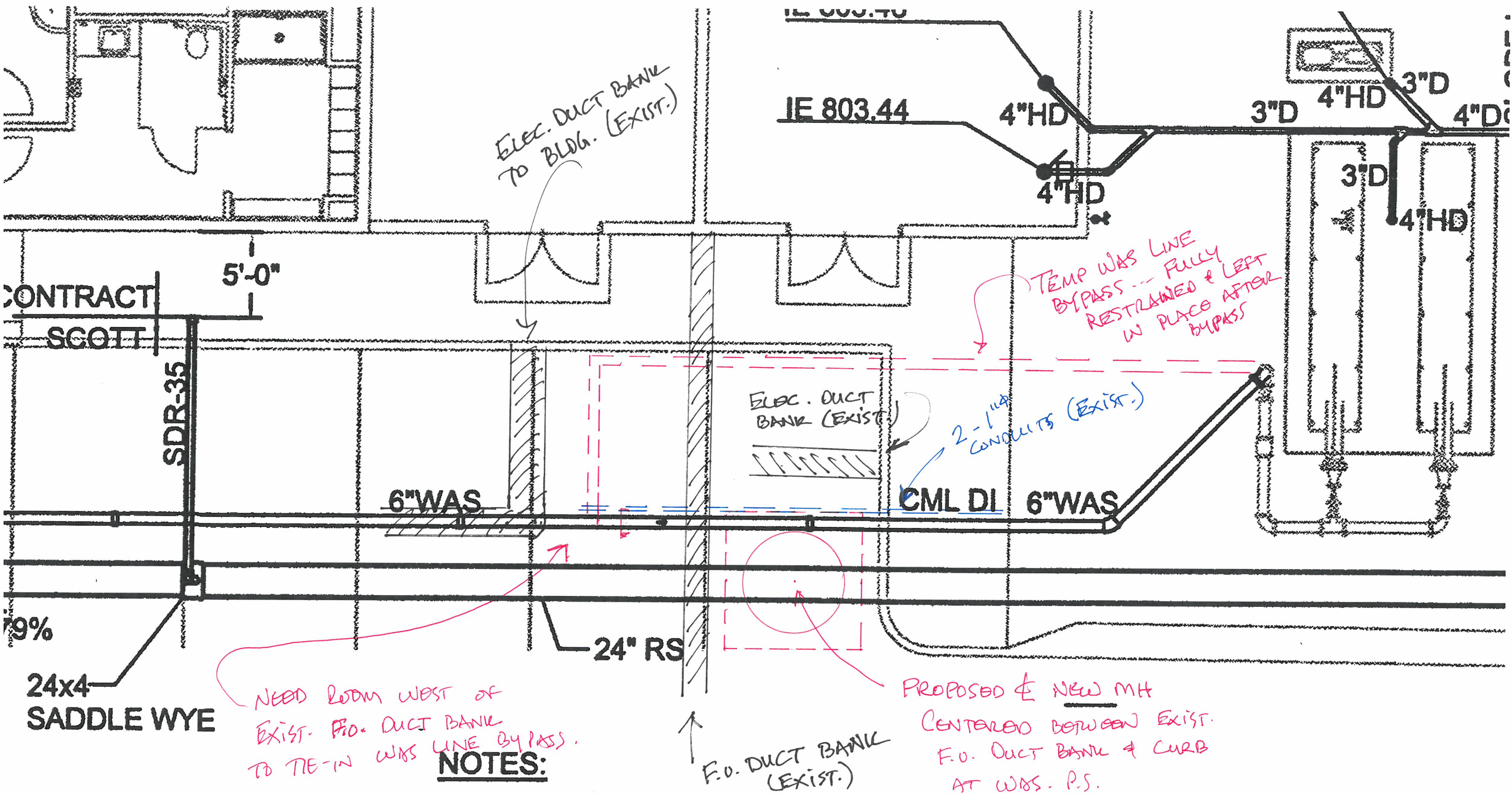
OTHER

Qty	Item	UM	Rate	Total
-4	Saw Cut AC Pavement	Hrs	\$ 175.00	\$ (700.00)
-1	Dispose Excess Mtl	Load	\$ 250.00	\$ (250.00)
				OTHER \$ (950.00)

SUB

Qty	Item	UM	Rate	Total
-1	AC Pave Trench Line	LS	\$ 3,400.00	\$ (3,400.00)
				SUBCONTRACTOR \$ (3,400.00)

Subtotal All Items \$ (23,077.32)
Total for RW Line Credit \$ (23,077.32)



NEED ROOM WEST OF
EXIST. F.O. DUCT BANK
TO TIE-IN WAS LINE BYPASS.
NOTES:

PROPOSED & NEW MH
CENTERED BETWEEN EXIST.
F.O. DUCT BANK & CURB
AT WAS - P.S.

1. SEE CITY OF CORONA STANDARD 401 FOR THRUST BLOCK DETAILS
2. SEE CITY OF CORONA STANDARD 412 FOR FIRE HYDRANT INSTALL

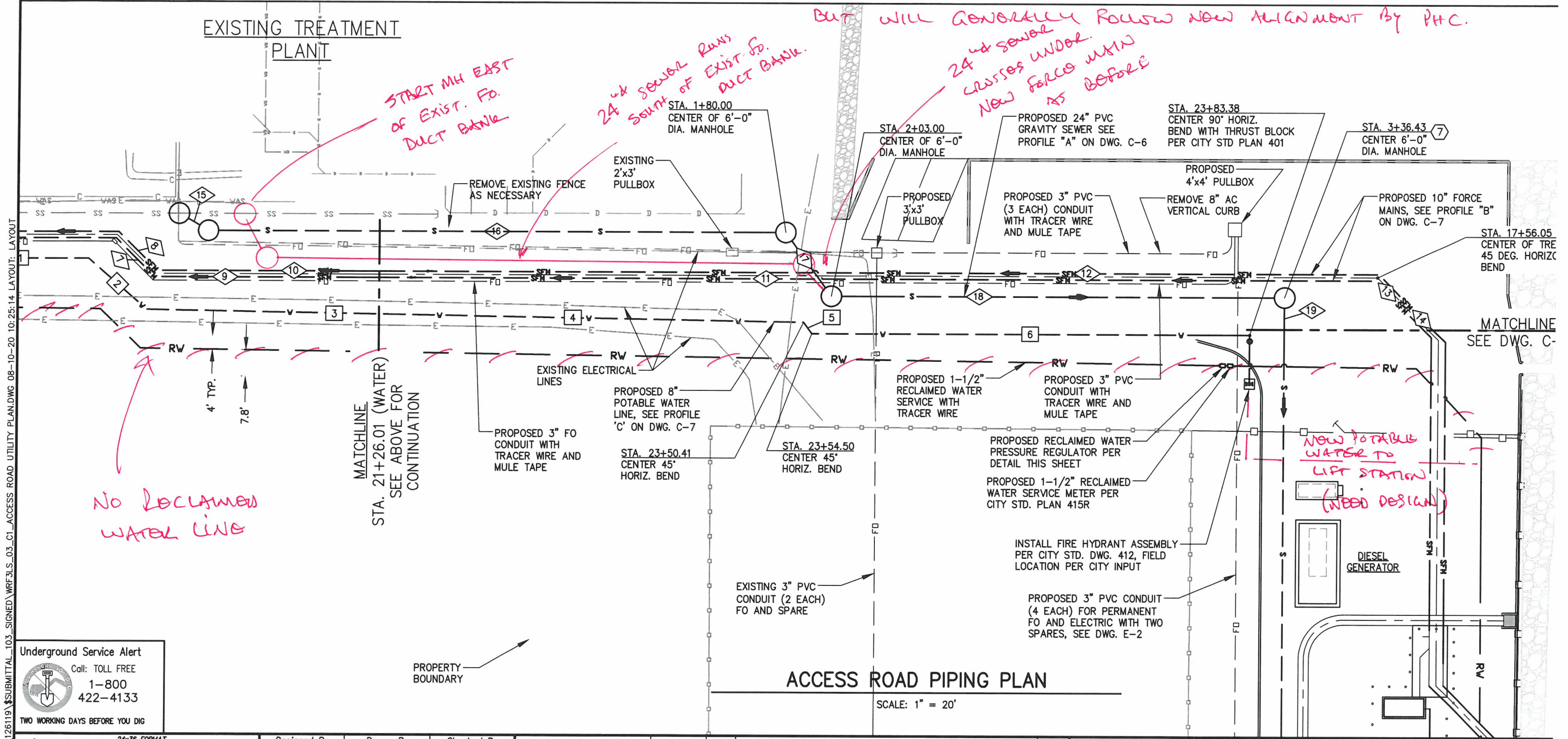
NOTE: FINAL ALIGNMENT/LOCATION OF 24" SOWAR, FORCE MAINS, 12" WATER LINE AND FIBER OPTIC (NEW + EXIST.) TO BE AS-BUILT.

BUT WILL GENERALLY FOLLOW NEW ALIGNMENT BY P.H.C.

START MH EAST OF EXIST. FO DUCT BANK

24" SOWAR RUNS SOUTH OF EXIST. FO DUCT BANK.

24" SOWAR CROSSES UNDER NEW FORCE MAIN BEFORE



No Reclaimed Water Line

NEW POTABLE WATER TO LIFT STATION (NEED DESIGN)

Underground Service Alert
 Call: TOLL FREE
 1-800
 422-4133
 TWO WORKING DAYS BEFORE YOU DIG

PROPERTY BOUNDARY

ACCESS ROAD PIPING PLAN

SCALE: 1" = 20'

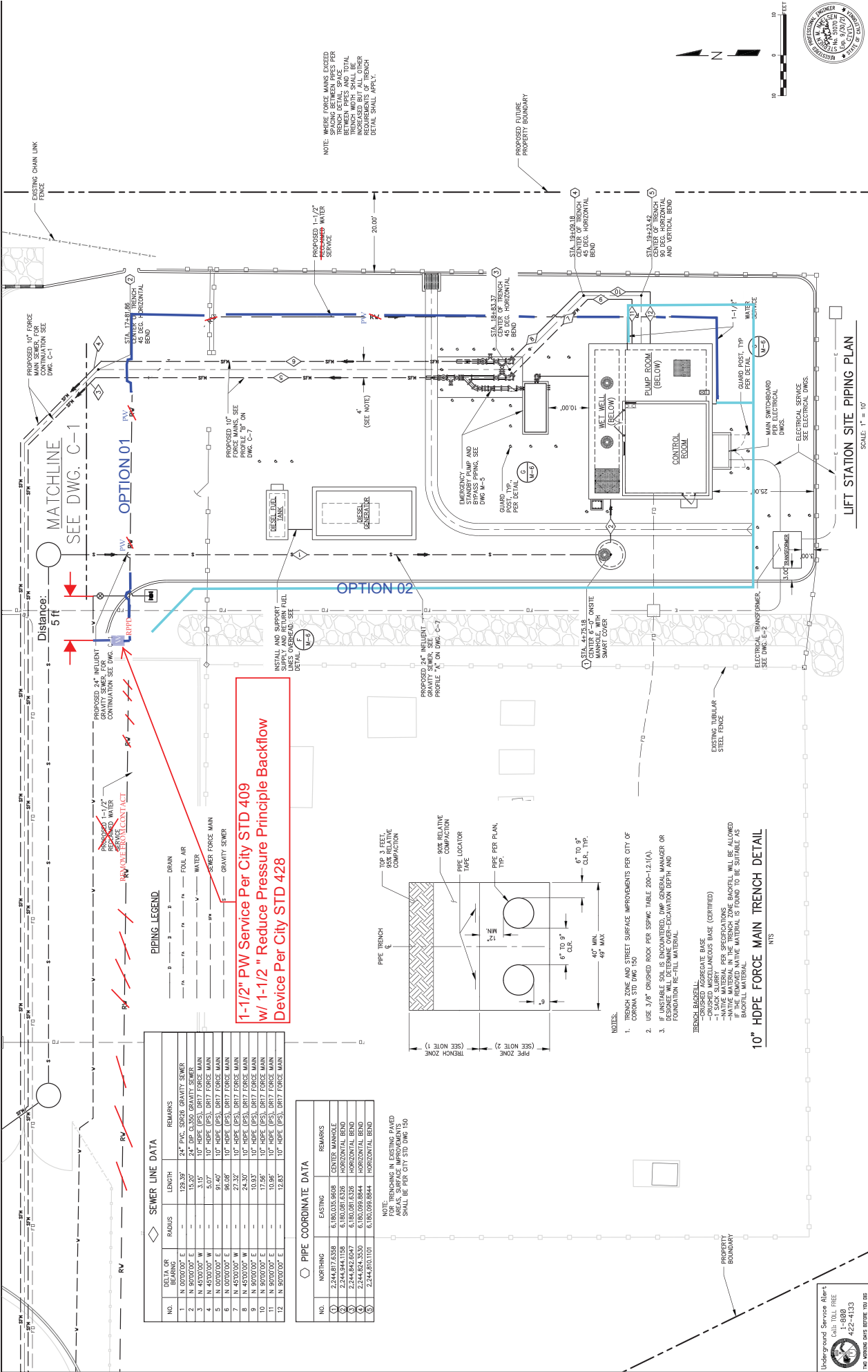
24x36 FORMAT
 IF THIS BAR MEASURES 1" THEN DRAWING SCALE IS AS NOTED
 12x18 FORMAT - WARNING
 IF THIS BAR MEASURES 1/2" THEN DRAWING IS NOT FULL SCALE AND IS 50% REDUCED

Designed By SN	Drawn By DW	Checked By SN
PLANS PREPARED UNDER SUPERVISION OF		
DATE: 08-07-2020	R.C.E.:	51070

Reference Plans for These Improvements	Date	By	Revisions	App'd

DICKER WILSON ENGINEERING, INC.
 CONSULTING ENGINEERS
 2224 FARADAY AVENUE
 CARLSBAD, CA 92008
 (760) 438-4422

APPROVED BY:	DATE:	APPROVED BY: L
ENGINEERING		VERNON R. WEISMAN DISTRICT ENGINEER R.C.E. 41610
OPERATIONS		



**1-1/2" PW Service Per City STD 409
w/ 1-1/2" Reduce Pressure Principle Backflow
Device Per City STD 428**

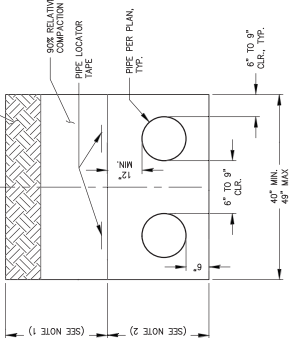
SEWER LINE DATA

NO.	DELTA OR BEARING	LENGTH	REMARKS
1	N 90°00'00" E	17.23'	24" HDPE 10' DEPTH GRAVITY SEWER
2	N 90°00'00" E	24'	24" HDPE 10' DEPTH GRAVITY SEWER
3	N 45°00'00" W	3.15'	10" HDPE (PS) 0.817 FORCE MAIN
4	N 45°00'00" W	5.07'	10" HDPE (PS) 0.817 FORCE MAIN
5	N 0°00'00" E	81.40'	10" HDPE (PS) 0.817 FORCE MAIN
6	N 0°00'00" E	96.59'	10" HDPE (PS) 0.817 FORCE MAIN
7	N 45°00'00" W	24.30'	10" HDPE (PS) 0.817 FORCE MAIN
8	N 45°00'00" W	10.93'	10" HDPE (PS) 0.817 FORCE MAIN
9	N 90°00'00" E	17.96'	10" HDPE (PS) 0.817 FORCE MAIN
10	N 90°00'00" E	10.96'	10" HDPE (PS) 0.817 FORCE MAIN
11	N 90°00'00" E	12.83'	10" HDPE (PS) 0.817 FORCE MAIN
12	N 90°00'00" E	12.83'	10" HDPE (PS) 0.817 FORCE MAIN

PIPE COORDINATE DATA

NO.	NORTHING	EASTING	REMARKS
1	2,244,871.2558	6,180,035.8608	CENTER MANHOLE
2	2,244,844.1158	6,180,081.6328	HORIZONTAL BEND
3	2,244,842.6047	6,180,081.6328	HORIZONTAL BEND
4	2,244,824.3530	6,180,099.8844	HORIZONTAL BEND
5	2,244,810.0101	6,180,099.8844	HORIZONTAL BEND

NOTE: TRENCHES IN EXISTING PAVED AREAS, SURFACE IMPROVEMENTS SHALL BE PER CITY STD DMC 150



- NOTES:**
- TRENCH ZONE AND STREET SURFACE IMPROVEMENTS PER CITY OF CORONA STD DMC 150
 - USE 3/8" CRUSHED ROCK PER SSPWC TABLE 200-12.1(A).
 - IF UNSTABLE SOIL IS ENCOUNTERED, DWP GENERAL MANAGER OR SUPERVISOR SHALL BE NOTIFIED IMMEDIATELY TO DETERMINE EXCAVATION DEPTH AND FOUNDATION RE-ILL MATERIAL.
- TRENCH BACKFILL:**
- CRUSHED WESTLAKE BASE (CERTIFIED)
 - 1" SACK SLURRY PER SPECIFICATIONS
 - IF UNSTABLE SOIL IS ENCOUNTERED, DWP GENERAL MANAGER OR SUPERVISOR SHALL BE NOTIFIED IMMEDIATELY TO DETERMINE EXCAVATION DEPTH AND FOUNDATION RE-ILL MATERIAL
- 10" HDPE FORCE MAIN TRENCH DETAIL**
- NTS

CITY OF CORONA
WPF-3 LIFT STATION
LIFT STATION SITE PIPING PLAN

APPROVED BY: **YVES R. WICKSON** DATE: 01/14/2020
 DESIGNED BY: **YVES R. WICKSON** DATE: 01/14/2020
 CHECKED BY: **YVES R. WICKSON** DATE: 01/14/2020
 PLANS PREPARED BY: **YVES R. WICKSON** DATE: 08-07-2020, P.C.E.: 51070
 REVISIONS: **YVES R. WICKSON** DATE: 08-07-2020, P.C.E.: 51070

UNDERGROUND SERVICE ALERT
 CALL 811 BEFORE YOU DIG
 422-4133

Revised 1.5 inch Water Service



PACIFIC HYDROTECH CORPORATION
314 E. 3RD ST, PERRIS, CA 92570
(951) 943-8803 FAX (951) 943-1093

August 2, 2021

City of Corona
755 Public Safety Way
Corona, CA 92880

Attn: Vernon Weisman

Reference: WRF-3 Lift Station Project
Project No. 2018-11

Subject: Gravity Sewer Slurry Encasement T&M

Mr. Weisman:

On 6/23/21 PHC was excavating for Manhole 6A, and when potholing for the end of the existing 24" Gravity Sewer line found the pipe was encased in unforeseen slurry encasement. PHC was advised to proceed on T&M for the demo to the encasement with the understanding that this is disputed work, and will be reviewed by the City.

Please review the proposed T&M cost below:

Gravity Sewer Slurry Encasement T&M \$2,081.04

Scope of work detailed above includes all necessary tax and mark up, including bonds and insurance.

See attached for breakdown, and backup documents.

Sincerely,
PACIFIC HYDROTECH CORPORATION

Dustin Chehey
Project Coordinator

COST PROPOSAL
(Changed Condition)

Gravity Sewer Encasement T&M

Printed: 8/2/2021

Gravity Sewer Concrete Encasement T&M

PHC Labor

Qty	Item	Hours	Rate	Total
6	Laborer	16	\$ 72.75	\$ 1,164.00
				Labor \$ 1,164.00

PHC Equipment

Qty	Item	Hours	Rate	Total
1	Loader	3	\$ 35.00	\$ 105.00
1	Excavator	3	\$ 150.00	\$ 450.00
1	Job Truck	3	\$ 25.00	\$ 75.00
				Equipment \$ 630.00

Subtotal \$ 1,794.00

15.0% PHC Markup \$ 269.10

1.0% Bonds/Ins. \$ 17.94

Total for Cable Railing Fence \$ 2,081.04



TIME & MATERIALS SHEET

DATE

Job# C2024

25-Jun-21

NAME	S	M	T	W	TH	F	COMMENTS
Roger Morehart				1.5	1.5		Break away slurry from existing 24" gravity sewer line
Brendon Whipple				1.5	1.5		
Luis Valladolid				1.5	1.5		
Dennis Vahitov				1.5	1.5		
Moises Cervantes				1.5	1.5		
Diego Tapia				1			

EQUIPMENT	S	M	T	W	TH	F	COMMENTS
Truck T-182				1.5			
Hitachi zw 180 Loader				1.5	1.5		Standby
Hitachi Zaxis 345 Excavator				1.5	1.5		Standby
Hilti te 3000-avr Demolition Hammer					1.5		Replacement cost \$2858.00
Hilti te 3000-avr Demolition Hammer					1.5		

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2021 06 025 , Received on 6/24/2021, AKM Steve Patterson: Verification of Time, Material and Equipment used only. AKM observed the existing 24 inch Gravity Sewer at the proposed Gravity Sewer POC as having a sand, cement slurry (slurry) in the Pipe Zone. PHC notified AKM of the following, that the slurry is not shown on the plans and therefore is a changed condition. In an effort to keep the project moving forward, AKM stated that this is disputed work, it was discussed and understood that the time, material and equipment used to remove and handle the slurry will be documented and reconciled in writing daily. AKM has no objections to the stipulated time, materials and equipment used only.



PACIFIC HYDROTECH CORPORATION
314 E. 3RD ST, PERRIS, CA 92570
(951) 943-8803 FAX (951) 943-1093

August 13, 2021

City of Corona
755 Public Safety Way
Corona, CA 92880

Attn: Vernon Weisman

Reference: WRF-3 Lift Station Project
Project No. 2018-11

Subject: Structure Subgrade Overex & Backfill

Mr. Weisman:

REVISED PER INITIAL COMMENTS FROM AKM (8/13/21)

Revisions include showing credit for labor/equipment/material for the deletion of the 4" sand directly under the foundation. Also, adjusted quantity of crushed rock.

Per the response to RFI 014, PHC offers the following for the change in subgrade preparation.

As noted in the RFI, PHC will complete the subgrade in the following steps.

- Overex 1' below finish grade
- Place Geotextile Fabric on native soil
- Backfill with 1' of ¾" Crushed Rock (per SUBM 105)
- Settle Crushed Rock with a Vibrating Pate
- "Burrito" Wrap the Crushed Rock with the Geotextile Fabric (all encompassing)

Please review the proposed additional cost below:

Structure Subgrade Overex & Backfill..... \$8,640.86

Scope of work detailed above includes all necessary tax and mark up, including bonds and insurance.

See attached for breakdown.

Sincerely,
PACIFIC HYDROTECH CORPORATION

Dustin Chehey
Project Coordinator

COST PROPOSAL
Structure Subgrade & Backfill

Structure Subgrade Over-Ex & Backfill**LABOR (For Structure Over-Ex & Backfill)**

Qty	Item	Hours	Rate	Total
1	Foreman	8	\$ 93.50	\$ 748.00
1	Operator	8	\$ 93.50	\$ 748.00
2	Laborer	16	\$ 72.75	\$ 2,328.00
LABOR (For Structure Over-Ex & Backfill)				\$ 3,824.00

EQUIPMENT (For Structure Over-Ex & Backfill)

Qty	Item	Hours	Rate	Total
1	Job Truck	8	\$ 39.12	\$ 312.96
1	Excavator	8	\$ 150.00	\$ 1,200.00
1	Vibrating Plate	2	\$ 9.32	\$ 18.64
EQUIPMENT (For Structure Over-Ex & Backfill)				\$ 1,531.60

MATERIAL (For Structure Over-Ex & Backfill)

Qty	Item	UM	Rate	Total
1	Geotextile Fabric	LS	\$ 606.09	\$ 606.09
100	Crushed Rock (100 Tons)	TONS	\$ 24.43	\$ 2,443.00
MATERIAL (For Structure Over-Ex & Backfill)				\$ 3,049.09

OTHER (For Structure Over-Ex & Backfill)

Qty	Item	UM	Rate	Total
1	Dispose Excess Mtl	Load	\$ 250.00	\$ 250.00
OTHER (For Structure Over-Ex & Backfill)				\$ 250.00

LABOR (Credit For Sand Install)

Qty	Item	Hours	Rate	Total
-1	Foreman	2	\$ 93.50	\$ (187.00)
-1	Operator	2	\$ 93.50	\$ (187.00)
-2	Laborer	4	\$ 72.75	\$ (582.00)
LABOR (Credit For Sand Install)				\$ (956.00)

EQUIPMENT (Credit For Sand Install)

Qty	Item	Hours	Rate	Total
-1	Job Truck	2	\$ 39.12	\$ (78.24)
-1	Excavator	2	\$ 150.00	\$ (300.00)
-1	Vibrating Plate	2	\$ 9.32	\$ (18.64)
EQUIPMENT (Credit For Sand Install)				\$ (396.88)

MATERIAL (Credit For Sand Install)

Qty	Item	UM	Rate	Total
-25	Sand Credit (25 Tons)	TONS	\$ 15.81	\$ (395.25)
MATERIAL (Credit For Sand Install)				\$ (395.25)

Subtotal All Items	\$	6,906.56
Markup for Labor, Equipment, Material, Other	15.0%	\$ 1,298.20
Bonds & Insurance	1.0%	\$ 86.55
Total for Structure Subgrade Over-Ex & Backfill	\$	8,291.31



PACIFIC HYDROTECH CORPORATION
314 E. 3RD ST, PERRIS, CA 92570
(951) 943-8803 FAX (951) 943-1093

August 16, 2021

City of Corona
755 Public Safety Way
Corona, CA 92880

Attn: Vernon Weisman

Reference: WRF-3 Lift Station Project
Project No. 2018-11

Subject: Manhole Deletion Credit

Mr. Weisman:

During the discussions of the alternate routing for the utilities, it was decided to reroute the 24" Gravity Sewer Line due to existing utility conflicts. See attached markups that reflect these conflicts.

With this rerouting, PHC and the City agreed to delete 2(QTY) manholes (STA 1+80.00 & STA 2+03.00).

PHC offers the credit of each manhole per Bid Item #37. Please note with this credit PHC will have to purchase additional 24" SDR PVC Pipe and trench backfill materials.

Please review the proposed credit for this work below:

Manhole Deletion Credit \$(26,265.03)

Scope of work detailed above includes all necessary tax and mark up, including bonds and insurance.

See attached for breakdown, and backup documents.

Sincerely,
PACIFIC HYDROTECH CORPORATION

Dustin Chehey
Project Coordinator

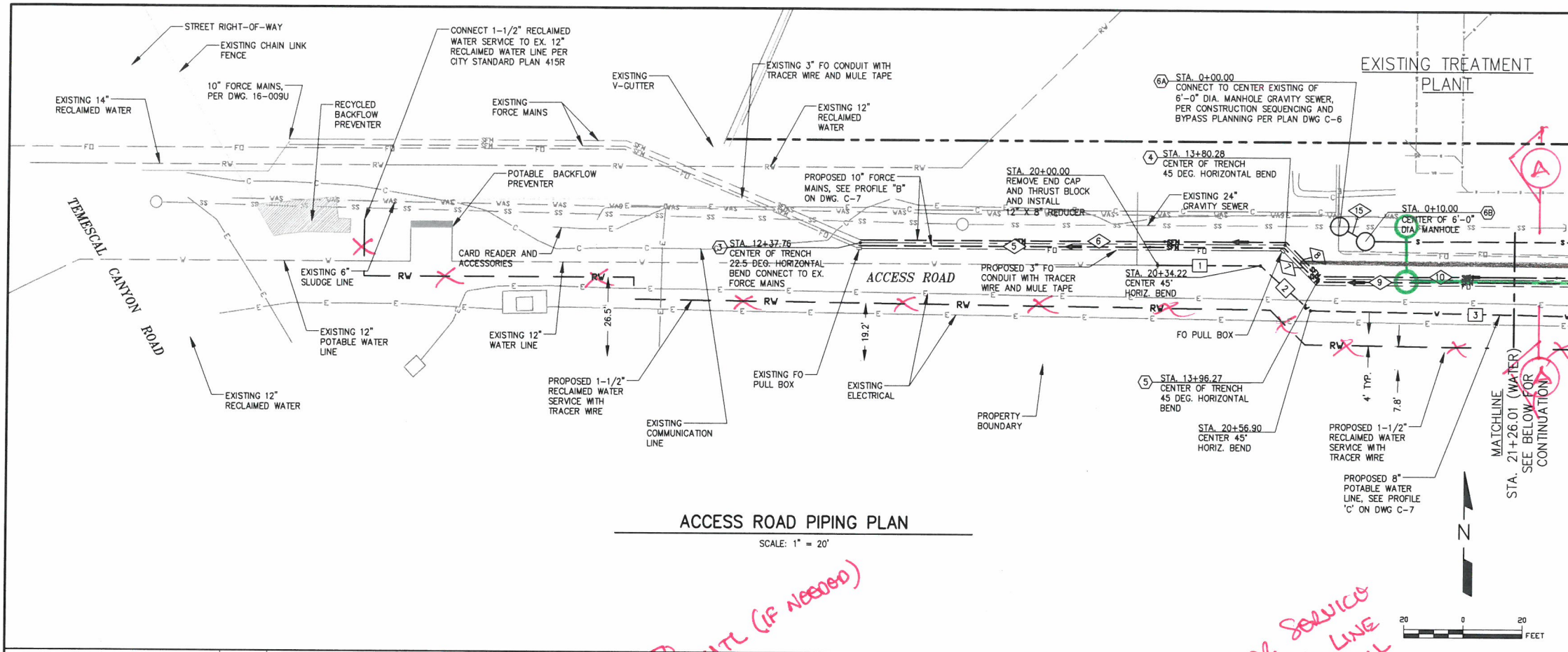
Manhole Deletion Credit**Manhole Deletion Credit****Manhole Deletion Credit**

Qty	Item	UM	Rate	Total
-2	Installation of 6' Manhole (Bid Item #37)	1 EA	\$ 13,600.00	\$ (27,200.00)
				Manhole Deletion Credit \$ (27,200.00)

MATERIAL (Adder for Additional 24" Pipe)

Qty	Item	UM	Rate	Total
12	24" SDR PVC	1 LF	\$ 54.95	\$ 659.43
6	3/4" Crushed Rock	1 TONS	\$ 24.43	\$ 146.58
				MATERIAL (Adder for Additional 24" Pipe) \$ 806.01

			Subtotal All Items	\$ (26,393.99)
			Markup for Labor, Equipment, Material, Other (ADDER ONLY)	15.0% \$ 120.90
			Bonds & Insurance (ADDER ONLY)	1.0% \$ 8.06
			Total for Manhole Deletion Credit	\$ (26,265.03)



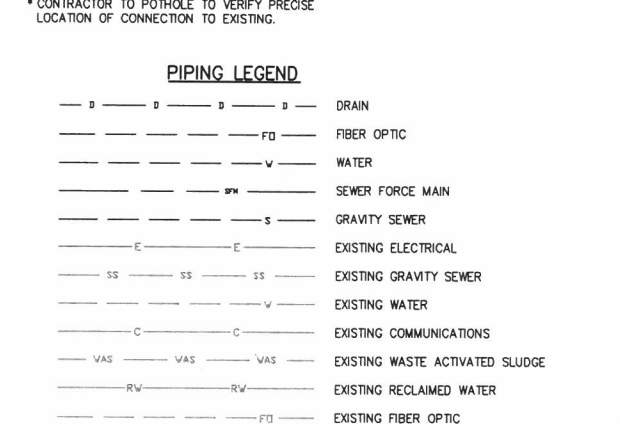
SEWER LINE DATA				
NO.	DELTA OR BEARING	RADIUS	LENGTH	REMARKS
1	-	-	-	NOT USED
2	-	-	-	NOT USED
3	-	-	-	NOT USED
4	-	-	-	NOT USED
5	N 90°00'00" E	-	142.33'	10" HDPE (IPS), DR17 FORCE MAIN
6	N 90°00'00" E	-	142.73'	10" HDPE (IPS), DR17 FORCE MAIN
7	N 45°00'00" W	-	15.98'	10" HDPE (IPS), DR17 FORCE MAIN
8	N 45°00'00" W	-	14.39'	10" HDPE (IPS), DR17 FORCE MAIN
9	N 90°00'00" E	-	66.28'	10" HDPE (IPS), DR17 FORCE MAIN
10	N 90°00'00" E	-	65.50'	10" HDPE (IPS), DR17 FORCE MAIN
11	N 90°00'00" E	-	293.50'	10" HDPE (IPS), DR17 FORCE MAIN
12	N 90°00'00" E	-	294.29'	10" HDPE (IPS), DR17 FORCE MAIN
13	N 45°00'00" W	-	20.38'	10" HDPE (IPS), DR17 FORCE MAIN
14	N 45°00'00" W	-	23.02'	10" HDPE (IPS), DR17 FORCE MAIN
15	N 60°00'26" W	-	10.00'	24" PVC, SDR26 GRAVITY SEWER
16	N 90°00'00" E	-	170.00'	24" PVC, SDR26 GRAVITY SEWER
17	N 35°52'43" W	-	23.00'	24" PVC, SDR26 GRAVITY SEWER
18	N 90°00'00" E	-	133.43'	24" PVC, SDR26 GRAVITY SEWER
19	N 00°00'00" N	-	9.36'	24" PVC, SDR26 GRAVITY SEWER

WATER LINE DATA				
NO.	DELTA OR BEARING	RADIUS	LENGTH	REMARKS
1	N 90°00'00" E	-	34.22'	8" DIP*
2	N 48°58'14" W	-	22.68'	8" DIP*
3	N 89°04'10" W	-	68.47'	8" DIP*
4	N 89°04'10" W	-	125.04'	8" DIP*
5	N 35°52'43" W	-	4.09'	8" DIP*
6	N 90°00'00" E	-	128.88'	8" DIP*

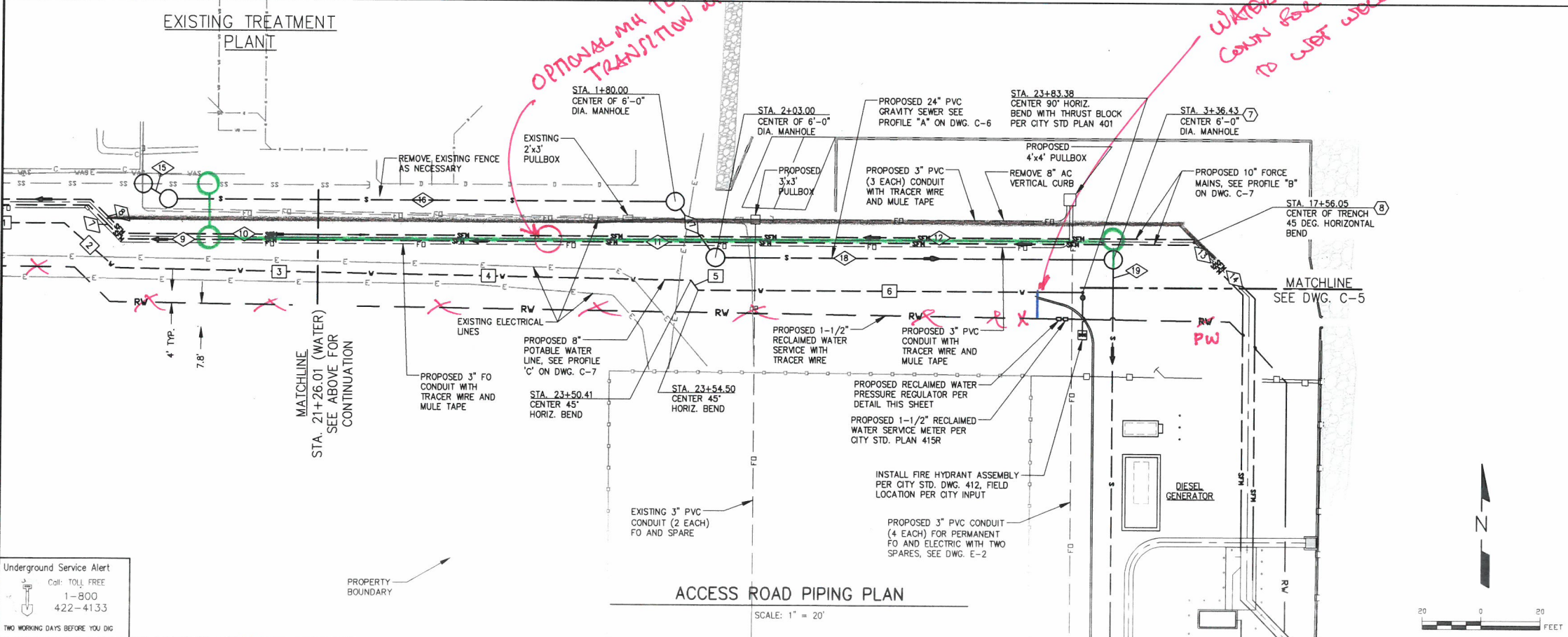
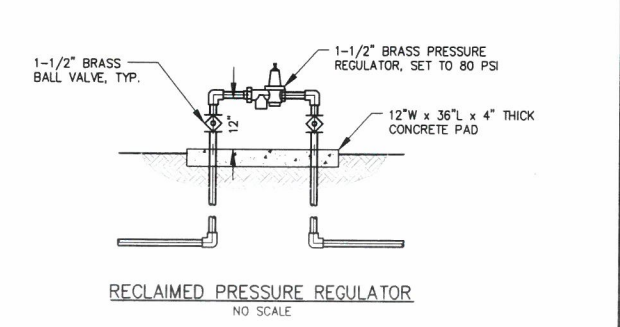
* RESTRAIN ALL JOINTS

PIPE COORDINATE DATA				
NO.	NORTHING	EASTING	REMARKS	
1	-	-	NOT USED	
2	-	-	NOT USED	
3	2,244,973.6669	6,179,549.7720	CONNECT TO EXISTING*	
4	2,244,973.6669	6,179,692.2993	HORIZONTAL BEND	
5	2,244,972.3651	6,179,703.6011	HORIZONTAL BEND	
6A	2,244,980.0234	6,179,710.3889	CONNECT TO EXISTING*	
6B	2,244,975.0234	6,179,719.0491	CENTER MANHOLE	
7	2,244,975.0234	6,180,035.9608	CENTER MANHOLE	
8	2,244,962.3651	6,180,063.3834	HORIZONTAL BEND	

* CONTRACTOR TO POTHOLE TO VERIFY PRECISE LOCATION OF CONNECTION TO EXISTING.



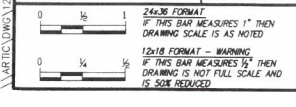
NOTE: FOR TRENCHING IN EXISTING PAVED AREAS, SURFACE IMPROVEMENTS SHALL BE PER CITY STD DWG 150



OPTIONAL M4 TO TRANSITION INTO (IF NEEDED)

WATER SERVICE CONNECTION TO WEST WELL

Underground Service Alert
Call: TOLL FREE 1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG



Designed By SN	Drawn By DW	Checked By SN
PLANS PREPARED UNDER SUPERVISION OF		
DATE: 08-07-2020	R.C.E.:	51070
Reference Plans for These Improvements	Date	By
Revisions	Date	By

APPROVED BY:	DATE:	APPROVED BY: DEPARTMENT OF WATER AND POWER	DATE:
ENGINEERING		KERNON R. WEISMAN	
OPERATIONS		DISTRICT ENGINEER	



PACIFIC HYDROTECH CORPORATION
314 E. 3RD ST, PERRIS, CA 92570
(951) 943-8803 FAX (951) 943-1093

September 17, 2021

City of Corona
755 Public Safety Way
Corona, CA 92880

Attn: Vernon Weisman

Reference: WRF-3 Lift Station Project
Project No. 2018-11

Subject: Change of Gravity Sewer Pipe Material Due to Availability

Mr. Weisman:

Due to ongoing volatility of the PVC Pipe material availability and production due to the pandemic and natural disasters, PHC is requesting a change of material from the specified and approved 24" SDR 26 PVC Pipe to either 26" DR 32.5 HDPE Pipe or 24" VCP Pipe.

Attached is a letter from JM Eagle stating the difficulties these manufacturers have been dealing with during these unprecedented times.

Option 1: 26" DR 32.5 HDPE Pipe with Electrofusion Couplings

The proposed 26" HDPE Pipe will have an ID of just over 24" (24.304"), so this material will be able to provide the same anticipated design flow of the originally designed 24" SDR 26 pipe.

The proposal below is for the material difference, and additional labor and equipment to assist the Electrofusion technicians install the EF Couplings. Per the EF manufacturer, they require their techs to install these couplings to avoid any potential incorrect installation that might make the pipe fail in the future. This assistance would be to help the techs lift and prep the pipe ends for the fusion process.

Price Increase to Switch from SDR PVC to HDPE\$59,229.85

Option 2: 24" VCP

PHC requests a change order to procure this material ASAP. The proposal below is for the material difference, and additional labor for installing the 24" VCP. This additional work proposal is based off PHC's bid estimate of the quantity and type of labor and equipment estimated to install the 24" PVC. PHC is estimating 1(QTY) additional work week beyond our original estimate to install this type of pipe.

The additional time is being requested due to the additional effort that will be needed to install the shorter 6' sections of VCP pipe.

Please note the VCP material currently has a lead time of 5-6 weeks, which would work in our schedule, but would need to order quickly to get into the production queue before the lead time increases.

Price Increase to Switch from SDR PVC to VCP\$45,342.23

See attached for breakdown, and backup documents.

Sincerely,
PACIFIC HYDROTECH CORPORATION

Dustin Chehey
Dustin Chehey – Project Coordinator

COST PROPOSAL
(HDPE Pipe)

Switch to HDPE Pipe Material

Printed: 9/17/2021

Option 1: Change of Materials to HDPE from SDR 26 PVC Pipe

HDPE Pipe Breakdown

Labor

Qty	Item	Hours	Rate	Total
2	PHC Labor to Assist Tech	32	\$ 72.75	\$ 4,656.00
2	PHC Operator to Assist Tech	16	\$ 93.50	\$ 2,992.00
1	PHC Foreman to Assist Tech	32	\$ 93.50	\$ 2,992.00
1	EF Coupling Install Tech	4 DAYS	\$ 1,355.00	\$ 5,420.00
				Labor \$ 16,060.00

Equipment

Qty	Item	Hours	Rate	Total
2	Excavator	16	\$ 150.00	\$ 4,800.00
1	Job Truck	32	\$ 39.12	\$ 1,251.84
				Equipment \$ 6,051.84

Material

Qty	Item	UM	Rate	Tax Rate	Total W/ Tax
320	26" DR 32.5 HDPE Pipe	LF	\$ 70.00	7.75%	\$ 24,136.00
6	26" EF Coupling	EA	\$ 2,125.00	7.75%	\$ 13,738.13
1	Est. Freight	LS	\$ 13,000.00	0%	\$ 13,000.00
					HDPE Pipe Material \$ 50,874.13

Subtotal \$ 72,985.97

Total for Adder for HDPE Pipe \$ 72,985.97

Credit for 24" SDR 26 PVC Pipe

Material

Qty	Item	UM	Rate	Tax Rate	Total
(306)	24" SDR 26 PVC Pipe	LF	\$ 50.82	7.75%	\$ (16,756.12)
					Subtotal \$ (16,756.12)
					Total for Credit for 24" SDR 26 PVC Pipe \$ (16,756.12)

GRAND TOTAL EXTRA WORK \$ 56,229.85



Bill To:
117481
PACIFIC HYDROTECH CORP
314 E. 3RD STREET
PERRIS, CA 92570

Ship To:
PACIFIC HYDROTECH CORP
314 E. 3RD STREET
PERRIS, CA 92570

Quotation

Quote Number	35023451
Quote Date	09/16/21
Expiration Date	09/23/21
Page	1 of 1

Payment Terms NET 30	Customer Job/Project Name	Written By MEGAN SELLERS
Freight Terms PREPAID AND ADD	Contact ACCOUNTS PAYABLE	Sales Rep SOUTHERN CALIFORNIA
Ship Via Best Way	Additional Info	

#	Qty	UM	Product	Description	Each	Extended
1	20	FT	10263210	26" DR 32.5 IPS PIPE HDPE	70.00	1,400.00
2	300	FT	10263210	26" DR 32.5 IPS PIPE HDPE	70.00	21,000.00
3	6	EA	56260010	26" IPS ELECTROFUSION COUPLING TEGA RATED FOR DR 32.5	2125.00	12,750.00

This product is subject to the terms and conditions of the Large Diameter Electrofusion Agreement. A copy of this Agreement must be executed prior to shipment.

#	Qty	UM	Product	Description	Rate
4	1	EA	72303100	FUSION TECH PREVAILING WAGE MON - FRI, 8 HOURS OR	1180.00
5	1	EA	72300900	DAILY TECHNICIAN TRAVEL/ PER DIEM	175.00

ESTIMATED PIPE FREIGHT IS \$13,000--COUPLINGS ARE FOB ORANGE PARK, FL
ALL ITEMS ARE IN STOCK & SUBJECT TO PRIOR ORDER.

ISCO Standard Terms and Conditions apply. Please visit <http://www.isco-pipe.com/terms-and-conditions.aspx>

Merchandise Total	Tax(1)	Freight(2)	Quote Total
35,150.00	2,724.13	0.00	US \$ 37,874.13
<p>1 Sales tax will be charged based on the ship to address at the time of invoice if there is no tax certificate on file.</p> <p>2 Freight amount in this quote is an estimate only. Actual freight terms and charges will be determined at the time the order is placed.</p>		<p>Accepted By: _____</p> <p>Printed Name: _____</p> <p>Date: _____</p>	

100 WITHERSPOON ST * LOUISVILLE, KY 40202
800-345-4726

HOLD HARMLESS AND INDEMNIFICATION AGREEMENT

This Agreement ("Agreement") is entered into as of the ____ day of _____, 201__, by and between ISCO Industries, Inc., a Kentucky corporation with a place of business located at 100 Witherspoon St. 2West, Louisville, Kentucky 40202 and its affiliated entities ("ISCO") and _____, a ____ with a place of business located at _____ ("Company").

WHEREAS, ISCO and Company are parties to a purchase order (the "PO"), a copy of which is attached hereto as Exhibit A, pursuant to which ISCO has agreed to supply certain materials and/or to perform certain pipe fusion services (the "Services") in connection with _____ (the "Project");

WHEREAS, Company has requested that ISCO provide the Services and ISCO has advised Company against such Services and/or ISCO has advised Company that performance of the Services may create a heightened risk to ISCO and/or Company; and

WHEREAS, the parties intend to enter into this Agreement in order to release ISCO from any liability related to the Services in light of the special circumstances related to this Project.

NOW, THEREFORE, in consideration of the mutual promises set out herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereby agree as follows:

1. Company acknowledges and agrees that ISCO has expressly advised against the Services and/or that performance of the Services may create a heightened risk to ISCO and/or Company.
2. Notwithstanding the terms of any other agreement between ISCO and Company or any terms to the contrary set out in the PO, ISCO has agreed to provide, and Company accepts, the Services "as is" and with no warranty, express or implied. Company expressly assumes any and all risk related to the Services.
3. Notwithstanding the terms of any other agreement between ISCO and Company, Company hereby agrees to defend, indemnify, and hold harmless ISCO from any and all claims, lawsuits, demands, causes of action, liability, loss, damage, or injury of any kind or nature whatsoever, including, without limitation, all claims for monetary loss, costs, expenses (including attorneys' fees and legal costs and expenses), property damage, equitable relief, personal injury, or wrongful death, whether brought by an individual or other entity (whether Company or any third party), or imposed by a court of law or by administrative action of any federal, state, or local governmental body or agency, arising out of or in any way related to any acts, omissions, negligence, or willful misconduct on the part of ISCO, Company, or any third party, or any of their officers, directors, employees, agents, contractors, invitees, or volunteers under the PO or otherwise related to the Project.
4. In no event and under no circumstances will ISCO be liable to Company for any damages of any nature related to the Services, whether direct, indirect, special, consequential, or incidental, and regardless whether the theory is breach of warranty, breach of contract, negligence, or strict liability.
5. This Agreement is governed by the laws of the Commonwealth of Kentucky, without regard to its conflict of laws provisions. The Convention for the International Sale of Goods (CISG) shall not apply to this Agreement.
6. In the event of any inconsistency between the terms of this Agreement and the terms of the PO or any other document related to ISCO's involvement in the Project, the terms of this Agreement will control.
7. This Agreement may be amended only by a writing signed by ISCO and Company. This Agreement contains the entire agreement between the parties with respect to the subject matter hereof, and no other terms attached to the PO or any other document will apply to the subject matter of this Agreement. If any provision of this Agreement shall be held to be invalid or unenforceable for any reason, the remaining provisions shall continue to be valid and enforceable. In the event that any aspect of this Agreement is deemed unenforceable, a court may modify this Agreement to give the broadest possible interpretation under applicable law.

IN WITNESS WHEREOF, the parties have executed this Agreement, effective as of the Effective Date.

ISCO INDUSTRIES, INC.

 ISCO
 By: _____
 Name: _____
 Its: _____
 Date: _____

 COMPANY
 By: _____
 Name: _____
 Its: _____
 Date: _____

COST PROPOSAL
(VCP Pipe)

Switch to VCP Pipe Material

Printed: 9/17/2021

Option 2: Change of Materials to VCP from SDR 26 PVC Pipe

VCP Pipe Breakdown

Labor

Qty	Item	Hours	Rate	Total
4	Laborer	40	\$ 72.75	\$ 11,640.00
2	Operator	40	\$ 93.50	\$ 7,480.00
1	Foreman	40	\$ 93.50	\$ 3,740.00
				Labor \$ 22,860.00

Equipment

Qty	Item	Hours	Rate	Total
1	Excavator	40	\$ 150.00	\$ 6,000.00
1	Job Truck	40	\$ 39.12	\$ 1,564.80
1	Loader	40	\$ 90.38	\$ 3,615.20
				Equipment \$ 11,180.00

Material

Qty	Item	UM	Rate	Tax Rate	Total W/ Tax
306	24" VCP	LF	\$ 83.00	7.75%	\$ 27,366.35
1	Freight	LS	\$ 692.00	0.00%	\$ 692.00
					VCP Pipe Material \$ 28,058.35

Subtotal \$ 62,098.35

Total for VCP Pipe Breakdown \$ 62,098.35

Credit for 24" SDR 26 PVC Pipe

Material

Qty	Item	UM	Rate	Tax Rate	Total
(306)	24" SDR 26 PVC Pipe	LF	\$ 50.82	7.75%	\$ (16,756.12)
					Subtotal \$ (16,756.12)
					Total for Credit for 24" SDR 26 PVC Pipe \$ (16,756.12)

GRAND TOTAL EXTRA WORK \$ 45,342.23



Gladding McBean - Lincoln

Quotation

601 7th Street
LINCOLN, CA
95648-1828

Phone 1-800-776-1133
Fax 1-916-645-1723
E-mail PABCOClayCustomerServiceInquiry@

Customer Address 1040984

PACIFIC HYDROTECH CORPORATION
314 E. 3RD STREET
PERRIS CA 92570-2225
Phone: 951-943-8803

Shipping Address 1040984

PACIFIC HYDROTECH CORPORATION
314 E. 3RD STREET
PERRIS CA 92570-2225
Phone: 951-943-8803 Fax: 951-943-1093

Information

Quotation No. 51657202
Document Date 09/17/2021
Job Name
Purchase Order No. 2024 WRF 3 LS - 24"
Purchase Order Date 09/17/2021
Incoterms Plant Vndr-FOB Dest, Frt PPD
Delivery Date 06/29/2021
Payment Terms NET 30 DAYS FROM INVOICE DATE
Net weight 63,240 LB
Salesperson SO. CAL. PIPE SALES
Entered by F Barralaga

*These prices quoted herein are valid if accepted by
09/17/2021 and shipped by 10/18/2021.*

Quotation Details

Page 1 of 1

Item	Material / Description	Quantity	Unit Price	Amount
	<i>Contact: Dustin Chehey Cell: (760) 250-5624</i>			
10	100010766 24" x 6' VCP SS	306 FT (51 EA)	83.00 /1 FT	25,398.00
20	900010787 FREIGHT CHARGE Small Pipe	1 EA	692.00	692.00
Material Total				26,090.00
Total Tax Amount				1,968.35
Total Amount			USD	\$ 28,058.35

The quantities listed are intended for bidding purposes only, as a service to our clients. Gladding McBean - Lincoln does not guarantee the accuracy of the materials listed herein. The customer has full responsibility to do a complete take-off to determine the suitability of their quotation to the job drawings and specifications. This is a firm quotation for the materials listed herein only.

PABCO Clay Products, LLC



5671 GATES ST CHINO, CA - 91710
 PHONE: (909)597-7000 | FAX: (909)597-7050

PROPOSAL

PROPOSAL ID	QUOTE NO.	DATE
WRF-3 CORONA	60184	11/10/20

LN#	PRODUCT AND DESCRIPTION	QTY	UM	PRICE	TOTAL
187					
188	- #31: 10" HDPE -				
189	DR17-10# 10 HDPE DR17 PIPE	1400	FT	9.66	13524.00
190	DR17-2210# 10 HDPE DR17 22-1/2 BEND	2	EA	70.31	140.62
191	DR17-4510# 10 HDPE DR17 45 BEND	10	EA	84.37	843.70
192	DR17-9010# 10 HDPE DR17 90 BEND	6	EA	156.84	941.04
193	XR501-10 10 EXT RANGE CPLG 1070-1215 304SS B/N EPOX	2	EA	281.70	563.40
196	- #31 SUBTOTAL -				16012.76
197					
198					
199	- #32: 6" LATERAL, GATE VALVE & FIRE HYDRANTS STD 412 -				
200	MJR0806D# 8x6 DI MJ RED DOM	1	EA	105.08	105.08
201	1108DEC 8 MJ RESTRAINT W/ACC DI PIPE - EBAA	1	EA	50.74	50.74
202	THBN-8-316 8 316 SS T-HEAD B/N SET	1	SET	34.88	34.88
203	FBD9006PBD# 6x90 DI FLG BND BLK(IN/OUT) DOM	1	EA	210.15	210.15
204	GVFM-06 6 FLGXMJ RW GATE VLV OL STEM 316 B/N	1	EA	541.10	541.10
205	DITP350-06 6 CL 350 DI TJ PIPE W/GSKT	18	FT	14.00	252.00
206	MJB9006D# 6x90 DI MJ BND DOM	1	EA	109.37	109.37
207	6FP60 6 FLGXPE 6'-0" SPOOL	1	EA	273.67	273.67
208	HE-606-8 6X6 8H HYD EXT GRV	1	EA	64.70	64.70
209	J4040-8H 6X4X2-1/2 DI HYD 8H DI CAPS 1-1/8 PENT	1	EA	1554.77	1554.77
210	BN6-B8M 6 B8M 316 SS B/N/W SET 150# 3/4X3-1/2	2	SET	38.40	76.80
211	1LB856/SIL# 5/8X3 BREAK-OFF B/N SET 8H 316SS SILICONE F	1	EA	39.91	39.91
212	6-8-FF-8H 6X1/8 8H FF CI RUBBER GSKT	3	EA	3.15	9.45
213	1106DEC 6 MJ RESTRAINT W/ACC DI PIPE - EBAA	3	EA	37.39	112.17
214	THBN-6-316 6 316 SS T-HEAD B/N SET	3	SET	34.16	102.48
215	DR18-08 8 CL235 DR18 C900 PVC PIPE	5	FT	8.57	42.85
216	10-VB-CORONA 10 H&C TRAFFIC VLV BOX CONC W/CI RING "CORO	1	EA	36.66	36.66
217	10X6-VC-WATER 10X6 H&C CI CVR "WATER"	1	EA	57.65	57.65
218	- #32 SUBTOTAL -				3674.43
219					
220					
221	- #34: 24" PVC SDR26 -				
222	SDR26-24-14# 24 PS115 PVC GRAVITY 14'	448	FT	50.78	22749.44
223	SMG-24# 24 SEWER MANHOLE GASKET	10	EA	100.88	1008.80
224	DITP350-24-P401# 24 DI CL350 TYTON JOINT PIPE P401	18	FT	121.84	2193.12
225	3824-316SS# 24 EBAA 3800 RESTRAINED COUPLING DI/DI	1	EA	1494.84	1494.84
226	LS-24-DI# 24 LINK SEALS FOR DI N/M7 LS-575-S-28	2	EA	970.63	1941.26
227	- #34 SUBTOTAL -				29387.46

Continued



Smooth Running Jobs

PAGE 6

Taxed amount = \$16,742.13



DELIVERING GOOD WATER TO YOU

Neal Gordon
VP, Waterworks Sales
Phone: 800-621-4404 x 7401
E-mail: nealgordon@jmeagle.com

Sarfraz Siddiqui
Asst. Manager, Waterworks Sales
Phone: 800-621-4404 X 7905
E-mail: sarfarazsiddiqui@jmeagle.com

JM Eagle
5200 West Century Blvd
Los Angeles, CA 90045

www.jmeagle.com

August 31, 2021

Dear Valued Customers,

Numerous petrochemical suppliers along the Louisiana coast have shut down in the wake of Hurricane Ida. In an industry already dealing with increased demand and limited raw material supplies, we are now operating in an unprecedented situation. This region traditionally supplies 41% of the US polyvinyl chloride production, and 21% of all polyethylene production. Going forward, resin will be severely limited, especially over the next two weeks as suppliers assess hurricane damage and determine a timeline for reopening.

At this time, please note that JM Eagle will continue to operate under Force Majeure conditions.

Rest assured that we will do our very best to take care of our most valued partners.

We ask all customers to pay close attention to terms on quotes as well as orders already placed. We will need to review details once terms expire. New orders will also need to be reviewed to confirm production capabilities. If you have any questions, please reach out to your JM Eagle Inside Sales representative.

Our thoughts and prayers are with all those living along the Gulf Coast, especially at this difficult time.

Neal Gordon
VP, Waterworks Sales

Sarfraz Siddiqui
Assist. Manager, Waterworks Sales



AKM Consulting Engineers

553 Wald

Irvine, CA 92618

Telephone: 949.753.7333

Facsimile: 949.753.7320

www.akmce.com

Water Resources
Infrastructure
Construction Management

September 21, 2021

Pacific HydroTech Corporation
314 E. Third St.
Perris, Ca. 92570

Attn: Mr. Greg Chehey
Project Manager

Subject: Change Order Request No. 011 (PCO 011) – Gravity Sewer Pipe Material Change Request

AKM and the City of Corona are in receipt of the above entitled Change Order Request. Following a careful review of all provided documents and all available information related to the matter, we offer the following.

As you are aware, the project Notice to Proceed for the Project was provided to Pacific Hydrotech Corporation (PHC) on December 9, 2020. Submittal No. 041 – SDR 26 PVC Pipe was provided by PHC on December 30, 2020 and returned by the City marked with a favorable review, “Accepted as Noted”, on January 18, 2021. It was not until June 29, 2021, 5 months following resolution of the submittal, that the City was made aware of a specific supply issue with the PVC pipe material. Since the time of the notification, the City and AKM have faithfully partnered with PHC to explore and evaluate different piping options for the gravity sewer pipe to assist in expediting procurement of pipe material. The City also realigned the sewer, resulting in reduced effort and cost to PHC, without compensation to the City.

It is the City’s position that the material was not timely ordered following submittal resolution. Considering that the effects of the COVID-19 Pandemic on construction material supply chains were well known at the time of the bid, and issuance of the Notice to Proceed, the City does not consider this matter out of the reasonable control of PHC. In the spirit of cooperation, the City will agree to compensate PHC \$11,302.23

for the additional cost of the VCP pipe relative to the PVC pipe; however no additional compensation will be provided for installation of the pipe.

Please proceed with ordering the VCP material forthwith to avoid any further procurement delays.

Please contact the undersigned if you have questions and/or concerns.

Thank you,

A handwritten signature in black ink, appearing to read 'Emin Kayiran', written in a cursive style.

*Emin Kayiran
Director of Construction Management*