



**BOARD OF SUPERVISORS AGENDA ITEM REPORT
CONTRACTS / AWARDS / GRANTS**

Award Contract Grant

Requested Board Meeting Date: 11/10/20

or Procurement Director Award

* = Mandatory, information must be provided

***Contractor/Vendor Name/Grantor (DBA):**

Borderland Construction Company, Inc.

***Project Title/Description:**

Construction Manager At Risk Services For Old Nogales Interceptor / Aerospace Corridor / Park Avenue Sewer Augmentation - Project 3ASC15

***Purpose:**

Amendment: Contract No. CT-WW-16-208, Amendment No. Six (6). This amendment increases the contract amount by \$28,718,039.73 from \$14,208,208.55 to 42,926,248.28 and incorporates Guaranteed Maximum Price No. 3 (GMP-3). Administering Department: Regional Wastewater Reclamation.

This amendment pertains to project Phase 2 / GMP-3 and provides for coordination of community relations prior to and during construction and for all construction activities for this phase. Due to limited subcontracting opportunities, no Small Business Enterprise (SBE) goal is established for GMP-3.

***Procurement Method:**

Pursuant to Solicitation For Qualifications No. 187502, on 02/16/16, the Board of Supervisors awarded a contract for this project in the amount of \$576,735.21 for preconstruction services for a contract term of 02/16/16 to 07/31/20.

Amendment No. One (1) was approved by the Board of Supervisors to incorporate GMP-1 into the contract in the amount of \$1,325,211.19. Amendment No. Two (2) was approved by the Board of Supervisors to incorporate GMP-2 into the contract in the amount of \$13,902,005.26.

Change Order No. Three (3) was approved by the Procurement Director to reduce the contract by \$183,410.62 to close out GMP-1. Change Order No. Four (4) was approved by the Procurement Director to reduce the contract by \$1,412,332.49 to close out GMP-2.

Amendment No. Five (5) was approved by the Board of Supervisors to extend the contract term to 06/30/23.

Attachment: Amendment No. Six (6).

***Program Goals/Predicted Outcomes:**

This project provides for the construction of a gravity system to carry tributary flows from the Arizona State Prison Complex (ASPC) west along the Old Vail Road and then north along the Old Nogales Highway to the Hughes Access Road area. From there, flows will continue traveling north along the Old Nogales Interceptor (ONI) alignment, discharging into the Southeast Interceptor (SEI) near the intersection of 36th Street and 2nd Avenue. The Park Avenue Sewer augmentation shall consist of diverting sewer flows at the intersection of Park Avenue and Drexel Rd along Drexel Rd to the ONI.

***Public Benefit:**

Construction of this project provides for the augmentation of existing conveyance systems and for construction of a new gravity conveyance sewer to support the anticipated future development along the Aerospace Corridor.

***Metrics Available to Measure Performance:**

Project schedule, Contract Fee Schedule and Established Milestones.

***Retroactive:**

No

*To: COB- 10-15-20
Ver. - 33
pgs. - 36 (1)*

Revised 5/2020

Contract / Award Information

Document Type: _____ Department Code: _____ Contract Number (i.e.,15-123): _____
Commencement Date: _____ Termination Date: _____ Prior Contract Number (Synergen/CMS): _____
 Expense Amount: \$* _____ Revenue Amount: \$ _____

***Funding Source(s) required:**

Funding from General Fund? Yes No If Yes \$ _____ % _____
Contract is fully or partially funded with Federal Funds? Yes No
If Yes, is the Contract to a vendor or subrecipient? _____
Were insurance or indemnity clauses modified? Yes No
If Yes, attach Risk's approval.
Vendor is using a Social Security Number? Yes No
If Yes, attach the required form per Administrative Procedure 22-10.

Amendment / Revised Award Information

Document Type: CT Department Code: WW Contract Number (i.e.,15-123): 16-208
Amendment No.: Six (6) AMS Version No.: Thirty-Three (33)
Commencement Date: 11/10/20 New Termination Date: _____
Prior Contract No. (Synergen/CMS): _____

Expense or Revenue Increase Decrease Amount This Amendment: \$ 28,718,039.73
Is there revenue included? Yes No If Yes \$ _____

***Funding Source(s) required:** Regional Wastewater Reclamation Department Obligations

Funding from General Fund? Yes No If Yes \$ _____ % _____

Grant/Amendment Information (for grants acceptance and awards) Award Amendment

Document Type: _____ Department Code: _____ Grant Number (i.e.,15-123): _____
Commencement Date: _____ Termination Date: _____ Amendment Number: _____
 Match Amount: \$ _____ Revenue Amount: \$ _____

***All Funding Source(s) required:**

*Match funding from General Fund? Yes No If Yes \$ _____ % _____
*Match funding from other sources? Yes No If Yes \$ _____ % _____

***Funding Source:** _____

***If Federal funds are received, is funding coming directly from the Federal government or passed through other organization(s)?**

Contact: Keith E. Rogers Digitally signed by Keith E. Rogers
DN: cn=Keith E. Rogers, o=co,
email=keith.rogers@opma.gov, c=US
Date: 2020.10.09.14.59.32 -0700 Terri Spencer Digitally signed by Terri Spencer
DN: cn=Terri Spencer, o=Pinna County,
ou=Procurement Department,
email=terri.spencer@pinna.gov, c=US
Date: 2020.10.09.15.40.47-0700
Department: Procurement Mary Jo Furphy Digitally signed by Mary Jo Furphy
DN: cn=Mary Jo Furphy, o=Pinna County,
ou=Procurement, email=mary.jo.furphy@pinna.gov, c=US
Date: 2020.10.09.15.41.47-0700 Telephone: 724-3542
Department Director Signature/Date: [Signature] 10/9/2020
Deputy County Administrator Signature/Date: [Signature] 10/13/2020
County Administrator Signature/Date: [Signature] 10/13/2020
(Required for Board Agenda/Addendum Items)

PIMA COUNTY DEPARTMENT REGIONAL WASTEWATER RECLAMATION DEPARTMENT

PROJECT: Construction Manager at Risk Services for Old Nogales Interceptor/Aerospace Corridor/Park Avenue Sewer Augmentation Project No. 3ASC15

CONTRACTOR: Borderland Construction Company, Inc.
400 East 38th St.
Tucson, AZ 85713

CONTRACT NO.: CT-WW-16-208

AMENDMENT NO.: Six (6)

FUNDING: Regional Wastewater Reclamation Department Obligations

CONTRACT TERM: 02/16/2016 - 07/31/2020	ORIGINAL CONTRACT AMOUNT:	\$	576,735.21
TERMINATION PRIOR AMENDMENT: 06/30/2023	PRIOR AMENDMENT(S):	\$	13,631,473.34
TERMINATION THIS AMENDMENT: 06/30/2023	AMOUNT THIS AMENDMENT:	\$	28,718,039.73
	REVISED CONTRACT AMOUNT:	\$	42,926,248.28

CONSTRUCTION CONTRACT AMENDMENT

WHEREAS, COUNTY and CONTRACTOR have entered into the Contract for the project referenced above; and

WHEREAS, construction of the project was anticipated to be conducted in multiple phases; and

WHEREAS, construction of project Phases 1 and 3 are complete; and

WHEREAS, GMP-3 shall pertain to project Phase 2; and

WHEREAS, COUNTY and CONTRACTOR, pursuant to Article 2, have agreed to incorporate Guaranteed Maximum Price-3 (GMP-3) into the contract for all Phase 2 activities, including coordination of community relations prior to and during construction and for all construction activities; and

WHEREAS, COUNTY's acceptance of GMP-3 is subject to the understanding of the Parties that all other elements of future GMPs, if any, are and remain negotiable; and

WHEREAS, COUNTY and CONTRACTOR pursuant to Article 3 have agreed to increase the Contract amount as identified in GMP-3.

NOW, THEREFORE, it is agreed as follows:

CHANGE: ARTICLE 3 – PRECONSTRUCTION PHASE FEE AND GUARANTEED MAXIMUM PRICE

Insert after the third paragraph of Section B, incorporated in Contract Amendment No. Two (2):

Guaranteed Maximum Price-3 (GMP-3) for all construction activities and coordination of community relations prior to the commencement of construction and during construction as identified in ATTACHMENT TWO (2) to APPENDIX "C" is Twenty-Eight Million, Seven Hundred Eighteen Thousand, Thirty-Nine Dollars and Seventy-Three Cents (\$28,718,039.73). COUNTY reserves the right to negotiate the construction fee, overhead rate, and all other elements of future GMPs, if any.

ADD: AS ATTACHMENT TWO (2) to APPENDIX "C"

ATTACHMENT TWO (2) to APPENDIX "C": Construction Manager at Risk (CMAR) Services for Old Nogales Interceptor / Aerospace Corridor / Park Avenue Sewer Augmentation - Project No. 3ASC15 GMP-2 Construction of Phase 2 Sewer, proposal dated September 24, 2020 (32 pages, attached).

This Amendment shall be effective on November 10, 2020.

All other provisions of the Contract, not specifically changed by this amendment, shall remain in effect and be binding upon the parties.

IN WITNESS WHEREOF, the parties have affixed their signatures to this Amendment on the dates written below.

APPROVED:

Chairman, Board of Supervisors

Date

CONTRACTOR:




Signature

TODD ADAMS VICE PRESIDENT
Name and Title (Please Print)
10/12/20
Date

ATTEST:

Clerk of the Board

APPROVED AS TO FORM:



Deputy County Attorney

Victoria Buchinger

Printed Name

October 12, 2020
Date

ATTACHMENT TWO (2) TO APPENDIX "C"

Construction Manager at Risk (CMAR) Services for Old Nogales Interceptor / Aerospace Corridor / Park Avenue Sewer Augmentation – Project No. 3ASC15 GMP-3 Construction Of Phase 2 Sewer, proposal dated September 24, 2020 (32 pages, attached)



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

GMP #3 - SUMMARY

Pima County Regional Wastewater Reclamation Department
Old Nogales Interceptor/Aerospace Corridor/Park Avenue Sewer Augmentation
PCRWRD Project Number: 3ASC15

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

CONSTRUCTION	AMOUNT
CONSTRUCTION COSTS:	
I. Cost of Construction	\$ 22,029,720.23
II. CMAR Contingency	\$ 440,594.40
SUBTOTAL <i>(Direct Construction Cost)</i>	\$ 22,470,314.63
INDIRECT CONSTRUCTION COSTS:	
III. General Conditions	\$ 800,006.60
IV. Overhead	\$ 2,194,391.29
V. Railroad Insurance	\$ 2,500.00
VI. General Liability Insurance	\$ 76,905.53
VII. Payment and Performance Bonds	\$ 171,645.53
SUBTOTAL <i>(Direct Cons. Cost + Gen Cond + Overhead + Insurance + Bonds)</i>	\$ 25,715,763.58
VIII. Construction Fee	\$ 1,273,235.63
SUBTOTAL <i>(Direct Cons. Cost + Gen Cond + Overhead + Insurance + Bonds + Fee)</i>	\$ 26,988,999.21
IX. Arizona Gross Receipts Tax	\$ 1,429,040.52
GUARANTEED MAXIMUM PRICE (GMP)	\$ 28,418,039.73
OTHER PROJECT COSTS:	
X. Owner's Contingency	\$ 300,000.00
TOTAL CONTRACT COST	\$ 28,718,039.73

For supporting documentation - see also:

- Attachment #1 - Schedule of Values
- Attachment #2 - Scope of Work (List of Plans/Specifications)
- Attachment #3 - Clarifications, Assumptions, and Exclusions to the scope of work
- Attachment #4 - Schedule
- Attachment #5 - Cash-flow Forecast
- Attachment #6 - Subcontractors
- Attachment #7 - Sales Tax Ratio Calculator



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #1 - SCHEDULE OF VALUES

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

Line No.	Item No.	Item Description	Unit	Quantity	Unit Cost	Extended Amount
1		I. COST OF CONSTRUCTION - LINE ITEMS				
2	001.100	MOBILIZATION	LS	1	\$ 80,260.93	\$ 80,260.93
3	002.100	SWPPP	LS	1	\$ 147,899.83	\$ 147,899.83
4	003.100	CLEAR AND GRUB	ACRE	47.5	\$ 2,051.90	\$ 97,465.25
5	004.100	POTHOLING (EXISTING UTILITIES)	EACH	70	\$ 785.51	\$ 54,985.70
6	005.100	HYDRO SEEDING	ACRE	47.5	\$ 2,982.28	\$ 141,658.30
7	006.100	TRAFFIC CONTROL	LS	1	\$ 340,013.80	\$ 340,013.80
8	007.100	PUBLIC RELATIONS	MO	22	\$ 7,509.09	\$ 165,199.98
9	008.100	SURVEYING AND AS-BUILTS	LS	1	\$ 199,600.00	\$ 199,600.00
10	009.100	COMPACTION / CONCRETE TESTING	LS	1	\$ 196,370.00	\$ 196,370.00
11	010.100	CLEAN UP RIGHT OF WAY	ACRE	47.5	\$ 781.44	\$ 37,118.40
12	011.100	CONSTRUCTION WATER	MGAL	46566	\$ 6.30	\$ 293,365.80
13	012.100	PERMIT ALLOWANCE	AL	1	\$ 77,725.00	\$ 77,725.00
14	013.100	AIRPORT PERMIT AND COMPLIANCE	AL	1	\$ 5,000.00	\$ 5,000.00
15	101.001	REMOVE EXISTING END CAP/ CONNECT TO EXIST. SEI MANHOLE STUB	EACH	1	\$ 15,750.28	\$ 15,750.28
16	104.002	REMOVE EXISTING CHAIN LINK FENCE AND REPLACE IN KIND (STA.16+50 To STA.27+00) (BORDERLAND YARD)	LF	1050	\$ 23.14	\$ 24,297.00
17	104.005	REMOVE EXISTING CHAIN LINK FENCE AND REPLACE IN KIND (STA.49+00 To STA.51+00)	LF	515	\$ 40.42	\$ 20,816.30
18	104.018	REMOVE EXISTING CHAIN LINK FENCE AND REPLACE IN KIND (STA.162+00 To STA.168+00)	LF	600	\$ 36.97	\$ 22,182.00
19	104.098	REMOVE EXISTING CHAIN LINK FENCE AND REPLACE IN KIND (TEMP ACCESS FROM EL INDIO)	LF	60	\$ 93.33	\$ 5,599.80
20	104.099	REMOVE EXISTING CHAIN LINK FENCE AND REPLACE IN KIND (TEMP ACCESS FROM VA HOSPITAL)	LF	100	\$ 48.50	\$ 4,850.00
21	104.100	REMOVE EXISTING SPAN BRIDGE AND REPLACE IN KIND (TEMP ACCESS TO UPRR FROM VA HOSPITAL)	AL	1	\$ 63,988.16	\$ 63,988.16
22	105.002	REMOVE EXISTING ABANDONED 8" GAS MAIN (STA.22+30)	LS	1	\$ 3,500.00	\$ 3,500.00



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #1 - SCHEDULE OF VALUES

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

Line No.	Item No.	Item Description	Unit	Quantity	Unit Cost	Extended Amount
23	106.007	REMOVE EXISTING GUARDRAIL AND REPLACE IN KIND (STA.63+00 To STA.72+00) (REALIGNMENT NOT NEEDED)	LF	900	\$ 52.31	\$ 47,079.00
24	106.023	REMOVE EXISTING GUARDRAIL AND REPLACE IN KIND (STA.206+00 to STA.210+00)	LF	400	\$ 52.31	\$ 20,924.00
25	107.009	REMOVE AND REPLACE EXISTING CONCRETE HEADER IN KIND (PENNSYLVANIA DR STA.85+00 to STA.86+50)	LF	115	\$ 25.00	\$ 2,875.00
26	109.009	REMOVE AND REPLACE EXISTING SIDEWALK IN KIND (STA.88+40 to STA.89+40) (FAIR @ MICHIGAN)	SF	600	\$ 10.00	\$ 6,000.00
27	109.030	REMOVE AND REPLACE EXISTING CONCRETE ACCESS RAMP IN KIND (STA.275+35) (Access Ramp @ Los Reales)	EACH	1	\$ 2,805.31	\$ 2,805.31
28	111.007	REMOVE (5) EXISTING SIGNS & (60) OBJECT MARKERS AND REPLACE IN KIND (FAIR AVE - STA.64+00 To STA.87+00)	LS	1	\$ 8,451.00	\$ 8,451.00
29	111.009	REMOVE (5) EXISTING SIGNS & (30) OBJECT MARKERS AND REPLACE IN KIND (FAIR AVE/ MICH AVE - STA.89+00 To STA.93+00)	LS	1	\$ 4,975.00	\$ 4,975.00
30	111.018	REMOVE (1) EXISTING SIGN AND REPLACE IN KIND (DREXEL RD - STA.119+30)	LS	1	\$ 911.00	\$ 911.00
31	111.019	REMOVE (16) EXISTING SIGNS AND REPLACE IN KIND (NOG HWY - STA. 170+80 to STA.221+00)	LS	1	\$ 4,712.00	\$ 4,712.00
32	111.021	REMOVE (3) EXISTING SIGNS AND REPLACE IN KIND (NOG HWY - STA.191+00 To STA.195+70)	LS	1	\$ 7,812.50	\$ 7,812.50



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

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GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

Line No.	Item No.	Item Description	Unit	Quantity	Unit Cost	Extended Amount
33	111.022	REMOVE (2) EXISTING SIGNS AND REPLACE IN KIND (NOG HWY - STA.204+00 to STA.206+50)	LS	1	\$ 671.00	\$ 671.00
34	111.023	REMOVE (1) EXISTING SIGN AND REPLACE IN KIND (NOG HWY - STA.210+20)	LS	1	\$ 382.50	\$ 382.50
35	111.024	REMOVE (9) EXISTING SIGNS AND REPLACE IN KIND (NOG HWY - STA.216+70 to STA.232+50)	LS	1	\$ 3,015.50	\$ 3,015.50
36	111.027	REMOVE (1) EXISTING SIGN AND REPLACE IN KIND (NOG HWY - STA.246+50)	LS	1	\$ 460.00	\$ 460.00
37	111.028	REMOVE (2) EXISTING SIGN AND REPLACE IN KIND (NOG HWY - STA.254+50 To STA.256+50)	LS	1	\$ 983.00	\$ 983.00
38	111.030	REMOVE (3) EXISTING SIGNS AND REPLACE IN KIND (NOG HWY - STA.272+70 To STA.275+00)	LS	1	\$ 1,795.00	\$ 1,795.00
39	111.031	REMOVE (1) EXISTING SIGN AND REPLACE IN KIND (NOG HWY - STA.287+80)	LS	1	\$ 450.00	\$ 450.00
40	111.034	REMOVE (1) EXISTING SIGN AND REPLACE IN KIND (NOG HWY - STA.308+00)	LS	1	\$ 450.00	\$ 450.00
41	111.035	REMOVE (5) EXISTING SIGNS AND REPLACE IN KIND (NOG HWY - STA.319+00 To 336+50)	LS	1	\$ 3,048.00	\$ 3,048.00
42	111.038	REMOVE (2) EXISTING SIGNS AND REPLACE IN KIND (NOG HWY - STA.346+70 to 350+40)	LS	1	\$ 678.00	\$ 678.00
43	111.039	REMOVE (1) EXISTING SIGN AND REPLACE IN KIND (NOG HWY - STA.353+00)	LS	1	\$ 450.00	\$ 450.00
44	111.041	REMOVE (1) EXISTING SIGN AND REPLACE IN KIND (NOG HWY - STA.374+50)	LS	1	\$ 450.00	\$ 450.00



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #1 - SCHEDULE OF VALUES

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

Line No.	Item No.	Item Description	Unit	Quantity	Unit Cost	Extended Amount
45	112.009	REMOVE AND REPLACE EXISTING CONCRETE CURB IN KIND (STA.88+40 to STA.89+40) (FAIR @ MICHIGAN)	LF	100	\$ 20.00	\$ 2,000.00
46	112.018	REMOVE AND REPLACE EXISTING CONCRETE CURB IN KIND (STA.168+50 to STA.169+50) (DREXEL INT)	LF	100	\$ 20.00	\$ 2,000.00
47	112.021	REMOVE AND REPLACE EXISTING CONCRETE CURB IN KIND (STA.195+00 to STA.195+50) (BILBY INT)	LF	100	\$ 20.00	\$ 2,000.00
48	112.028	REMOVE AND REPLACE EXISTING CONCRETE CURB (HEADER) IN KIND (AT STA.254+50 AND STA.256+00) (TETON INT)	LF	142	\$ 25.00	\$ 3,550.00
49	114.015	REMOVE AND REPLACE EXISTING CONCRETE JERSEY BARRIER IN KIND (STA.141+30 TO 141+60)	LF	80	\$ 14.64	\$ 1,171.20
50	114.017	REMOVE AND REPLACE EXISTING CONCRETE JERSEY BARRIER IN KIND (STA.159+75)	LF	80	\$ 14.72	\$ 1,177.60
51	115.022	REMOVE AND REPLACE EXISTING CONCRETE IN KIND (AIRPORT WASH BRIDGE INLET APRON)	SF	955	\$ 9.39	\$ 8,967.45
52	116.006	REMOVE EXISTING HANDRAIL AND REPLACE IN KIND (STA.58+00 To STA.62+00)	LF	400	\$ 30.25	\$ 12,100.00
53	117.021	SUPPORT EXISTING TEP POWER POLE (BILBY RD STA. 195+70)	EACH	1	\$ 10,000.00	\$ 10,000.00
54	118.026	TEMPORARILY REMOVE AND REINSTALL EXISTING COT STREET LIGHT POLE (MEDINA RD STA. 234+70)	LS	1	\$ 7,500.00	\$ 7,500.00
55	118.030	TEMPORARILY REMOVE AND REINSTALL (3) EXISTING COT STREET LIGHT POLES (NOG HWY @ LOS REALES - STA.276+00 To STA.278+00)	LS	1	\$ 12,500.00	\$ 12,500.00
56	119.009	TEMPORARILY REMOVE AND REINSTALL EXISTING COT STREET LIGHT POLE (NEW FOUNDATION) (FAIR ST - STA.88+70)	LS	1	\$ 7,500.00	\$ 7,500.00



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #1 - SCHEDULE OF VALUES

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

Line No.	Item No.	Item Description	Unit	Quantity	Unit Cost	Extended Amount
57	120.021	REMOVE AND RELOCATE EXISTING TDOT TRAFFIC SIGNAL CONTROLLER. TEMPORARILY REMOVE AND REINSTALL EB SIGNAL POLE/FOUNDATION/MAST ARM, (3) EB SIGNAL HEADS, EB LUMINAIRE, EB CAMERA, (1) PED SIGNAL POLE/FOUNDATION/BUTTON, (2) PED SIGNALS, AND UPRR SIGNAL INTERCONNECT. ITEM INCLUDES TEMPORARY TRAFFIC SIGNAL. (BILBY RD - STA.195+70)	LS	1	\$ 103,200.00	\$ 103,200.00
58	120.030	TEMPORARILY REMOVE AND REINSTALL EXISTING TDOT NB TRAFFIC SIGNAL POLE/FOUNDATION/ MAST ARM, (4) NB SIGNAL HEADS, NB LUMINAIRE, NB CAMERA, EB TRAFFIC SIGNAL POLE/FOUNDATION/MAST ARM, (2) EB SIGNAL HEADS, EB PED SIGNAL/POLE/FOUNDATION/BUTTON, (1) PED SIGNAL, EB CAMERA. ITEM INCLUDES TEMPORARY TRAFFIC SIGNAL. (NOG HWY @ LOS REALES - STA.274+50 To STA.275+30)	LS	1	\$ 88,900.00	\$ 88,900.00
59	121.019	REMOVE AND REPLACE EXISTING HEADWALL IN KIND (STA.172+60)	LS	1	\$ 6,252.20	\$ 6,252.20
60	125.007	FAIR AVE STORM DRAIN RELOCATION (RCP, MANHOLE, CATCH BASIN)	LS	1	\$ 103,586.73	\$ 103,586.73
61	128.009	WATER CHANGE OUT - 8" DIP (STA.89+07) (EX. 8" CA IN FAIR ST)	LF	30	\$ 213.62	\$ 6,408.60
62	128.011	WATER CHANGE OUT - 12" DIP (STA.102+31) (EX. 12" CA @ RODEO WASH)	LF	30	\$ 240.62	\$ 7,218.60
63	128.015	WATER CHANGE OUT - 8" DIP (STA.142+20) (EX. 8" CA CROSSING FLETCHER AVE)	LF	30	\$ 213.62	\$ 6,408.60
64	200.100	36" SEWER (MATERIAL BUY) (PVC SDR35)	LF	36138	\$ 95.38	\$ 3,446,842.44



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #1 - SCHEDULE OF VALUES

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

Line No.	Item No.	Item Description	Unit	Quantity	Unit Cost	Extended Amount
65	200.101	36" SEWER (INSTALLATION)	LF	36138	\$ 192.41	\$ 6,953,312.58
66	200.420	18" SEWER (MATERIAL BUY) (PVC SDR 35)	LF	290	\$ 24.28	\$ 7,041.20
67	200.421	18" SEWER (INSTALLATION)	LF	290	\$ 95.39	\$ 27,663.10
68	200.520	21" SEWER (SIPHON) (MATERIAL BUY)	LF	360	\$ 131.07	\$ 47,185.20
69	200.521	21" SEWER (SIPHON) (INSTALLATION)	LF	360	\$ 123.06	\$ 44,301.60
70	200.530	12" SEWER (SIPHON) (MATERIAL BUY)	LF	180	\$ 29.67	\$ 5,340.60
71	200.531	12" SEWER (SIPHON) (INSTALLATION)	LF	180	\$ 121.47	\$ 21,864.60
72	202.100	5' DIAMETER MANHOLE (36" LINE) (MATERIAL BUY)	EACH	48	\$ 17,867.00	\$ 857,616.00
73	202.101	5' DIAMETER MANHOLE (36" LINE) (INSTALLATION)	EACH	48	\$ 11,290.85	\$ 541,960.80
74	203.100	6' DIAMETER MANHOLE (36" LINE) (MATERIAL BUY)	EACH	5	\$ 26,789.00	\$ 133,945.00
75	203.101	6' DIAMETER MANHOLE (36" LINE) (INSTALLATION)	EACH	5	\$ 12,511.19	\$ 62,555.95
76	204.420	7' DIAMETER MANHOLE (18" LINE) (MATERIAL BUY)	EACH	1	\$ 44,804.00	\$ 44,804.00
77	204.421	7' DIAMETER MANHOLE (18" LINE) (INSTALLATION)	EACH	1	\$ 24,042.60	\$ 24,042.60
78	205.100	6'-7' DIAMETER MANHOLE W/SCOUR PROTECTION (36" LINE) (MATERIAL BUY)	EACH	1	\$ 31,450.00	\$ 31,450.00
79	205.101	6'-7' DIAMETER MANHOLE W/SCOUR PROTECTION (36" LINE) (INSTALLATION)	EACH	1	\$ 19,137.84	\$ 19,137.84
80	206.300	6' DIAMETER METERING MANHOLE (36" LINE) (MATERIAL BUY)	EACH	1	\$ 24,158.00	\$ 24,158.00
81	206.301	6' DIAMETER METERING MANHOLE (36" LINE) (INSTALLATION)	EACH	1	\$ 46,457.02	\$ 46,457.02
82	211.100	CONCRETE MANHOLE COLLAR 211	EACH	9	\$ 575.00	\$ 5,175.00
83	212.100	CONCRETE MANHOLE COLLAR 212	EACH	50	\$ 675.00	\$ 33,750.00
84	213.100	UPRR ROW BARRIER - ROPE/T-POST	LF	36600	\$ 0.83	\$ 30,378.00
85	213.005	UPRR FLAGGERS (TUCSON DIVERSION CHANNEL - SIPHON STRUCTURES)	DY	10	\$ 1,300.00	\$ 13,000.00



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #1 - SCHEDULE OF VALUES

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

Line No.	Item No.	Item Description	Unit	Quantity	Unit Cost	Extended Amount
86	213.014	UPRR FLAGGERS (UPRR BORING CROSSING - SPURLINE RAILS STA. 126+99)	DY	10	\$ 1,300.00	\$ 13,000.00
87	213.041	UPRR FLAGGERS (UPRR BORING CROSSING - MAINLINE RAILS STA. 375+00)	DY	15	\$ 1,300.00	\$ 19,500.00
88	213.042	UPRR FLAGGERS (UPRR BORING CROSSING - MAINLINE RAILS STA. 10+28 DREXEL RD)	DY	14	\$ 1,300.00	\$ 18,200.00
89	214.002	JACK AND BORE - 54" CASING (0.781" WALL), INSTALL CARRIER PIPE AND SLURRY FILL (STA.22+10 To STA.22+70)(HP Gas)	LF	60	\$ 2,845.46	\$ 170,727.60
90	214.003	JACK AND BORE - 60" CASING (0.844" WALL), INSTALL CARRIER PIPE AND SLURRY FILL (STA.31+83 To STA.38+39) (ADOT - I-10)	LF	656	\$ 2,436.47	\$ 1,598,324.32
91	214.005	JACK AND BORE - 60" CASING (0.844" WALL), INSTALL CARRIER PIPE AND SLURRY FILL (STA.49+72 To STA.50+65) (For 21", 21", 12" SIPHON PIPE At VA Wash)	LF	93	\$ 3,972.27	\$ 369,421.11
92	214.006	JACK AND BORE - 54" CASING (0.781" WALL), INSTALL CARRIER PIPE AND SLURRY FILL (STA.60+40 To STA.64+07) (AJO WAY)	LF	367	\$ 1,671.47	\$ 613,429.49
93	214.012	JACK AND BORE - 60" CASING (0.844" WALL), INSTALL CARRIER PIPE AND SLURRY FILL (STA.114+82 To STA.118+05) (IRVINGTON RD)	LF	323	\$ 1,746.84	\$ 564,229.32
94	214.014	JACK AND BORE - 54" CASING (0.781" WALL), INSTALL CARRIER PIPE AND SLURRY FILL (STA.126+99 To STA.128+22) (UPRR SPURLINE)	LF	123	\$ 1,832.63	\$ 225,413.49



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #1 - SCHEDULE OF VALUES

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

Line No.	Item No.	Item Description	Unit	Quantity	Unit Cost	Extended Amount
95	214.018	JACK AND BORE - 54" CASING (0.781" WALL), INSTALL CARRIER PIPE AND SLURRY FILL (STA.168+50 To STA.169+50) (DREXEL RD)	LF	100	\$ 1,987.45	\$ 198,745.00
96	214.024	JACK AND BORE - 54" CASING (0.781" WALL), INSTALL CARRIER PIPE AND SLURRY FILL (STA.220+70 To STA.223+30) (VALENCIA RD)	LF	260	\$ 1,363.23	\$ 354,439.80
97	214.026	JACK AND BORE - 54" CASING (0.781" WALL), INSTALL CARRIER PIPE AND SLURRY FILL (STA.233+43 To STA.235+09) (VALENCIA WASH)	LF	166	\$ 1,219.21	\$ 202,388.86
98	214.027	JACK AND BORE - 54" CASING (0.781" WALL), INSTALL CARRIER PIPE AND SLURRY FILL (STA.248+40 To STA.248+60) (TEP POLE @ ELVIRA)	LF	40	\$ 2,367.39	\$ 94,695.60
99	214.032	JACK AND BORE - 54" CASING (0.781" WALL), INSTALL CARRIER PIPE AND SLURRY FILL (STA.289+33 To STA.289+70) (ELVADO WASH)	LF	37	\$ 1,846.57	\$ 68,323.09
100	214.034	JACK AND BORE - 54" CASING (0.781" WALL), INSTALL CARRIER PIPE AND SLURRY FILL (STA.305+66 To STA.307+37) (AERO PARK RD)	LF	171	\$ 1,408.88	\$ 240,918.48
101	214.036	JACK AND BORE - 54" CASING (0.781" WALL), INSTALL CARRIER PIPE AND SLURRY FILL (STA.326+35 To STA.329+05) (HERMANS RD)	LF	270	\$ 1,290.70	\$ 348,489.00
102	214.041	JACK AND BORE - 54" CASING (0.781" WALL), INSTALL CARRIER PIPE AND SLURRY FILL (STA.374+31 To STA.375+73) (UPRR MAINLINE)	LF	142	\$ 1,100.79	\$ 156,312.18
103	214.042A	JACK AND BORE - 30" CASING (0.75" WALL), INSTALL CARRIER PIPE AND SLURRY FILL (STA.10+28 To STA.11+50) (UPRR MAINLINE @ DREXEL RD)	LF	122	\$ 795.02	\$ 96,992.44



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #1 - SCHEDULE OF VALUES

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

Line No.	Item No.	Item Description	Unit	Quantity	Unit Cost	Extended Amount
104	214.042B	JACK AND BORE - 30" CASING (0.75" WALL), INSTALL CARRIER PIPE AND SLURRY FILL (STA.11+90 To STA.12+81) (DREXEL RD TIE- IN)	LF	91	\$ 840.74	\$ 76,507.34
105	216.007	ASPHALT PAVEMENT PATCH - FAIR AVE (3" AC ON 6" ABC) (STA.64+00 To STA.74+50)	SY	2303	\$ 36.94	\$ 85,072.82
106	216.009A	ASPHALT PAVEMENT PATCH - FAIR AVE/PENNSYLVANIA DR (3" AC ON 6" ABC) (STA.85+50 To STA.86+30)	SY	155	\$ 47.49	\$ 7,360.95
107	216.009B	ASPHALT PAVEMENT PATCH - FAIR ST/MICHIGAN DR (3" AC ON 6" ABC) (STA.88+70 To STA.89+50)	SY	107	\$ 112.43	\$ 12,030.01
108	216.021	ASPHALT PAVEMENT PATCH - BILBY RD (4" AC ON 6" ABC) (STA.195+20 To STA.195+70)	SY	66.7	\$ 147.14	\$ 9,814.24
109	216.023	ASPHALT PAVEMENT PATCH - NOGALES HWY/VALENCIA RD (5" AC ON 10" ABC) (STA.207+70 To STA.235+80)	SY	6125	\$ 48.21	\$ 295,286.25
110	216.028	ASPHALT PAVEMENT PATCH - TETON RD (4" AC ON 6" ABC) (STA.254+50 To STA.255+50)	SY	133	\$ 81.84	\$ 10,884.72
111	216.030	ASPHALT PAVEMENT PATCH - NOGALES HWY/LOS REALES RD (5" AC ON 10" ABC) (STA.272+30 To STA.277+80)	SY	1297	\$ 56.67	\$ 73,500.99
112	216.042	ASPHALT PAVEMENT PATCH - DREXEL RD EAST OF UPRR (4" AC ON 6" ABC) (STA.12+40 To STA.13+00)	SY	280	\$ 81.18	\$ 22,730.40
113	219.027	MONITORING WELL PROTECTION/REPAIR (CRA-13 and CRA-14)	EACH	2	\$ 1,169.24	\$ 2,338.48
114	219.028	MONITORING WELL PROTECTION/REPAIR (CRA-31S and CRA-31D)	EACH	2	\$ 1,169.24	\$ 2,338.48
115	219.029	MONITORING WELL PROTECTION/REPAIR (D-5, CRA-57SD, S-18, S-9, and D-2)	EACH	5	\$ 1,169.24	\$ 5,846.20



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #1 - SCHEDULE OF VALUES

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

Line No.	Item No.	Item Description	Unit	Quantity	Unit Cost	Extended Amount
116	219.030	MONITORING WELL PROTECTION/REPAIR (CRA-39SD, CRA-38 and CRA-22 DS)	EACH	3	\$ 1,169.24	\$ 3,507.72
117	219.031	MONITORING WELL PROTECTION/REPAIR (MWR-2 and CRA-18)	EACH	2	\$ 1,169.24	\$ 2,338.48
118	221.410	10' DIAMETER MANHOLE (36" LINE) (MATERIAL BUY)	LS	1	\$ 115,320.00	\$ 115,320.00
119	221.411	10' DIAMETER MANHOLE (36" LINE) (INSTALLATION)	EACH	1	\$ 25,977.95	\$ 25,977.95
120	225.511	SIPHON STRUCTURE #6 (DOWNSTREAM)	EACH	1	\$ 168,585.84	\$ 168,585.84
121	225.521	SIPHON STRUCTURE #7 (UPSTREAM)	EACH	1	\$ 179,498.84	\$ 179,498.84
122	240.021	SEWER CHANGE OUT - 8" DIP (STA.195+30) (EX. 8" VCP IN BILBY RD)	LF	20	\$ 471.28	\$ 9,425.60
123	240.028	SEWER CHANGE OUT - 10" DIP (STA.252+00) (EX. 10" VCP NORTH OF TETON RD)	LF	20	\$ 467.78	\$ 9,355.60
124	240.031	SEWER CHANGE OUT - 10" DIP (STA.283+50) (EX. 10" VCP EAST OF PAN TAK ST)	LF	20	\$ 467.78	\$ 9,355.60
125	250.021	FMP OF 8" SEWER (STA.195+30, BILBY, SHEET C-21)	EACH	1	\$ 3,715.00	\$ 3,715.00
126	250.028	FMP FOR 10" SEWER (STA.252+00, TETON, SHEET C-28)	EACH	1	\$ 3,800.00	\$ 3,800.00
127	250.031	FMP FOR 10" SEWER (STA.283+50, PANTAK, SHEET C-31)	EACH	1	\$ 7,985.00	\$ 7,985.00
128	250.041	FMP FOR 18" & 36" SEWER (STA. 376+16, ONI PH 1, SHEET C-41)	EACH	1	\$ 13,392.00	\$ 13,392.00
129	255.042	FMP FOR 8" & 18" SEWER (STA.13+00, DREXEL, SHEET C-42)	AL	1	\$ 141,500.00	\$ 141,500.00
130	298.001	32 LB MAGNESIUM ANODES (CASING BORES AT STA.126+99, STA.374+31, STA.11+00) (POTENTIAL UPRR REQUIREMENT)	AL	240	\$ 396.77	\$ 95,224.80
131	298.002	TYPE 2/5 CORROSION TEST STATION (POTENTIAL UPRR REQUIREMENT)	AL	6	\$ 3,631.30	\$ 21,787.80



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #1 - SCHEDULE OF VALUES

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

Line No.	Item No.	Item Description	Unit	Quantity	Unit Cost	Extended Amount
132	298.003	CORROSION TESTING REPORT (POTENTIAL UPRR REQUIREMENT)	AL	3	\$ 2,750.00	\$ 8,250.00
133	298.004	SMART COVER H2S MONITORING SYSTEM	AL	4	\$ 7,150.00	\$ 28,600.00
134	298.005	PCRWRD ALLOWANCE: UTILITY MODIFICATIONS AND STAND-BY INSPECTIONS	AL	1	\$ 293,392.49	\$ 293,392.49
135		COST OF CONSTRUCTION - LINE ITEMS SUBTOTAL				\$ 22,029,720.23
136	299.001	II. CMAR CONTINGENCY (UNFORESEEN CONDITIONS) (2% of LINE ITEMS SUBTOTAL)	LS	1	\$ 440,594.40	\$ 440,594.40
137		SUBTOTAL A. (DIRECT CONSTRUCTION COSTS)				\$ 22,470,314.63
138		INDIRECT CONSTRUCTION COSTS				
139		III. GENERAL CONDITIONS				
140	300.102	FIELD ENGINEER	WK	108	\$ 2,637.60	\$ 284,860.80
141	300.103	SUPERINTENDENT	WK	108	\$ 2,907.60	\$ 314,020.80
142	301.100	DRINKING WATER	WK	108	\$ 25.00	\$ 2,700.00
143	302.100	PORTABLE RESTROOMS	MO	25	\$ 480.00	\$ 12,000.00
144	303.100	SMALL TOOLS	WK	108	\$ 550.00	\$ 59,400.00
145	304.100	LAND RENTAL	MO	25	\$ 3,000.00	\$ 75,000.00
146	305.100	TEMPORARY FENCE FOR YARD	MO	25	\$ 681.00	\$ 17,025.00
147	308.100	SUPPLIES/REPROGRAPHICS	MO	25	\$ 350.00	\$ 8,750.00
148	309.100	TRASH DUMPSTER	MO	25	\$ 750.00	\$ 18,750.00
149	310.100	STORAGE CONTAINER	MO	25	\$ 300.00	\$ 7,500.00
150		SUBTOTAL B. (III. GENERAL CONDITIONS)				\$ 800,006.60
151		SUBTOTAL C. (DIRECT COSTS + GENERAL CONDITIONS)				\$ 23,270,321.23
152	400.100	IV. CMAR OVERHEAD (9.43% of Subtotal C)	LS	1	\$ 2,194,391.29	\$ 2,194,391.29
153		SUBTOTAL D. (DIRECT COSTS + GENERAL CONDITIONS + OVERHEAD)				\$ 25,464,712.52
154	800.100	VIII. CONSTRUCTION FEE (5% of Subtotal D)	LS	1	\$ 1,273,235.63	\$ 1,273,235.63
155	500.100	V. RAILROAD INSURANCE	LS	1	\$ 2,500.00	\$ 2,500.00
156	600.100	VI. GENERAL LIABILITY INSURANCE (0.2876% of Subtotal D + VIII + V)	LS	1	\$ 76,905.53	\$ 76,905.53
157	700.100	VII. PAYMENT & PERFORMANCE BONDS	LS	1	\$171,645.53	\$ 171,645.53
158		SUBTOTAL E. (SUBTOTAL D + VIII + V + VI + VII)				\$ 26,988,999.21



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #1 - SCHEDULE OF VALUES

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

Line No.	Item No.	Item Description	Unit	Quantity	Unit Cost	Extended Amount
159	900.100	IX.a. SOUTH TUCSON SALES TAX* (11.6% at 65% of 6.0% of Subtotal E)	LS	1	\$ 122,098.23	\$ 122,098.23
160	900.101	IX.b. CITY OF TUCSON SALES TAX* (8.7% at 65% of 66% of Subtotal E)	LS	1	\$ 1,007,310.42	\$ 1,007,310.42
161	900.102	IX.c. PIMA COUNTY SALES TAX* (6.1% at 65% of 28% of Subtotal E)	LS	1	\$ 299,631.87	\$ 299,631.87
162		IX. SALES TAX SUBTOTAL (IX.a. + IX.b. + IX.c.)				\$ 1,429,040.52
163		GUARANTEED MAXIMUM PRICE (GMP)				\$ 28,418,039.73
164	1000.000	X. OWNER'S CONTINGENCY				
165	1300.100	OWNER UNFORESEEN CONDITIONS	AL	1	\$ 300,000.00	\$ 300,000.00
166		SUBTOTAL F. (OWNER'S CONTINGENCY)				\$ 300,000.00
167		ESTIMATED TOTAL CONTRACT COST				\$ 28,718,039.73

*See "ATTACHMENT 7" for Sales Tax Ratio Calculator



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #2 - SCOPE OF WORK

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

BRIEF DESCRIPTION OF WORK:			
New 36" diameter sewer line paralleling the existing UPPR Nogales Subdivision tracks and/or Nogales Highway (between 36th Street and Aerospace Parkway), including new manholes, jack & bore casings, existing utility relocations, and asphalt/roadway repairs			
LIST OF PLANS & SPECIFICATIONS USED FOR GMP			
	Document:	Prepared By:	Date:
1	Old Nogales Interceptor/Aerospace Corridor and Park Avenue Relief Sewer Augmentation Design Phase 2 - 90% Plans (APRIL 2020 - FINAL SUBMITTAL)	Westland Resources	04/08/20
2	PCRWRD Engineering Design Standards 2016 (EDS 2016)	Pima County Regional Wastewater Reclamation Dept.	2016
3	PCRWRD Standard Specifications and Details for Construction 2016 (SSDC 2016)	Pima County Regional Wastewater Reclamation Dept.	2016
4	Standard Specifications for Public Improvements Volume 1	Pima Association of Governments (PAG)	2014
5	Standard Specifications for Public Improvements Volume 2 (Standard Details)	Pima Association of Governments (PAG)	2014



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #3 - CLARIFICATIONS, ASSUMPTIONS, EXCLUSIONS

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

CLARIFICATIONS, ASSUMPTIONS, AND EXCLUSIONS TO THE SCOPE OF WORK:	
1	Clarification - This GMP#3 submittal update is based on an anticipated construction start date of January 4th, 2020. It is assumed between September 23, 2020 and the construction start date that: 1. Final/Sealed Plans will be made available and ADEQ Construction Authorization will be obtained. 2. An agreement with UPRR will be finalized that allows construction to move forward. 3. The USACE 408 permitting process will be completed (within the vicinity of the Tucson Diversion Channel) 4. PC Procurement/BOS contract approval process will be completed. All (4) items are required in order to efficiently begin field work and major construction activities. If any of the 4 items are not finalized prior to the construction start date, the included pricing and scheduling will need to be reevaluated.
2	Clarification - At the time of this GMP#3 update, PVC pricing and availability is highly volatile and unpredictable (Force Majeure was declared by the manufacturers after their June 2020 quotes). This GMP#3 accounts for PVC purchase at the current market rates (September 2020). As the construction start date/pipe shipping date approaches (approximately 3-4 months after the September 2020 quotes were obtained), PVC pricing will need to be confirmed and reconciled within GMP#3. If pricing is less than the GMP#3 quoted amount, a credit can be offered to PCRWRD. If pricing is greater than the GMP#3 quoted amount, the use of contingencies and/or change order may be required to cover the difference in direct material cost.
3	Clarification - 90% submittal received by Borderland did <u>not</u> include any Flow Management Plans (FMP referenced in General Note #22 on page G-03). As part of this GMP, we have our own made site-specific FMP assumptions (based on our past experiences) that may/may not correlate to the FMPs noted in General Note #22 - if inconsistent, additional FMP budget may be required.
4	Clarification - 90% submittal received by Borderland did <u>not</u> include any Special Provisions (Special Provisions Section 600 is referenced in Key Note #14 on page C-02). This GMP only accounts for the scope of work noted in the 90% plans, PCRWRD/PAG standard specifications and details, and this list of clarifications/assumptions/exclusions.
5	Clarification - 90% submittal received by Borderland did <u>not</u> include any project-specific 404 permitting requirements. This GMP assumes all wash crossings (not currently shown as casing bores) will be open cut under the Nationwide Permit #14 - As such, we have not considered any specialty construction methods/techniques to cross existing washes/drainageways. Any changes to the open cut approach will need to account for construction scheduling and costs defined in this GMP.
6	Clarification - All new 12", 18", 21" and 36" sewer pipe will be SDR35/PS46 PVC pipe
7	Clarification - All new manholes will be Armorock (precast polymer concrete).
8	Clarification - Sewer sand bedding assumed to meet Pima County's current standard specification of 6" below pipe, 12" on both sides of pipe, and 12" above pipe.



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #3 - CLARIFICATIONS, ASSUMPTIONS, EXCLUSIONS

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

CLARIFICATIONS, ASSUMPTIONS, AND EXCLUSIONS TO THE SCOPE OF WORK:	
9	Clarification - To ensure casing accuracy, we will be using a guided boring head or pilot tube system to be used for the proposed casing bores.
10	Clarification - Per field coordination meetings with TDOT and PCDOT, we have confirmed the City of Tucson DOT jurisdictional authority includes all of the Nogales Highway intersections between Ajo Way and Los Reales Rd. Pima County DOT jurisdictional authority includes all of the Nogales Highway intersections between Aero Park Blvd and Hermans Rd.
11	Clarification - Railroad flagging fee is estimated at \$1,300 per day. We have estimated the number of days and UPRR flagger costs as part of each specific location that flaggers will be needed (UPRR boring crossings and siphon structures)
12	Clarification - Construction Keynote #13 (Typical) UPRR Barrier Fence is assumed as a temporary t-post and rope barrier offset 25'-35' from UPRR track centerline (to ensure there are no encroachments that require UPRR flaggers, etc.). Our installation is based on 20' spacing between t-posts (not the 10' spacing shown on sheet C-46)
13	Clarification - In order to access to the area behind the VA Hospital property, we anticipate a potential access point from the El Indio/Circle K driveway along 6th Avenue. This will require the temporary removal of chain link fence and installation of a new gate to access the VA property from the north. Construction equipment will then be tracked through the VA property and access the new sewer alignment at approximately Sta.38+50 via a secondary temporary fence removal and new gate between VA and UPRR. This assumed access point will need to be coordinated and memorialized with VA in advance of construction and is CRITICAL for construction access (as well as long-term operations and maintenance) between Interstate-10 and the Tucson Diversion Channel (Stations 38+00 to 50+00). Depending on the exact location of access to the UPRR ROW, an existing span bridge on VA property (that is structurally deficient) may need to be removed and replaced to support large construction vehicles - we've included item 104.100 as an allowance to address this physical impediment, if needed. No other alternative access points have been acquired by PCRWRD at the time of this GMP.
14	Clarification - Keynote 12 on sheet C-28 calls for removal and replacement of curb in kind at Teton Rd. Our investigations show no curb at this location, but concrete header may exist, so we've included line item 112.028 to remove/replace the header.
15	Clarification - A specific siphon structure coating manufacturer/product/specification (that is preferred by PCRWRD and/or FEU) was not provided in the 90% submittal - our cost model assumes the use of Raven 405 for all new coatings. Due to physical access limitations, the siphon structures must be cast in-place - pre-cast polymer concrete structures were not possible at the siphon structure location.



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #3 - CLARIFICATIONS, ASSUMPTIONS, EXCLUSIONS

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

CLARIFICATIONS, ASSUMPTIONS, AND EXCLUSIONS TO THE SCOPE OF WORK:	
16	<p>Clarification - The new pipeline alignment is located within (or crosses) the public right-of-way of several different jurisdictional authorities, including ADOT, Pima County, City of Tucson, City of South Tucson. As such, we've established generic permitting allowance, but specifics are not yet quantifiable until the full extent of roadway impacts/improvements are determined as part of Final/Approved plans. Actual permitting requirements and associated construction fees will be established as the right-of-way improvements are specified in agency approved plans. Borderland will only invoice for actual permitting costs realized by the project.</p>
17	<p>Clarification - The current Phase 2 alignment conflicts with numerous existing Tucson Electric Power (TEP) and Century Link (CTL) facilities, including OHE poles, manholes/vaults, pullboxes, transformers, and pedestals. It is anticipated that the ONI project will need to resolve these conflicts, but since specific existing conditions may not yet be fully depicted in the plans, we've defined some anticipated line items within the Owners Contingency to facilitate future utility coordination efforts. As conflict resolution details are made available through TEP, CTL, PCRWRD, and the design team, the plan notes and conflict resolution details should be updated to define the CMAR's scope of work vs. third party utility contractor work. This will allow generic contingencies and/or costs to be accurately accounted for in the GMP (and/or eliminated by the use of separate third-party contract/agreements between PCRWRD and the utility providers). It was assumed that any TEP/CTL design, approval, and construction of system modifications will occur within our assumed project schedule (no special considerations for additional time have been accounted for).</p>
18	<p>Clarification - Per coordination with PC, we understand a project settlement has already paid Greyhound Park for the value of their structures and related demolition costs. We need to give the owners 30 days' notice, and do not have to replace any of the improvements that exist on their property - including the fencing. As such we have <u>excluded all costs</u> for removal and replacement of existing improvements at the Greyhound Park.</p>
19	<p>Clarification - 5.5' and 7' offsets to the existing monitoring wells will be insufficient during construction. Our intent is build temporary earthen ramps over the existing wells to avoid impact to the wells. We have <u>not</u> included any costs for modification or relocation of the existing wells.</p>
20	<p>Clarification - Removal Keynote 17 on Sheet C-21 calls for existing power pole at Bilby Rd to be protected in place. Our investigations show this is an overhead electric pole operated by TEP with additional communication lines (assumed to be Century Link). Since we are trenching in close proximity to this pole, we have included item 117.021 to support the pole in-place.</p>



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #3 - CLARIFICATIONS, ASSUMPTIONS, EXCLUSIONS

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

CLARIFICATIONS, ASSUMPTIONS, AND EXCLUSIONS TO THE SCOPE OF WORK:	
21	<p>Clarification - The 90% plans do not reflect the use of any PVC couplings. However, couplings will be required at: each of the (13) boring locations, (1) at the tie-in at Station 376+51, and (2) on either side of the siphons (the two at the siphons may or may not be needed, depending on the construction schedule - which is unclear at this time due to 408 permitting). These (16) couplings are included in Item 200.100. In addition, a transition coupling is needed to connect the new 36" PVC to the existing HOBAS pipe at 36th street (SEI Terminus) - this coupling is included in Item 101.100</p>
22	<p>Clarification - PCRWRD specifications state "Any imperfections, which, in the opinion of the field engineer, may adversely affect the performance of the pipe or joints, shall be cause for rejection of the pipe." Because PVC pipe is commonly rejected by PCRWRD for being sun damaged, we have required the PVC manufacturer to pre-wrap the pipe to help minimize burning of the PVC pipe from the sun (between delivery and installation). Item 200.100 includes this temporary poly-wrapping of the pipe (from the manufacturer).</p>
23	<p>Clarification - The 90% plans do not reflect the use of joint restraints at the siphon structure pipelines. However, based on discussions with PCRWRD and WestLand, it is understood that these pipes will build some pressure under normal operating conditions - thereby requiring the joint restraints. As such, Borderland has included the cost for siphon pipeline joint restraints in Item 214.005</p>
24	<p>Clarification - Current PCRWRD installation specifications require PVC bell/spigot joint connections not overlap the PVC pipe manufacturers black line printed on the pipe (i.e. joints should not be "overstabbed"). These pipe joint connections are intermittently inspected by PCRWRD during construction and also verified during the CCTV inspection (after installation). In an open trench condition the joints can be monitored and secured to avoid the over-stabbing condition. However, at the casing bore locations where the carrier pipe is pushed/pulled through an inaccessible casing, the pipe joints cannot be isolated/controlled during installation. Our approach to GMP#3 assumes overstabbed joint connections within the casing locations will be unacceptable to PCRWRD (i.e. bell end needs to be held at the black line on the spigot). In order to prevent overstabbing of the joint connections at the boring locations, we have included partial joint restraint system to secure the pipelines during the installation within the casings. The additional material cost of 1/2 joint restrainers is included in the each of the individual jack & bore line items.</p>
25	<p>Clarification - per PCRWRD direction we have included Item 298.004 "SMART COVER H2S MONITORING SYSTEM" as an Owner Directed allowance (not shown in 90% plans)</p>
26	<p>Clarification - per PCRWRD direction we have included Item 298.005 "PCRWRD ALLOWANCE: UTILITY MODIFICATIONS AND STAND-BY INSPECTIONS" as an Owner Directed allowance</p>



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #3 - CLARIFICATIONS, ASSUMPTIONS, EXCLUSIONS

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

CLARIFICATIONS, ASSUMPTIONS, AND EXCLUSIONS TO THE SCOPE OF WORK:	
27	Clarification - per 06/29/20 GMP review meeting with PCRWRD, a CMAR contingency amount of 2% (relative to direct cost construction) was established for potential items of remaining/unknown risk that could not be reasonably identified at the time the GMP#3 package was prepared. Prior to any use/allocation of the CMAR contingency amount, Borderland will provide PCRWRD a notice/application for review and approval. The amount of CMAR Contingency that is unused during construction will be returned as a credit to PCRWRD.
28	- not used -
29	Assumption - As of the date of this GMP, Final/Sealed "FOR-CONSTRUCTION" plans are not available. It is assumed construction documents (or confirmation of the 90% plans provided) will be available prior to the anticipated construction start date included with this proposal (to be provided by PCRWRD/WestLand Resources). Delays to the start date may cause an increase in material/labor/equipment/subcontractor costs - any delays will require re-evaluation of the GMP amount.
30	Assumption - As of the date of this GMP, ADEQ "Construction Authorization" is not available. It is assumed the CA will be available prior to the anticipated construction start date included with this proposal (to be provided by PCRWRD/WestLand Resources). Delays to the start date may cause an increase in material/labor/equipment/subcontractor costs - any delays will require re-evaluation of the GMP amount.
31	Assumption - As of the date of this GMP, a PCRWRD Field Engineering "Construction Permit" is not available. It is assumed the FE permit will be available prior to the anticipated construction start date included with this proposal (Final/Approved plans and ADEQ CA to be provided by PCRWRD/WestLand Resources). Delays to the start date may cause an increase in material/labor/equipment/subcontractor costs - any delays will require re-evaluation of the GMP amount.
32	Assumption - As of the date of this GMP, a UPRR encroachment/ROW agreement is not available. It is assumed the UPRR agreement will be available prior to the anticipated construction start date included with this proposal (to be provided by PCRWRD/WestLand Resources). Delays to the start date may cause an increase in material/labor/equipment/subcontractor costs - any delays will require re-evaluation of the GMP amount.
33	Assumption - As of the date of this GMP, PCDOT has not approved/signed the final plans needed for a ROW permit. It is assumed the PCDOT approval and ROW permit will be available prior to the anticipated construction start date included with this proposal (Final/Approved plans to be provided by PCRWRD/WestLand Resources). Delays to the start date may cause an increase in material/labor/equipment/subcontractor costs - any delays will require re-evaluation of the GMP amount.



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #3 - CLARIFICATIONS, ASSUMPTIONS, EXCLUSIONS

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

CLARIFICATIONS, ASSUMPTIONS, AND EXCLUSIONS TO THE SCOPE OF WORK:	
34	Assumption - As of the date of this GMP, TDOT has not approved/signed the final plans needed for a ROW permit. It is assumed the TDOT approval and ROW permit will be available prior to the anticipated construction start date included with this proposal (Final/Approved plans to be provided by PCRWRD/WestLand Resources). Delays to the start date may cause an increase in material/labor/equipment/subcontractor costs - any delays will require re-evaluation of the GMP amount.
35	Assumption - As of the date of this GMP, USACE 404 and 408 permits are not available. It is assumed the necessary 404 and 408 permits will be available prior to the anticipated construction start date included with this proposal (to be provided by PCRWRD/WestLand Resources). Delays to the start date may cause an increase in material/labor/equipment/subcontractor costs - any delays will require re-evaluation of the GMP amount.
36	Assumption - As of the date of this GMP, a preliminary ADOT encroachment permit for the I-10 casing bore has been coordinated between ADOT and PCRWRD, but put on-hold until the actual start is confirmed. It is assumed that the preliminary coordination that has taken place (and new sewer alignment/casing bore under I-10) will remain generally acceptable to ADOT (for permitting and construction purposes). As such, the ADOT encroachment permit will be made available prior to the anticipated construction start date included with this proposal. Delays to the start date may cause an increase in material/labor/equipment/subcontractor costs - any delays will require re-evaluation of the GMP amount.
37	Assumption - Clearing and grubbing area assumed to include 25' offset from existing UPRR tracks to edge of existing roadways/property lines - varying in width from 45' to 90'. Cleared vegetation will be chipped and spread onsite (within the new sewer disturbance area).
38	Assumption - Limits/areas requiring hydroseeding were assumed to be equivalent to the clear/grub acreage.
39	Assumption - Any/all existing invasive species within the project area are assumed to be removed as part of clear/grub operations and chipped and left onsite.
40	Assumption - Spoils generated by pipe trench excavation is assumed to be generally suitable for use on the project for backfill (without screening). We do anticipate some screening of native material for portions of the alignment - Instead of assuming 100% screened backfill everywhere, we reduced our screening activities by a factor of 66% (assuming 2/3 of the alignment will need screening). Any excess materials generated by the project are assumed to be hauled to Pima County parcel between Aerospace Parkway and Old Vail Connection Rd - just east of Nogales Highway.
41	Assumption - We've assumed a 2-year bond will be required for the Phase 2 project.



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #3 - CLARIFICATIONS, ASSUMPTIONS, EXCLUSIONS

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

CLARIFICATIONS, ASSUMPTIONS, AND EXCLUSIONS TO THE SCOPE OF WORK:	
42	Assumption - For the UPRR casing bores at stations 126+99, 374+31, and 11+00 we assume cathodic protection may be required by UPRR (details unknown/unavailable at the time of the GMP). As such, we have estimated the potential need for (240) 32 lb magnesium anodes and a Type 2/5 corrosion test station (per Tucson Water Standard Detail SD-710) on each side of the UPRR casings. As directed by PCRWRD, we are showing detailed cost for these items as an allowances under items 298.001, 298.002, and 298.003. (not shown in 90% plans)
43	Assumption - Impacted traffic control signage along Nogales Highway and other roadways are assumed to be replaced with new signs, posts, and foundations.
44	Assumption - SWPPP assumptions: 24,656 LF of filter sock, 30,820 LF of trench/berm (remaining pipeline length), 800 LF of straw logs, (4) signs, (2) spill kits, 25 months of inspection (average three inspections per month), modifications/additions to designer provided SWPPP book, (2) concrete washout signs, (18) 50'x75' track-out pads, 550 days of BMP maintenance, (20) spill berms for equipment
45	Assumption - We are assuming Fair Ave pavement impact repairs will be permissible through the City of Tucson, even as the current roadway is shown to be located partially in UPRR ROW (not entirely City of Tucson) on sheet C-06 and C-07.
46	Assumption - For installation of MH#62, sewer pipeline installation, and the Drexel road bore under UPRR, it is assumed Drexel road will be closed to traffic for at least six weeks. In addition, construction sequencing at this junction structure will need close evaluation as the design proceeds so that the UPRR bore (and receiving pit) does not conflict with the new manhole.
47	Assumption - It was assumed the new sewer line construction may impact the existing improved channel between stations 50+00 and 62+00. Estimated costs for handling trench spoils, removing, and hauling back-in the necessary backfill material for this portion of work adjacent to the existing drainage channel
48	Assumption - Existing AC water line shown at 89+07± will require change out to ductile iron (approximately 30 LF). Our GMP assumes a satisfactory shutdown of the line can be achieved by Tucson Water for the change-out - no special considerations/costs have been included for a scenario where the shutdown is not satisfactory.
49	Assumption - Existing AC water line shown at 102+36± will require change out to ductile iron (approximately 30 LF). Our GMP assumes a satisfactory shutdown of the line can be achieved by Tucson Water for the change-out - no special considerations/costs have been included for a scenario where the shutdown is not satisfactory.
50	Assumption - Existing AC water line shown at 142+20± may require change out to ductile iron (approximately 30 LF). Our GMP assumes a satisfactory shutdown of the line can be achieved by Tucson Water for the change-out - no special considerations/costs have been included for a scenario where the shutdown is not satisfactory.



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #3 - CLARIFICATIONS, ASSUMPTIONS, EXCLUSIONS

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

CLARIFICATIONS, ASSUMPTIONS, AND EXCLUSIONS TO THE SCOPE OF WORK:	
51	Assumption - Use of unscreened native material for all backfill above shading and below ABC/AC is acceptable (i.e., no slurry to be used in backfill) – If slurry becomes required for backfill, specific locations and limits need to be provided for accurate cost and schedule considerations.
52	Assumption - Removal Keynote 19 on Sheet C-09 calls for the relocation of an existing electric box. We believe this is actually and overhead street light that will need be temporarily removed and then reinstalled after the sewer installation. We have included line item 119.009 to relocate the light pole in coordination with TDOT/TEP.
53	Assumption - Removal Keynote 18 on Sheet C-30 calls for the relocation of an existing light pole. We believe (3) existing street lights will need be temporarily removed and then reinstalled after the sewer installation. We have included line item 118.030 to temporarily remove and then reinstall the existing light poles in coordination with TDOT/TEP.
54	- not used -
55	Exclusion - No budget has been included to address NPPO scope/mitigation. It is understood any/all NPPO costs will be handled outside the construction contract.
56	Exclusion - No budget has been included to address 404/408 permitting fees. It is understood any/all 404/408 permitting costs will be handled outside the construction contract.
57	Exclusion - No budget has been included to address Riparian Area mitigation fees. It is understood any/all in-lieu fees or other mitigation costs will be handled outside the construction contract.
58	Exclusion - Per previous coordination efforts with RWRD, no stabilized surfaces will be included within the Phase 2 project. Access to manholes will be provided from existing roadways and pathways.
59	Exclusion - Except where explicitly noted in the plans, slurry costs were not included anywhere in the trench backfill for Phase 2.
60	Exclusion - Other than at the VA siphon location which is unavoidable, costs for specialized shoring systems within UPRR Right-of-Way have <u>not</u> been included along the current alignment.
61	Exclusion - Based on initial coordination with UPRR, typical contractor right-of-entry fees to access UPRR ROW have <u>not</u> been included by Borderland – instead UPRR ROW access permitting and fees will be accounted for in the master encroachment agreement between UPRR and PCRWRD
62	Exclusion: Trench backfill is assumed per PCRWRD standards. We have excluded the UPRR requirement for backfill placed in a maximum of 6" Uniform Layers" (i.e. not consistent with PCRWRD standards). Additional labor/equipment costs will need to be considered if the UPRR requirement is implemented.
63	Exclusion - Keynote 8 on Sheet C-09 calls for removal and replacement of existing bollards. Our investigations show no bollards at this location so they've been excluded. Instead we've included the removal/replacement of 24"x4" PVC object markers that currently exist.



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #3 - CLARIFICATIONS, ASSUMPTIONS, EXCLUSIONS

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

CLARIFICATIONS, ASSUMPTIONS, AND EXCLUSIONS TO THE SCOPE OF WORK:	
64	Exclusion - Based on current sewer alignment to the middle of Fair Ave (sheet C-07), conflicts with the existing TEP power pole should be eliminated, and the OHE pole is anticipated to remain in place. As such we have specifically excluded any costs related to the relocation of the existing power pole at approximate Station 69+10.
65	Exclusion - Removal Keynote 17 on Sheet C-09 calls for existing OHE/communication pole near Fair Street to be protected in place. As such, we have specifically excluded any costs related to the relocation of the existing pole.
66	Exclusion - Removal Keynotes 10, 12, and 19 on Sheet C-18 calls for removal and relocation of existing TEP power pole, guy wire, curb, communication pedestal (likely operated by Century Link), and electric box at Drexel Rd. Our investigations show this is a multi-directional overhead electric pole operated by TEP, with an existing transformer that serves the existing meter pedestal for the Nogales Hwy/Drexel Rd traffic signal. Since this pole relocation was a substantial cost, we are instead planning to use a 54" x 100 LF casing bore to avoid the conflicts with existing improvements at the Drexel Road intersection. We have excluded the relocation costs associated with Keynotes 10, 12, and 19. Existing OHE pole will be supported in-place during boring operations.
67	Exclusion - Removal Keynote 17 on Sheet C-27 calls for existing power pole at Elvira Rd to be protected in place (even though it is directly on top of the sewer alignment). Our investigations show this is an overhead electric pole operated by TEP with additional communication lines (assumed to be Century Link). Since this pole relocation was a substantial cost, we are instead planning to use a 54" x 40 LF casing bore to avoid the conflicts with this existing OHE pole. The existing OHE pole will be supported in-place during boring operations. The original jack&bore subcontractor quote included 20 LF of casing at this location, but after further evaluation with the design team and TEP, it was determined that 40 LF is the minimum casing length that can be constructed without impacting the existing pole – therefore, our GMP extends the original unit price over the additional 20 LF (for a total of 40 LF) – see item 214.027.
68	Exclusion - Removal Keynote 17 on Sheet C-28 calls for the existing power pole south of Teton Rd to be protected in place. This pole is in conflict with construction and must be relocated. Our investigations show this is an overhead electric pole operated by TEP with additional communication lines (assumed to be Century Link). Since this pole relocation will require an agreement between PCRWRD and the utility providers (TEP and Century Link) (and/or work to be performed by utility's contractors) we have specifically excluded any costs related to the relocation of the existing pole in our scope of work. Instead, PCRWRD has directed us to include 298.005 "OWNER DIRECTED CHANGE IN SCOPE" as an Owner Directed allowance in case these third-party costs need to be accounted for as part of the overall GMP.



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #3 - CLARIFICATIONS, ASSUMPTIONS, EXCLUSIONS

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

CLARIFICATIONS, ASSUMPTIONS, AND EXCLUSIONS TO THE SCOPE OF WORK:	
69	Exclusion - Removal Keynote 27 on Sheet C-30 calls for removal and relocation of existing power pole at Los Reales Rd. Our investigations show this is an overhead electric guy pole operated by TEP that will require significant cost and an agreement between PCRWRD and the utility provides (TEP) (and/or work to be performed by utility's contractors). Based on an alignment shift into the Nogales Highway NB lanes, we have assumed this pole will be protected-in-place and we have specifically excluded any costs related to the relocation of the existing pole.
70	Exclusion - Removal Keynote 22 on Sheet C-30 calls for removal and relocation of existing traffic loops in Nogales Highway. Per coordination with TDOT, the Nogales Highway/Los Reales Road Traffic Signal is currently operated by detection cameras and <u>NOT</u> detection loops in the existing asphalt. As such, we have specifically excluded the cost to replace any detection loops in the existing asphalt that may be impacted by the new sewer installations.
71	Exclusion - Removal Keynote 20 on Sheets C-33 and C-34 calls for removal and relocation of existing traffic signal at Aeropark Rd. Due to cost and impact to traffic (Raytheon entrance) we have excluded the traffic signal relocation and will avoid the conflict with a casing bore - See Item 214.034
72	Exclusion - Removal Keynote 19 on Sheet C-37 calls for removal and relocation of existing electric box near Station 340+30. Our investigations show this is an abandoned street light that is no longer in service. As such, we have specifically excluded any costs related to the relocation of the existing pullbox and street light.
73	Exclusion - Construction Keynote 15 on Sheet C-03 calls for Kinder Morgan notification during jack and bore activities under I-10. Per email correspondence provided by RWRD, it is understood an agreement will exist between Kinder Morgan and PCRWRD for standby services. As such, we have specifically excluded any costs related to Kinder Morgan's standby. Instead, PCRWRD has directed us to include 298.005 "PCRWRD ALLOWANCE: UTILITY MODIFICATIONS AND STAND-BY INSPECTIONS" as an Owner Directed allowance in case these third-party costs need to be accounted for as part of the overall GMP.
74	Exclusion - Construction Keynote 17 on Sheet C-06 calls for EPNG notification when working within 25' of EPNG pipelines. Per email correspondence provided by RWRD, it is understood an agreement will exist between Kinder Morgan and PCRWRD for standby services. As such, we have specifically excluded any costs related to EPNG standby. Instead, PCRWRD has directed us to include 298.005 "PCRWRD ALLOWANCE: UTILITY MODIFICATIONS AND STAND-BY INSPECTIONS" as an Owner Directed allowance in case these third-party costs need to be accounted for as part of the overall GMP.



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #3 - CLARIFICATIONS, ASSUMPTIONS, EXCLUSIONS

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

CLARIFICATIONS, ASSUMPTIONS, AND EXCLUSIONS TO THE SCOPE OF WORK:	
75	Exclusion - Construction Keynote 20 on Sheets C-18 thru C-22 calls for Tucson Water notification when working between stations 168+70 and 207+00. We have specifically excluded any costs related to delays/requirements as a result of Tucson Water standby. Instead, PCRWRD has directed us to include 298.005 "PCRWRD ALLOWANCE: UTILITY MODIFICATIONS AND STAND-BY INSPECTIONS" as an Owner Directed allowance in case these third-party costs need to be accounted for as part of the overall GMP.
76	Exclusion - Plan view of Sheet C-27 shows (2) existing manholes at Station 243+70 and 244+50 (between Aragon Rd and Elvira Rd). Our investigations show these are existing underground electric vaults likely operated by TEP. It is currently unknown if a conflict exists with these manholes/vaults. If relocations are needed, it is assumed an agreement will be required between PCRWRD and the utility provider (assumed to be TEP) (and/or work to be performed by utility's contractors). As such, we have specifically excluded any costs related to the relocation of the existing manholes. Instead, PCRWRD has directed us to include 298.005 "PCRWRD ALLOWANCE: UTILITY MODIFICATIONS AND STAND-BY INSPECTIONS" as an Owner Directed allowance in case these third-party costs need to be accounted for as part of the overall GMP.
77	Exclusion - Based on coordination with PCRWRD, we have not included any costs associated with joint restraints on the PVC pipe (other than those areas specifically noted above in items #23 and #24)
78	Exclusion - Based on the use of a siphon and casing bore, we have not included any other construction costs associated with PCRFCO and/or USACE review/approval for crossing the Tucson Diversion Channel
79	Exclusion - Based on the use of a casing bore, we have not included any other construction costs associated with PCRFCO design (and construction) review/approval for crossing the Rodeo Wash (just south of Irvington Rd)
80	Exclusion - Based on the use of a casing bore, we have not included any other construction costs associated with UPRR design (and construction) review/approval for crossing the existing railroad spur at station 127+50
81	Exclusion - An odor control allowance of \$400,000 was previously discussed during the design phase, but is specifically excluded from this GMP (per direction from PCRWRD)
82	Exclusion - A material escalation allowance (10% of raw material costs) was previously discussed during the design phase, but is specifically excluded from this GMP (per direction from PCRWRD)
83	Exclusion - A siphon air jumper allowance was previously discussed during the design phase, but is specifically excluded from this GMP (per direction from PCRWRD)



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #3 - CLARIFICATIONS, ASSUMPTIONS, EXCLUSIONS

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

CLARIFICATIONS, ASSUMPTIONS, AND EXCLUSIONS TO THE SCOPE OF WORK:	
84	Exclusion - There is an existing TEP OHE pole near Teton Road (Sta.257+50) that is in direct conflict with the new sewer alignment. Based on cost analysis the most efficient resolution is relocation of the OHE pole (estimated at \$62,500 by TEP) which will require an agreement between PCRWRD and TEP. Per direction from PCRWRD, since this work will happen via separate agreement, we have specifically excluded the TEP estimated cost from this GMP.
85	Exclusion - Item 202.100 and 202.100, the current 90% plans include a quantity of (49) 5' diameter manholes, but it understood that current MH#6 will be eliminated from the project. As such, this GMP excludes (1) of the noted 5' manholes
86	Exclusion - Item 203.100 and 203.100, the current 90% plans include a quantity of (6) 6' diameter manholes, but it understood that current MH#39 will be eliminated from the project. As such, this GMP excludes (1) of the noted 5' manholes
87	Exclusion - Item 205.100 and 205.100, the current 90% plans include a quantity of (2) 6'-7' diameter manholes w/scour protection, but it understood that current MH#18 will be eliminated from the project. As such, this GMP excludes (1) of the noted 5' manholes. In addition, it is understood the special scour protection detail will not be used - instead this will be a traditional 6' manhole with weld tabs.

Borderland

CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #4 - ANTICIPATED CONSTRUCTION SCHEDULE

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

ID	Task Name	Duration	Start	Finish	0	Half 2, 2020	Half 1, 2021	Half 2, 2021	Half 1, 2022	Half 2, 2022	Half 1, 2023
					JUL/AUG/SEP	OCT/NOV/DEC	JAN/FEB/MAR	APR/MAY/JUN	JUL/AUG/SEP	OCT/NOV/DEC	JAN/FEB/MAR
1	PRECONSTRUCTION SERVICES	143 days	Fri 6/19/20	Mon 1/4/21							
2	Permits/Approvals	142 days	Fri 6/19/20	Mon 1/4/21							
3	PC Procurement/BOC Contract Approval	135 days	Fri 6/19/20	Fri 11/27/20							
4	UPRR ROW Agreement/Contractors Right of Entry	142 days	Fri 6/19/20	Mon 1/4/21							
5	USACE 404 and 408 Permits	142 days	Fri 6/19/20	Mon 1/4/21							
6	PCDOT/IDOT Plan Approval (Location in ROW)	142 days	Fri 6/19/20	Mon 1/4/21							
7	ADOT Encroachment Permit (I-10 Casing Bore)	135 days	Fri 6/19/20	Thu 11/26/20							
8	ADEQ Construction Authorization	122 days	Fri 6/19/20	Mon 12/7/20							
9	PCRWED - Field Engineering Construction Permit	20 days	Tue 12/8/20	Mon 1/4/21							
10	Material Submittals - Agency Reviews/Approvals	25 days	Tue 12/1/20	Mon 1/4/21							
17	PCRWED Issuance of Notice to Proceed	8 days	Mon 5/4/21	Mon 5/18/21							
18	CONSTRUCTION SERVICES	557 days	Mon 1/4/21	Tue 2/23/22							
19	Mobilization/Survey	541 days	Mon 1/4/21	Mon 1/30/22							
20	Clearing/Grubbing	75 days	Mon 1/11/21	Fri 4/23/21							
21	SWPPP BMPs	538 days	Mon 1/11/21	Wed 2/17/22							
22	Install Gravity Sewer and Manholes	521 days	Mon 1/18/21	Mon 1/18/22							
23	Segment 1: Open Cut (10+00 to 22+10) (36th to HP Gas-Borderland)	16 days	Tue 2/9/21	Tue 3/30/21							
24	Segment 2: Casing Bore Crew #3 (22+10 to 22+70) (HP Gas-Borderland)	15 days	Tue 2/9/21	Mon 3/1/21							
25	Segment 3: Open Cut (22+70 to 31+83) (HP Gas-Borderland to Interstate-10)	15 days	Wed 3/31/21	Tue 4/20/21							
26	Segment 4: Casing Bore Crew #1 (31+83 to 38+30) (Interstate-10)	67 days	Mon 2/18/21	Tue 4/20/21							
27	Segment 5: Open Cut (38+38 to 48+93) (Interstate-10 to Siphon Structure/TDC)	18 days	Wed 4/21/21	Fri 5/14/21							
28	Segment 6: Casing Bore (49+72 to 50+65) (Siphon Structure/TDC)	20 days	Wed 4/21/21	Tue 5/18/21							
29	Siphon Structures (49+07 to 51+06) (Tucson Diversion Channel)	60 days	Mon 5/17/21	Fri 8/6/21							
30	Segment 7: Open Cut (51+08 to 60+40) (Siphon Structure/TDC to Ajo Way)	12 days	Mon 5/17/21	Tue 6/1/21							
31	Segment 8: Casing Bore Crew #2 (60+40 to 64+07) (Ajo Way)	42 days	Tue 5/2/21	Wed 6/23/21							
32	Segment 9: Open Cut (64+07 to 134+82) (Ajo to Irvington)	64 days	Wed 6/2/21	Mon 8/30/21							
33	Segment 10: Casing Bore (134+82 to 138+05) (Irvington Way)	40 days	Wed 5/19/21	Tue 7/13/21							
34	Segment 11: Open Cut (138+05 to 126+59) (Irvington to UPRR Spur)	12 days	Tue 8/31/21	Wed 9/15/21							
35	Segment 12: Casing Bore (126+59 to 128+22) (UPRR Spur)	15 days	Wed 7/14/21	Tue 8/3/21							
36	Segment 13: Open Cut (128+22 to 168+50) (UPRR Spur to Draxel)	51 days	Thu 9/16/21	Thu 11/25/21							
37	Segment 14: Casing Bore (168+50 to 169+50) (Draxel Road)	15 days	Fri 11/5/21	Thu 11/25/21							
38	Segment 15: Open Cut (169+50 to 220+70) (Draxel to Valencia)	64 days	Fri 11/26/21	Wed 2/23/22							
39	Segment 16: Casing Bore (220+70 to 223+30) (Valencia Road)	35 days	Fri 11/26/21	Thu 1/13/22							
40	Segment 17: Open Cut (223+30 to 233+43) (Valencia Rd to Valencia Wash)	13 days	Thu 2/24/22	Mon 3/14/22							
41	Segment 18: Casing Bore (233+43 to 235+09) (Valencia Wash)	25 days	Fri 1/14/22	Thu 2/3/22							
42	Segment 19: Open Cut (235+09 to 248+30) (Valencia Wash to Elvira)	20 days	Tue 3/15/22	Mon 4/11/22							
43	Segment 20: Casing Bore (248+30 to 248+50) (Elvira Rd O&E Pole)	13 days	Fri 2/18/22	Tue 3/8/22							



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #4 - ANTICIPATED CONSTRUCTION SCHEDULE

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

ID	Task Name	Duration	Start	Finish	D	Half 2, 2020	Half 1, 2021	Half 2, 2021	Half 1, 2022	Half 2, 2022	Half 1, 2023
						DIAGNO	FEV	MAY	AUG	NOV	FEB
44	Segment 21: Open Cut (248+50 to 289+33) (Elvira to Elvado Wash)	55 days	Tue 4/12/22	Mon 6/7/22							
45	Segment 22: Casing Bore (289+33 to 289+70) (Elvado Wash)	13 days	Thu 5/12/22	Mon 5/30/22							
46	Segment 23: Open Cut (289+70 to 305+66) (Elvado Wash to Aeropark)	20 days	Tue 6/28/22	Mon 7/25/22							
47	Segment 24: Casing Bore (305.66 to 307+37) (Aeropark)	25 days	Tue 5/31/22	Mon 7/4/22							
48	Segment 25: Open Cut (307+37 to 326+35) (Aeropark to Hermans)	24 days	Tue 7/26/22	Fri 8/26/22							
49	Segment 26: Casing Bore (326+33 to 329+05) (Hermans)	33 days	Tue 7/8/22	Mon 8/22/22							
50	Segment 27: Open Cut (329+05 to 374+31) (Hermans to UPRR)	57 days	Mon 8/29/22	Tue 11/15/22							
51	Segment 28: Casing Bore (374+31 to 375+83) (UPRR)	18 days	Fri 10/21/22	Tue 11/15/22							
52	Segment 29: Open Cut (375+73 to 376+51) (UPRR to ONI Phase 1 Tie-In)	5 days	Wed 11/16/22	Tue 11/22/22							
53	Segment A: Drisel Open Cut (10+00 to 10+26) (ONI Phase 2 to UPRR)	3 days	Wed 11/23/22	Fri 11/25/22							
54	Segment B: Drisel Casing Bore (10+28 to 11+50) (UPRR)	15 days	Mon 11/28/22	Fri 12/16/22							
55	Segment C: Drisel Open Cut (11+53 to 11+90) (UPRR to 36" Water)	3 days	Mon 12/19/22	Wed 12/21/22							
56	Segment D: Drisel Casing Bore (11+90 to 12+81) (36" Water)	15 days	Thu 12/22/22	Wed 1/11/23							
57	Segment E: Drisel Open Cut (12+81 to 13+02) (36" Water to ONI Phase 3 Tie-In)	3 days	Thu 1/12/23	Mon 1/16/23							
58	QA/QC - Testing	521 days	Mon 1/18/21	Mon 1/16/23							
59	Sewer Permitting Closeout	28 days	Tue 1/17/23	Tue 2/21/23							
60	PCRWRD As-built Review/Approval	10 days	Tue 1/17/23	Mon 1/30/23							
61	ADEQ Discharge Authorization	15 days	Tue 1/18/23	Mon 2/20/23							
62	PCRWRD Construction Permit Closeout	15 days	Tue 1/31/23	Mon 2/20/23							
63	Utility Conflicts with other agencies' sewer systems	1 day	Tue 3/21/23	Tue 3/21/23							
64	Utility Conflict Resolutions and Surface Restorations*	546 days	Mon 1/4/21	Mon 2/6/23							
65	TEP OHE Pole Relocation (Teban Road)	85 days	Mon 1/4/21	Fri 4/30/23							
66	Billby Traffic Signal Controller Modifications	85 days	Mon 1/4/21	Fri 4/30/23							
67	Asphalt Pavement Patch - Fair Ave (w/Storm Drain)	15 days	Tue 8/31/21	Mon 9/20/21							
68	Asphalt Pavement Patch - Fair Ave/Pennsylvania/Michigan St	15 days	Tue 9/21/21	Mon 10/11/21							
69	Asphalt Pavement Patch - Billby	15 days	Thu 2/24/22	Wed 3/16/22							
70	Asphalt Pavement Patch - Nog Hwy/Valencia	15 days	Thu 3/17/22	Wed 4/6/22							
71	Asphalt Pavement Patch - Teban	15 days	Tue 6/28/22	Mon 7/18/22							
72	Asphalt Pavement Patch - Los Rioses	15 days	Tue 7/19/22	Mon 8/8/22							
73	Asphalt Pavement Patch - Drisel (east of UPRR)	15 days	Tue 1/17/23	Mon 2/6/23							
74	Hydroseeding (10+00 to 62+00)	15 days	Wed 6/9/21	Tue 6/29/21							
75	Hydroseeding (63+00 to 135+00)	15 days	Tue 9/7/21	Mon 9/27/21							
76	Hydroseeding (116+00 to 168+80)	15 days	Fri 12/3/21	Thu 12/23/21							
77	Hydroseeding (169+30 to 221+00)	15 days	Thu 3/3/22	Wed 3/23/22							
78	Hydroseeding (224+00 to 306+00)	15 days	Tue 8/2/22	Mon 8/22/22							
79	Hydroseeding (306+00 to 376+51)	15 days	Wed 11/30/22	Tue 12/20/22							



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #5 - CASH-FLOW FORECAST

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

Estimated Monthly Cash-Flow Forecast* (\$,000s)																													
Major Work Areas	Work Performed: To be Invoiced:	FY20-21 Work						FY21-22 Work												FY22-23 Work									
		Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	
Buy Pipe	3419																												
36th to Ajo	591	591	591	591	591	591																							
Ajo to Irvington					1205	1205	868	337																					
Irvington to Drexel							904	904	904	904																			
Drexel to Valencia											904	904	904	904															
Valencia to Los Reales													723	723	723	723	723												
Los Reales to Hermans																		452	904	904	904	452							
Hermans to Phase 1 Drexel to Phase 3																						563	563	563	563	563	563	281	281
Monthly Subtotals	4010	591	591	1796	1796	2363	1241	904	904	904	904	1627	1627	723	723	1175	904	904	904	1015	563	563	563	563	563	281	281	281	
FY Subtotals	\$11,147,785.98						\$12,537,617.58												\$4,732,636.17										
Project Total***	\$28,418,039.73																												
*Estimated amounts reflect anticipated installations/work completed by months end																													
**Forecast assumes start of construction in January 4, 2021																													
***Forecast Total does NOT include unencumbered Owners Contingency amount of \$300,000																													



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #6 - SUBCONTRACTORS LIST

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

LIST OF ANTICIPATED SUBCONTRACTORS						
	Company	Scope of Work:	Selection Based on:	Anticipated Subcontractor Participation		
				SBE Status? (YES/NO)	Anticipated Subcontract Value (\$)	Anticipated Participation (%)
1	Gonzales Boring & Tunneling	Casing Bore	Quals and Price	NO	\$ 4,506,302.00	15.86%
2	Trafficade	Signage/Traffic Control	Quals and Price	NO	\$ 379,708.30	1.34%
3	RLF Consulting	Construction Survey	Quals and Price	NO	\$ 199,600.00	0.70%
4	CMT Engineering Labs	QA/QC Testing	Quals and Price	NO	\$ 196,370.00	0.69%
5	PACE	Electrical	Quals and Price	YES	\$ 183,600.00	0.65%
6	Kaneen Communications	Public Relations	Quals and Price	YES	\$ 165,200.00	0.58%
7	Southwest Environmental	Coatings	Quals and Price	NO	\$ 113,464.00	0.40%
8	Desert Seeders	Hydroseed	Quals and Price	NO	\$ 111,775.00	0.39%
9	Canyon Fence	Fencing/Handrail	Quals and Price	NO	\$ 76,341.20	0.27%
10	Hunter Guardrail	Guardrail	Quals and Price	NO	\$ 68,000.00	0.24%
11	Trench Shore Rental	Slide Rail Shoring	Quals and Price	NO	\$ 65,532.00	0.23%
12	ProPipe	CCTV	Quals and Price	NO	\$ 35,161.10	0.12%
13	PMI	Striping (major)	Quals and Price	NO	\$ 31,000.00	0.11%
14	Arrow Striping	Striping (minor)	Quals and Price	NO	\$ 27,500.00	0.10%
15	EPAC	SWPPP	Quals and Price	NO	\$ 21,300.00	0.07%
Anticipated Subcontractor Total Value					\$ 6,180,853.60	21.75%
Anticipated Self-Performance Total Value					\$22,237,186.13	78.25%

ANTICIPATED SBE GOAL SUMMARY		
BORDERLAND GMP#3 AMOUNT	=	\$28,418,039.73
PIMA COUNTY SBE PARTICIPATION GOAL - GMP#3 (%)	=	0.00%
PIMA COUNTY SBE PARTICIPATION GOAL - GMP#3# (\$)	=	\$0.00
Anticipated SBE Participation Total	=	\$348,800.00
Anticipated SBE Participation Total (%)	=	1.23%
SBE Participation Goal Anticipated to be Met (Yes/No)	=	N/A



CONSTRUCTION MANAGER AT RISK (CMAR) - CONSTRUCTION SERVICES

ATTACHMENT #8 - SALES TAX RATIO CALCULATOR

GMP#3 - CONSTRUCTION OF PHASE 2 SEWER (Old Nogales Interceptor)

Updated: September 24, 2020

SEGMENT	BEGIN STATION	END STATION	LENGTH	JURISDICTION	NOTES
1	10+00.00	32+00.00	2,200.00	CITY OF SOUTH TUCSON	36th Street to Interstate-10
2	32+00.00	275+00.00	24,300.00	CITY OF TUCSON	Interstate-10 to Los Reales
3	275+00.00	376+47.90	10,147.90	PIMA COUNTY	Los Reales to Aerospace Pkwy
PHASE 2 - TOTAL LENGTH			36,647.90		

JURISDICTION	LENGTH	% of TOTAL LENGTH	% of TOTAL LENGTH (ROUNDED)*
CITY OF SOUTH TUCSON	2,200.00	6.00%	6.00%
CITY OF TUCSON	24,300.00	66.31%	66.00%
PIMA COUNTY	10,147.90	27.69%	28.00%
PHASE 2 - TOTALS	36,647.90	100.00%	100.00%

*USE ROUNDED PERCENTAGES TO CALCULATE SALES TAX

RIDER

**Travelers Casualty and Surety Company of America
Hartford, CT 06183**

To be attached to and form a part of:

Bond No. 106656606

Type of Bond: Performance and Payment

Executed by Borderland Construction Company, Inc., as Principal, and by Travelers Casualty and Surety Company of America, as Surety, in favor of Pima County and dated April 19, 2017.

In consideration of the premium charged for the attached bond, it is hereby agreed to change:

the bond amount per GMP 3 Phase 2 in the amount of \$28,718,039.73

From: Thirteen Million Six Hundred Thirty One Thousand Four Hundred Seventy Three and 36/100 Dollars (\$13,631,473.36)

To: Forty Two Million Three Hundred Forty Nine Thousand Five Hundred Thirteen and 09/100 Dollars (\$42,349,513.09)

This rider is effective October 9, 2020.

This rider is executed upon the express condition that the surety's liability under said bond shall not be cumulative and shall in no event exceed the amount specifically set forth in said bond or any existing certificate changing the amount of said bond. The referenced bond shall be subject to all its agreements, limitations and conditions except as herein expressly modified.

Signed this 9th day of October, 2020.

Borderland Construction Company, Inc.
(Principal)

By: [Signature]

Travelers Casualty and Surety Company of America

By: [Signature]
Andrea T Windish, Attorney-in-Fact

*Rider Accepted By: **Pima County**
(Obligee)

By: [Signature]





**Travelers Casualty and Surety Company of America
Travelers Casualty and Surety Company
St. Paul Fire and Marine Insurance Company**

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company are corporations duly organized under the laws of the State of Connecticut (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint **Andrea T Windish** of **TEMPE Arizona**, their true and lawful Attorney-in-Fact to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed, and their corporate seals to be hereto affixed, this **3rd** day of **February**, 2017.



State of Connecticut

City of Hartford ss.

By: 
Robert L. Raney, Senior Vice President

On this the **3rd** day of **February**, 2017, before me personally appeared **Robert L. Raney**, who acknowledged himself to be the Senior Vice President of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal.

My Commission expires the **30th** day of **June**, 2021




Marie C. Tetreault, Notary Public

This Power of Attorney is granted under and by the authority of the following resolutions adopted by the Boards of Directors of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, which resolutions are now in full force and effect, reading as follows:

RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President, any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary may appoint Attorneys-in-Fact and Agents to act for and on behalf of the Company and may give such appointee such authority as his or her certificate of authority may prescribe to sign with the Company's name and seal with the Company's seal bonds, recognizances, contracts of indemnity, and other writings obligatory in the nature of a bond, recognizance, or conditional undertaking, and any of said officers or the Board of Directors at any time may remove any such appointee and revoke the power given him or her; and it is

FURTHER RESOLVED, that the Chairman, the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President may delegate all or any part of the foregoing authority to one or more officers or employees of this Company, provided that each such delegation is in writing and a copy thereof is filed in the office of the Secretary; and it is

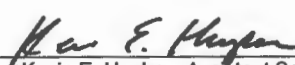
FURTHER RESOLVED, that any bond, recognizance, contract of indemnity, or writing obligatory in the nature of a bond, recognizance, or conditional undertaking shall be valid and binding upon the Company when (a) signed by the President, any Vice Chairman, any Executive Vice President, any Senior Vice President or any Vice President, any Second Vice President, the Treasurer, any Assistant Treasurer, the Corporate Secretary or any Assistant Secretary and duly attested and sealed with the Company's seal by a Secretary or Assistant Secretary; or (b) duly executed (under seal, if required) by one or more Attorneys-in-Fact and Agents pursuant to the power prescribed in his or her certificate or their certificates of authority or by one or more Company officers pursuant to a written delegation of authority; and it is

FURTHER RESOLVED, that the signature of each of the following officers: President, any Executive Vice President, any Senior Vice President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary, and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any certificate relating thereto appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or understanding to which it is attached.

I, **Kevin E. Hughes**, the undersigned, Assistant Secretary of Travelers Casualty and Surety Company of America, Travelers Casualty and Surety Company, and St. Paul Fire and Marine Insurance Company, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies, which remains in full force and effect.

Dated this **9th** day of **October**, 2020




Kevin E. Hughes, Assistant Secretary

**To verify the authenticity of this Power of Attorney, please call us at 1-800-421-3880.
Please refer to the above-named Attorney-in-Fact and the details of the bond to which the power is attached.**