



SHARING YOUR VISION. BUILDING SUCCESS.

5/17/2021

Scott Ketchmark
Utilities Superintendent
10355 N. 121st Avenue
El Mirage, AZ, 85335

Re: El Mirage Water Reclamation Facility Filter Upgrades – Construction Phase Change Order Price Proposal

Dear Mr. Ketchmark,

Please see attached our Construction Phase Change Order Price Proposal based on 90% progress design for the El Mirage Water Reclamation Facility Filter Upgrades D/B.

Attached to this letter you will find:

1. DBIA Design-Build Contract Change Order Form – CO001
2. List of Scope of Work Clarifications and Inclusions/Exclusions.
3. Price Proposal Summary by Scope of Work Item.
4. 90% Detail Estimate.
5. Project Schedule
6. Proposed MOPO approach for new mechanical piping and tie-in of new filter.
7. Supplier and Subcontractor Quotes.

Please do not hesitate to contact me if you have any questions or comments.

Best Regards,

PCL CONSTRUCTION, INC.

Jesus G Angulo
Project Manager
E-mail: jangulo@pcl.com
Mobile: (480)493-8706

Attachment: DBIA 500D2 Change Order Form, List of Scope of Work Clarifications, 90% design progress detail estimate, Project Schedule, MOPO for mechanical work, Supplier and Subcontractor Quotes.

CC: Adam Gordon, Craig Yakubow, Josh Tomita, Kevin Roach, Michael Cox, Andrea Kagie

PCL CONSTRUCTION, INC.

1711 West Greentree Drive, Suite 201, Tempe, AZ 85284
Telephone: 480-829-6333 ♦ Fax: 480-829-8252 ♦ www.pcl.com

Equal Opportunity Employer



Design-Build Change Order Form

For Use with DBIA Document No. 525, *Standard Form of Agreement Between Owner and Design-Builder – Lump Sum* (2010 Edition) and DBIA Document No. 530, *Standard Form of Agreement Between Owner and Design-Builder – Cost Plus Fee with an Option for A Guaranteed Maximum Price* (2010 Edition)

Change Order Number: 001		Change Order Effective Date: (date when executed by both parties)	
Project: Water Reclamation Facility – Effluent Filter Project Design-Build		Design-Builder's Project No: 5471224	
		Date of Agreement: December 1 st , 2020	
Owner: City of El Mirage 10355 N. 121 st Avenue El Mirage, AZ, 85335		Design-Builder: PCL Construction, Inc. 1711 W Greentree Drive, Suite 201 Tempe, AZ, 85284	

Construction Phase – Pricing Proposal based on 90% Design Progress

Scope of the Change:

Original Contract Price:	\$ 525,717.00
Net Change by Previous Change Order No(s): to:	\$ 0.00
This Change Order Increase (attach breakdown):	\$ 1,409,676.00
New Contract Price:	\$ 1,935,393.00

Original Contract Completion Date:	June 22	2021
Adjustments by Change Order No(s) to:	0	(calendar days)
This Change Order Contract Time Increase:	149	(calendar days)
Revised Substantial Completion Date:	November 18,	2021

By executing this Change Order, Owner and Design-Builder agree to modify the Agreement's Scope of Work, Contract Price and Contract Time as stated above. Upon execution, this Change Order becomes a Contract Document issued in accordance with DBIA Document No. 535, *Standard Form of General Conditions of Contract Between Owner and Design-Builder*, (2010 Edition).

OWNER:

By: _____
Printed Name: _____
Title: _____
Date: _____

DESIGN-BUILDER:

By: _____
Printed Name: _____
Title: _____
Date: _____



Cost Model Pricing Assumptions

- 1) The following scope is included in Cost Model per 90% Submittal drawing dated 4/16/2021:
 - Mobilization of Site Trailers and Equipment Associated
 - Permit fees (ACT / Building)
 - Quality Control / Construction Services by Wood
 - Site Demolition of Existing vertical curb, concrete section, existing asphalt section for Filter #4 SOG and asphalt removal for 14" OF/SERV line installation
 - o Demo Permit Included
 - o Asbestos / Hazardous Material Testing included
 - Site Work includes:
 - o Excavate / Lay / Backfill 14" OF/SERV Line
 - o Install drop leg into existing manhole per MAG detail 426.
 - o 2 each - Core Drilling into existing manhole per MAG 426 Detail
 - o Removing sections of existing abandoned 4" WAS Line and Capping
 - o Detailed Excavation for new Filter #4 SOG
 - o New Split Face CMU Walls as indicated on drawings
 - o Concrete Vertical Curb replacement 20 LF
 - o Landscaping between new vertical curb section and new CMU Wall (south side). Match existing DG.
 - o Removal of existing manhole steps
 - o Site Painting includes CMU wall to match existing, bollards and painting of vertical curb
 - o Asphalt Replacement
 - Concrete includes:
 - o Filter #4 Concrete SOG, including reinforcement for SOG and CMU Wall Dowels
 - o 3" Equipment Pad for new Filter #4
 - Miscellaneous Metals includes:
 - o 2 each bollard
 - o Temporary Fencing with privacy screen 8'-0" in height. Installation per alternate detail 2 on drawing S-004
 - o Stainless Steel Pipe penetration covers as indicated on drawings
 - o New pipe supports
 - o Furnish & Install Filter Access Platforms
 - Design and AZ Stamped Engineering Included
 - Painting includes
 - o Painting of new CMU Wall to match existing
 - o Painting of existing & new piping at filter gallery
 - o Painting of vertical curb (approx. 15LF) and bollards
 - Equipment includes:
 - o Installation of new Aqua Disk Tertiary Filter No. 4
 - o Wier Adjustments per 90% design discussions on 4/28/2021
 - o Coating Quality Control – MFR Facility Witness Testing



- Exposed Piping includes:
 - o Remove of existing pipe per limits shown on drawings
 - o Plant shutdowns and temporary piping (installation & Removal)
 - o Installation of new piping system including new injection quill, static mixer, and flow meter
 - o Quality Control Laser Scanning
 - Confirm pipe clashes and injection quill access
- Electrical / Programming Includes:
 - o Furnish and Install new MAG Flow Meter
 - o ¾" GRC Conduit, communication cabling, power conductors to instrumentation equipment. Install VFD, filter panel, electronically connect flow meter, grounding of flow meter and programming by Veritech.
 - o Relocate existing lighting
 - o Electrical to be ran exposed (field confirmed)
- Start Up / Testing
 - o Standard MFR installation and testing requirements
 - o Pressure testing of piping included
 - o In line testing with filtered water and discharged into wet well

Cost Model Clarifications, Assumptions, and Exclusions

2) Clarifications, Assumptions & Exclusions

- Escalation Contingency \$40,000.00 – Various Materials from Submittals to contract date.
- Construction Contingency \$25,000.00
- 90% to 100% Permit Contingency \$25,000.00 – Design / Construction Cost Changes based on ADEQ / Permit Design Changes
- MOPO / Unknown Conditions \$50,000.00 – Unforeseen Conditions and/or Owner Changes based of MOPO Plans
- Owners Allowance \$115,547.00 – 10% of contract amount for Owner changes
- El Mirage to expand drainage areas prior to mobilization
- Assuming PCL can utilize El Mirage power for office trailer
- Maricopa ACT Permit & El Mirage Building Permit Fees Included
 - i. Woods to submit applications, PCL to included cost for permits
- Woods to provide construction & QC services
- No concrete foundation or anchoring into existing manhole per MAG 426 Drop Leg detail included
- Added costs for structural engineering design for filter platforms
- No Coatings for existing manhole included per 90% design review meeting on 4/28/2021
- Painting of existing CMU walls excluded
- No electrical duct banks included. Will run conduit exposed per 90% design review meeting held on 4/28/2021
- No CVTV / Pipe Mandrel testing included



- Included 3" equipment pad for Filter #4 per discussions with manufacture and per approved submittal literature.
 - No anchoring of Filter #4 included as no seismic calculations required per spec
 - Assume existing valves to filters are operational, seals do not leak. No provisions included if existing valves are not watertight included.
 - Potential price escalation from subcontractors and suppliers based on construction start date and unknown market conditions at this time
 - No hazardous material remediation or removal included. If hazardous materials discovered remediation and/or removal to by others
 - Shutdowns / MOPO
 - i. Shutdowns to be done early mornings with a 2 to 2 ½ hour window. PCL assumes the 2 to 2 ½ hours are working time and does not include time for operations staff to shut down the plant and/or restart plant
 - ii. If at least one (1) existing filters operational during MOPO it is assumed MOPOS can be extended to 7-8 hours (i.e. 2AM to 10AM)
 - iii. Included in proposal is PCL's MOPO / Shut down plan
- 3) All labor and equipment will be charged to the GMP based on the following billable hourly rate table:

Craft Classification	Billable Hourly Rate (\$/HR)
Design Build Manager	\$125.70
Project Manager	\$116.61
Project Superintendent	\$126.33
Superintendent	\$101.76
Project Engineer	\$97.18
Project Coordinator	\$71.83
Scheduler	\$99.76
HSE Coordinator	\$71.83
Foreman	\$61.76
Lead Foreman	\$84.13
Carpenter/Mason	\$51.17
Laborer	\$35.29
Pipe Layer/Fitter	\$52.94
Process Equipment Operator	\$51.17
Crane Operator	\$61.76

Billable hourly rates used in this GMP are estimates of projected market conditions at the time work will be performed.

Billable hourly equipment rates shall be FHWA operated rates published by Bluebook (penton) on equipmentwatch.com. Small tools will be billed as an assessment of 5% of total labor.



Date	May 12, 2021
Time	12:19:30 PM
BE Number	BE210840
Opportunity No	
Owner File No	
Estimator	

General Estimate Summary & Item Analysis Sheet

Project	El Mirage WRF Filter Upgrades 90%
Location	El Mirage, AZ, USA
Owner	
Designer	

Bid Closing

Project Start	June 17, 2021
Completion	November 18, 2021



CONSTRUCTION

BE Number BE210840

Opportunity No

Owner File No

Project EI Mirage WRF Filter Upgrades 90%

Location EI Mirage AZ, USA

Summary Page 1 of 2

May 12, 2021

12:19:31 PM

General Estimate Summary

Sheet Name			Description			Quantity UOM		Labor			Equipment			Services/ Tools / Supplies		Material		Subcontract		Total Cost	
								Hours	Rate	Total	Hours	Unit	Total	Unit	Total	Unit	Total	Unit	Total	Unit	Total
DIV 2			DIVISION 2			1 LS		426	50.28	21,445	250	---	10,174	---	6,934	---	12,541	---	9,654	---	60,749
DIV 3			DIVISION 3			1 LS		269	50.10	13,476	104	---	2,275	---	731.10	---	4,812	---	5,300	---	26,595
DIV 4			DIVISION 4			1 LS		16	49.99	800	---	---	---	---	349.50	---	675	---	6,840	---	8,664
DIV 5			DIVISION 5			1 LS		193	50.51	9,762	16	---	1,176	---	---	---	50,262	---	5,701	---	66,901
DIV 9			DIVISION 9			1 LS		---	---	---	---	---	---	---	---	---	---	---	16,920	---	16,920
DIV 11			DIVISION 11			1 LS		242	54.79	13,258	8	---	958	---	---	---	3,650	---	---	---	17,867
DIV 15			DIVISION 15			1 LS		1,211	50.21	60,827	429	---	37,840	---	1,628	---	139,272	---	---	---	239,566
DIV 16			DIVISION 16			1 LS		---	---	---	---	---	---	---	---	---	12,000	---	74,302	---	86,302
CON			CONTINGENCY			1 LS		---	---	---	---	---	---	---	---	---	140,000	---	---	---	140,000
DIRECT COSTS								2,358	---	119,569	807	---	52,423	---	9,642	---	363,212	---	118,717	---	663,564
GENERAL EXPENSE COSTS																					
FIXED GENERAL EXPENSE			1 LS																		
GE 1			GENERAL EXPENSE			1 LS		---	---	---	---	---	---	---	---	---	---	---	---	---	---
GE 3			F1 MOBILIZE & DEMOBILIZE			100 %		32	49.99	1,600	---	---	---	47.70	4,770	---	---	---	---	63.70	6,370
GE 5			F3 CONST TEMP BLDGS-FACL			100 %		32	49.99	1,600	---	---	---	2.50	250	84.20	8,420	37.50	3,750	140.20	14,020
GE 6			F4 INSTAL TEMP UTILITIES			100 %		---	---	---	---	---	---	35	3,500	---	---	---	---	35.00	3,500
GE 7			F5 DISMAN & RESTORE SITE			100 %		16	49.99	800	---	---	---	20	2,000	---	---	---	---	28.00	2,800
GE 8			F6 BOND			100 %		---	---	---	---	---	---	145.84	14,584	---	---	13.74	1,374	159.58	15,958
GE 9			F7 INSURANCE			100 %		---	---	---	---	---	---	274.89	27,489	---	---	---	---	274.89	27,489
FIXED GENERAL EXPENSE			1 LS					80	---	4,000	---	---	---	---	52,593	---	8,420	---	5,124	---	70,136
VARIABLE GENERAL EXPENSE			1 LS																		
GE 12			V2 OPERATE BLDGS-FACIL			100 %		---	---	---	1,730	22.52	2,252	20	2,000	---	---	---	---	42.52	4,252
GE 14			V4 OPERATE UTILITIES			100 %		---	---	---	---	---	---	73.25	7,325	---	---	---	---	73.25	7,325
GE 15			V5 OPERATE SUPPORT EQUIP			100 %		87	51.17	4,435	952	201.40	20,140	18	1,800	---	---	---	---	263.75	26,375
GE 17			V7 PROJECT STAFF			100 %		1,820	115.69	210,551	---	---	---	---	---	102	10,200	27.75	2,775	2,235.26	223,526
GE 19			V9 MANAGEMENT SERVICE			100 %		---	---	---	2,595	19.40	1,940	166.37	16,637	30	3,000	467.60	46,760	683.37	68,337
GE 22			V12 ESCAL/TAX/UNINSURED			100 %		---	---	---	---	---	---	803.57	80,357	---	---	---	---	803.57	80,357

001 STANDARD LANDSCAPE MASTER.RPT

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BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 1 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

DIV 2	DIVISION 2	1.00	LS
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No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
SITE DEMO		1	LS															
02 41 00 Demolition		1	LS															
Site Demolition		1	LS															
Includes: Landscape, Concrete Curb & Gutter, Asphalt, and CMU Wall																		
DEMOLITION						1.00	LS											
Saw Cutting Includes Asphalt, CMU Wall Saw Cutting, Mobilization and Min. Charge																		
	Saw Cutting	1	LS	---	---	---	---	---	---	---	---	---	---	---	---	1,652	---	1,652
	Bckho-Ldr Ct 420C 1.0cy	40	HR	1.000	1.000	40	OP2 51.17	2,047	48.51	1,940	---	---	---	---	---	---	99.68	3,987
	Hammer - 5500lbs/ft 324-336	8	HR	1.000	1.000	---	---	---	44.87	359	---	---	---	---	---	---	44.87	359
2	Demo Crew	40	HR	1.000	1.000	80	SPC 49.99	4,000	---	---	---	---	---	---	---	---	99.99	4,000
	Tank Trl Water 500 Gal	40	HR	1.000	1.000	---	---	---	3.24	130	---	---	---	---	---	---	3.24	130
	Haul Off (Heritage Trucking)	5	LD	---	---	---	---	---	---	---	225.00	1,125	---	---	---	---	225.00	1,125
	Bckho-Ldr Ct 420C 1.0cy	5	HR	1.000	1.000	5	OP2 51.17	256	48.51	243	---	---	---	---	---	---	99.68	498
Site Demolition		1.00	LS	---	---	125	50.42	6,302	---	2,672	---	1,125	---	---	---	1,652	---	11,751
02 41 00 Demolition		1.00	LS	---	---	125	50.42	6,302	---	2,672	---	1,125	---	---	---	1,652	---	11,751
SITE DEMO		1.00	LS	---	---	125	50.42	6,302	---	2,672	---	1,125	---	---	---	1,652	---	11,751
Buried Pipe		30	LF															
Yard Pipe Materials		1	LS															
	Purchase Yard Pipe Materials (ALB)	1	LS	---	---	---	---	---	---	---	---	---	7,364	---	---	---	---	7,364
DIP for 14" OF/SERV						1.00	LS						7,364	1.00				
	Pipe Rigging STS	1	LS	---	---	---	---	---	---	---	---	250	---	---	---	---	---	250
	Pipe Installation STS	1	LS	---	---	---	---	---	---	---	---	250	---	---	---	---	---	250

DIV 2	DIVISION 2	1.00
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BE Number BE210840
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Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Item Analysis Sheet

Detail Page 2 of 46
May 12, 2021
12:19:32 PM

DIV 2	DIVISION 2	1.00	LS
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No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	Utilize Slurry for Pipe / Trench Zone Trench and Pipe Zone backfilled with Slurry / Asphalt Subgrade backfilled with MAG AB																	
	Slurry Backfill	27	CY	---	---	---	---	---	---	---	---	---	94.50	2,552	---	---	94.50	2,552
	Slurry Backfill	27	CY	2.000	0.500	14	SPC 49.99	675	---	---	---	---	---	---	---	---	25.00	675
	Pipe Testing STS																	
	Testing STS	1	LS	---	---	---	---	---	---	---	---	500	---	---	---	---	---	500
	Trench Protection																	
	Trench Protection	1	LS	---	---	---	---	---	---	---	---	4,000	---	---	---	---	---	4,000
	Yard Pipe Materials	1.00	LS	---	---	14	49.99	675	---	---	---	5,000	---	9,916	---	---	---	15,590
	Production Pipe Subtotal	30	LF															
	Unload & Handle	1	EA															
	Unload & Handle	8	HR	1.000	1.000	8	SPC 49.99	400	---	---	---	---	---	---	---	---	49.99	400
	Bckho-Ldr Ct 420C 1.0cy	8	HR	1.000	1.000	8	OP2 51.17	409	48.51	388	---	---	---	---	---	---	99.68	797
	Unload & Handle	1.00	EA	0.063	16.000	16	50.58	809	388.08	388	---	---	---	---	---	---	1,197.40	1,197
	14" Overflow / Service to Existing Manhole	30	LF															
	14" Overflow / Service to Existing Manhole OF/SER MJ Fittings Type "C" Soil																	
	Cut & Cap Existing Pipe	2	EA															
	Cut & Cap Existing 4" WAS Piping - DIP (Been abandoned for years)																	

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BE Number BE210840

Opportunity No

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Project **El Mirage WRF Filter Upgrades 90%**

Location El Mirage, AZ, USA

Detail Page 3 of 46

May 12, 2021

12:19:32 PM

Item Analysis Sheet

DIV 2 DIVISION 2 1.00 LS

Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	Piping Materials	1	LS	---	---	---	---	---	---	---	---	---	---	305	---	---	---	305
	Cut& Cap	2	EA	0.250	4.000	8	SPC 49.99	400	---	---	---	---	---	---	---	---	199.98	400
	STS	1	LS	---	---	---	---	---	---	---	---	---	---	200	---	---	---	200
	Cut & Cap Existing Pipe	2.00	EA	0.250	4.000	8	49.99	400	---	---	---	---	252.50	505	---	---	452.48	905
	Existing MH Modifications	1	LS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Removal of Existing MH Steps per Email Dated 4/16/2021 No Coating of MH Required - Refer back to Woods Meeting Minutes 5/3/2021																	
	Manhole Step Removal	16	EA	2.000	0.500	8	SPC 49.99	400	---	---	---	---	---	---	---	---	25.00	400
	MH Watch	8	HR	1.000	1.000	8	SPC 49.99	400	---	---	---	---	---	---	---	---	49.99	400
	STS	1	LS	---	---	---	---	---	---	---	---	---	---	300	---	---	---	300
	Existing MH Modifications	1.00	LS	---	---	16	49.99	800	---	---	---	---	---	300	---	---	---	1,100
	Utility Crossing	1	EA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Protect Existing Utility																	
	Temp Materials	1	LS	---	---	---	---	---	---	---	---	---	---	300	---	---	---	300
	2 Set up / Tear Down	4	HR	1.000	1.000	8	SPC 49.99	400	---	---	---	---	---	---	---	---	99.99	400
	Utility Crossing	1.00	EA	0.125	8.000	8	49.99	400	---	---	---	---	300.00	300	---	---	699.95	700
	Dig / Lay / Bury	30	LF	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	Dig / Lay / Bury																	
	3 Yard Pipe Crew	30	LF	1.250	0.800	72	SPC 49.99	3,600	---	---	---	---	---	---	---	---	119.99	3,600
	Bckho 321DL 1.83cy -O	30	LF	1.250	0.800	24	OP2 51.17	1,228	145.17	3,484	---	---	---	---	---	---	157.07	4,712
	Trench Compactor 24"-33"-O	30	LF	1.250	0.800	---	---	---	21.55	517	---	---	---	---	---	---	17.24	517
	Tank Trl Water 500 Gal	30	LF	1.250	0.800	---	---	---	3.24	78	---	---	---	---	---	---	2.60	78
	Dig / Lay / Bury	30.00	LF	0.313	3.200	96	50.29	4,828	135.97	4,079	---	---	---	---	---	---	296.89	8,907
	Risers	2	EA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	3 Yard Pipe Crew	2	EA	0.250	4.000	24	SPC 49.99	1,200	---	---	---	---	---	---	---	---	599.93	1,200

U01 STANDARD LANDSCAPE MASTER.RPT

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DIV 2 DIVISION 2**1.00**



BE Number BE210840
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Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 4 of 46
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12:19:32 PM

Item Analysis Sheet

DIV 2	DIVISION 2	1.00	LS
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	Bckho 321DL 1.83cy -O	2	EA	0.250	4.000	8	OP2 51.17	409	145.17	1,161	---	---	---	---	---	---	785.34	1,571
	Trench Compactor 24"-33"-O	2	EA	0.250	4.000	---	---	---	21.55	172	---	---	---	---	---	---	86.19	172
	Tank Trl Water 500 Gal	2	EA	0.250	4.000	---	---	---	3.24	26	---	---	---	---	---	---	12.98	26
	Risers	2.00	EA	0.063	16.000	32	50.29	1,609	679.83	1,360	---	---	---	---	---	---	1,484.44	2,969
	Test	1	EA															
2	Yard Pipe Crew	1	EA	0.125	8.000	16	SPC 49.99	800	---	---	---	---	---	---	---	---	799.90	800
	Comp 185 CFM Diesel	1	EA	0.125	8.000	---	---	---	16.04	128	---	---	---	---	---	---	128.33	128
	Test	1.00	EA	0.063	16.000	16	49.99	800	128.33	128	---	---	---	---	---	---	928.23	928
	Tie Into Existing Manhole	1	LS															
	Sleeve / Link seal Covered in Pipe Material Cost																	
	Two Core Drills Per 90% Drawing Drop Down per MAG 426																	
	Core Drill (A-Core)	2	EA	---	---	---	---	---	---	---	---	---	---	---	676.00	1,352	676.00	1,352
	Assist Core Driller	16	HR	1.000	1.000	16	SPC 49.99	800	---	---	---	---	---	---	---	---	49.99	800
2	Install Sleeve	1	EA	0.333	3.000	6	SPC 49.99	300	---	---	---	---	---	---	---	---	299.96	300
2	Install Link Seal	2	EA	2.000	0.500	2	SPC 49.99	100	---	---	---	---	---	---	---	---	49.99	100
	Slower Productivity due to grouting inside of Manhole (Depth of MH is 16.42')																	
	Grout	1	LS	---	---	---	---	---	---	---	---	---	---	50	---	---	---	50
	STS	1	LS	---	---	---	---	---	---	---	---	---	---	200	---	---	---	200
	Tie Into Existing Manhole	1.00	LS	---	---	24	49.99	1,200	---	---	---	---	---	250	---	1,352	---	2,802
	14" Overflow / Service to Existing Ma	30.00	LF	0.150	6.667	200	50.18	10,036	185.56	5,567	---	---	45.17	1,355	45.07	1,352	610.35	18,310
	Production Pipe Subtotal	30.00	LF	0.139	7.200	216	50.21	10,846	198.50	5,955	---	---	45.17	1,355	45.07	1,352	650.26	19,508
	Buried Pipe	30.00	LF	0.131	7.650	230	50.20	11,521	198.50	5,955	166.67	5,000	375.68	11,271	45.07	1,352	1,169.94	35,098
	Asphalt Paving	112	SF															
	Fine Grade Roads - Subgrade Prep	112	SF															

U01 STANDARD-LANDSCAPE-MASTER.RPT

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DIV 2	DIVISION 2	1.00
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BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 5 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

DIV 2 **DIVISION 2** **1.00** **LS**

Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	MAG AB	5	TN	---	---	---	---	---	---	---	---	---	100.00	500	---	---	100.00	500
	Grade Foreman	112	SF	14.000	0.071	8	SPC 49.99	400	---	---	---	---	---	---	---	---	3.57	400
	Bckho-Ldr Ct 420C 1.0cy	112	SF	14.000	0.071	8	OP2 51.17	409	48.51	388	---	---	---	---	---	---	7.12	797
	Cmpt Vib Pdft Ct CP-433 66 -O	112	SF	14.000	0.071	---	---	---	63.62	509	---	---	---	---	---	---	4.54	509
	Tank Trl Water 500 Gal	8	HR	1.000	1.000	---	---	---	3.24	26	---	---	---	---	---	---	3.24	26
	Fine Grade Roads - Subgrade Prep	112.00	SF	7.000	0.143	16	50.58	809	8.24	923	---	---	4.46	500	---	---	19.93	2,232
	Asphalt Subcontractor	1	LS															
	14" OF - Refer to Drawing C-201 T-Top Repair (Width = 5'-2" x 4")																	
	Re-Sawcut for Asphalt Paving					60.00	LF											
	Clean Up Edges	60	LF	3.750	0.267	16	SPC 49.99	800	---	---	---	---	---	---	---	---	13.33	800
	STS	1	LS	---	---	---	---	---	---	---	---	---	---	200	---	---	---	200
	02065 Mobilization	1	LS	---	---	---	---	---	---	---	---	---	---	---	---	1,500	---	1,500
	02065 Asphalt Paving Sub	17	SY	---	---	---	---	---	---	---	---	---	---	---	294.12	5,000	294.12	5,000
	Asphalt Subcontractor	1.00	LS	---	---	16	49.99	800	---	---	---	---	---	200	---	6,500	---	7,500
	Asphalt Paving	112.00	SF	3.500	0.286	32	50.29	1,609	8.24	923	---	---	6.25	700	58.04	6,500	86.89	9,732
	Filter No. 4 Detailed Excavation	27.50	CY															
	New Filter No. 4 Assuming 6" Over Excavation 1'-6" D x 15'-6" x 31'-9"																	
	Detail Excavation																	
	Grade Foreman	27.50	CY	5.000	0.200	6	SPC 49.99	275	---	---	---	---	---	---	---	---	10.00	275
	Bckho-Ldr Ct 420C 1.0cy	27.50	CY	5.000	0.200	6	OP2 51.17	281	48.51	267	---	---	---	---	---	---	19.94	548
	Tank Trl Water 500 Gal	27.50	CY	10.000	0.100	---	---	---	3.24	9	---	---	---	---	---	---	0.324460	9
	Haul Off Trucking																	

U01 STANDARD-LANDSCAPE-MASTER.RPT

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DIV 2 **DIVISION 2**

1.00



BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 6 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

DIV 2	DIVISION 2	1.00	LS
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	Includes Pipe Trench & MAG Drop Native		Material															
	- HR/Roundtrip					2.00	HR											
	- CY/LD					50.50	CY											
	Haul Off (Heritage Trucking)	4	LD	---	---	---	---	---	---	---	200.00	800	---	---	---	---	200.00	800
	Bckho-Ldr Ct 420C 1.0cy	4	HR	1.000	1.000	4	OP2 51.17	205	48.51	194	---	---	---	---	---	---	99.68	399
	Filter No. 4 Detailed Excavation	27.50	CY	1.833	0.545	15	50.74	761	17.08	470	29.09	800	---	---	---	---	73.85	2,031
	Vertical Curb Replacement	1	CY															
	Sub Grade Prep	8	SF															
	Quantities					8.00												
	Foundation Prep	8	SF	4.000	0.250	2	SPC 49.99	100	---	---	---	---	---	---	---	---	12.50	100
	Bckho-Ldr Ct 420C 1.0cy	8	SF	4.000	0.250	2	OP2 51.17	102	48.51	97	---	---	---	---	---	---	24.92	199
	Tank Trl Water 500 Gal	2	SF	4.000	0.250	---	---	---	3.24	2	---	---	---	---	---	---	0.811150	2
	Sub Grade Prep	8.00	SF	2.000	0.500	4	50.58	202	12.33	99	---	---	---	---	---	---	37.62	301
	Erect and Strip Formwork	16	SF															
	Totals Formwork					16.00	sf											
	Form Oil	16	SF	---	---	---	---	---	---	---	0.030000	---	---	---	---	---	0.030000	---
	Erect and Strip Supplies	16	SF	---	---	---	---	---	---	---	0.250000	4	---	---	---	---	0.250000	4
	Vertical Curb	16	SF															
	Vertical Curb					16.00												
	Only 6" of Curb Exposed																	
	2 Vertical Curb	16	SF	4.000	0.250	8	SPC 49.99	400	---	---	---	---	---	---	---	---	25.00	400
	Vertical Curb	16.00	SF	2.000	0.500	8	49.99	400	---	---	---	---	---	---	---	---	25.00	400
	Erect and Strip Formwork	16.00	SF	2.000	0.500	8	49.99	400	---	---	0.280000	4	---	---	---	---	25.28	404
	Cast In Place Concrete	1	CY															

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DIV 2	DIVISION 2	1.00
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BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 7 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

DIV 2	DIVISION 2	1.00	LS
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor		Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit
Concrete Materials		1 CY															
	Conc.4000 Psi	1 CY		---	---	---	---	---	---	---	---	120.50	121	---	---	120.50	121
	Conc.4000 Psi Waste 5%	0.50 CY		---	---	---	---	---	---	---	---	120.50	60	---	---	120.50	60
	Short Load Fee	1 EA		---	---	---	---	---	---	---	---	200.00	200	---	---	200.00	200
	Environmental Fees	1 LD		---	---	---	---	---	---	---	---	25.00	25	---	---	25.00	25
	Fuel Surcharge	1 LD		---	---	---	---	---	---	---	---	15.00	15	---	---	15.00	15
	Conc. Placing Supplies	1 CY		---	---	---	---	---	---	0.350000	---	---	---	---	---	0.350000	---
Concrete Materials		1.00 CY		---	---	---	---	---	---	0.350000	---	420.75	421	---	---	421.10	421
Concrete Placement		1 CY															
Vertical Curb		1 CY															
	Vertical Curb	1 CY		0.250	4.000	4	49.99	200	---	---	---	---	---	---	---	199.98	200
Vertical Curb		1.00 CY		0.250	4.000	4	49.99	200	---	---	---	---	---	---	---	199.98	200
Concrete Placement		1.00 CY		0.250	4.000	4	49.99	200	---	---	---	---	---	---	---	199.98	200
Curing		40 SF															
Quantities		40.00 SF															
	Curing Labor	40 SF		40.000	0.025	1	49.99	50	---	---	---	---	---	---	---	1.25	50
	Water Curing Supplies	40 SF		---	---	---	---	---	---	0.100000	4	---	---	---	---	0.100000	4
Curing		40.00 SF		40.000	0.025	1	49.99	50	---	---	0.100000	4	---	---	---	1.35	54
Concrete Reinforcement		0.12 TN															
Rebar Furnish & Install		0.12 TN															
	2 Rebar Install	15 LB		15.000	0.067	2	49.99	100	---	---	---	---	---	---	---	6.67	100
	03200 Concrete Rebar Supplier	1 LS		---	---	---	---	---	---	---	---	---	---	---	150	---	150
Rebar Furnish & Install		0.12 TN		0.060	16.667	2	49.99	100	---	---	---	---	---	1,250.00	150	2,083.23	250

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DIV 2	DIVISION 2	1.00
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BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Item Analysis Sheet

Detail Page 8 of 46
May 12, 2021
12:19:32 PM

DIV 2	DIVISION 2	1.00	LS
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	Concrete Reinforcement	0.12	TN	0.060	16.667	2	49.99	100	---	---	---	---	---	---	1,250.00	150	2,083.23	250
	Cast In Place Concrete	1.00	CY	0.143	7.000	7	49.99	350	---	---	4.35	4	420.75	421	150.00	150	925.06	925
	Vertical Curb Replacement	1.00	CY	0.053	19.000	19	50.12	952	98.64	99	8.83	9	420.75	421	150.00	150	1,630.46	1,630
	Landscape	64	SF															
	Per 90% Design Meeting extend vertical curb to end of new CMU Wall Utilize native materials from excavation for fill material 2" DG to match existing																	
	Salvage Existing DG	2	HR	1.000	1.000	2	SPC 49.99	100	---	---	---	---	---	---	---	---	49.99	100
	DG	1	TN	---	---	---	---	---	---	---	---	---	150.00	150	---	---	150.00	150
	Install Native																	
	Install	64	SF	32.000	0.031	2	SPC 49.99	100	---	---	---	---	---	---	---	---	1.56	100
	Trench Compactor 24"-33"	2	HR	1.000	1.000	---	---	---	21.55	43	---	---	---	---	---	---	21.55	43
	Tank Trl Water 500 Gal	2	HR	1.000	1.000	---	---	---	3.24	6	---	---	---	---	---	---	3.24	6
	Install DG																	
	Install	64	SF	32.000	0.031	2	SPC 49.99	100	---	---	---	---	---	---	---	---	1.56	100
	Tank Trl Water 500 Gal	2	HR	1.000	1.000	---	---	---	3.24	6	---	---	---	---	---	---	3.24	6
	Landscape	64.00	SF	10.667	0.094	6	49.99	300	0.876124	56	---	---	2.34	150	---	---	7.91	506
	DIVISION 2	1.00	LS	---	---	426	50.28	21,445	---	10,174	---	6,934	---	12,541	---	9,654	---	60,749

U01 STANDARD-LANDSCAPE-MASTER.RPT

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DIV 2	DIVISION 2	1.00
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BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 9 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

DIV 3	DIVISION 3	1.00	LS
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor		Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit
CONCRETE		21.50 CY															
Per Drawing D: Note B (3" Equipment Pad Recommended to be Installed Flat for Filter)																	
Sub Grade Prep		492 SF															
Quantities						492.00											
6" AB Under Slab																	
AB (Heritage Trucking)		18.50 TN		---	---	---	---	---	---	---	---	15.75	291	---	---	15.75	291
Vapor Barrier																	
MIRAFI 140 Fabric		492 SF	200.000	0.005	2	SPC 49.99	123	---	---	---	---	0.060000	30	---	---	0.309970	153
Foundation Prep		492 SF	20.500	0.049	24	SPC 49.99	1,200	---	---	---	---	---	---	---	---	2.44	1,200
Bckho-Ldr Ct 420C 1.0cy		492 SF	20.500	0.049	24	OP2 51.17	1,228	48.51	1,164	---	---	---	---	---	---	4.86	2,392
Trench Compactor 24"-33"		492 SF	20.500	0.049	---	---	---	21.55	517	---	---	---	---	---	---	1.05	517
Tank Trl Water 500 Gal		492 SF	20.500	0.049	---	---	---	3.24	78	---	---	---	---	---	---	0.158273	78
Sub Grade Prep		492.00 SF	9.750	0.103	50	50.55	2,551	3.58	1,759	---	---	0.652226	321	---	---	9.41	4,631
Concrete Formwork		95 SF															
Fab Formwork		109 SF															
Fab SOG & Ftg Forms		109 SF															
Fab SOG Forms (Stick Built)						109.00											
Fab SOG Forms		109 SF	4.500	0.222	24	SPC 49.99	1,211	---	---	---	---	---	---	---	---	11.11	1,211
Form Ply 3/4" (119SF)		4 EA	---	---	---	---	---	---	---	65.98	264	---	---	---	---	65.98	264
Dimen. Lumber (2x4-2x10)		30 EA	---	---	---	---	---	---	---	9.65	290	---	---	---	---	9.65	290
Form Hardware		109 SF	---	---	---	---	---	---	---	0.300000	33	---	---	---	---	0.300000	33
Fab SOG & Ftg Forms		109.00 SF	4.500	0.222	24	49.99	1,211	---	---	5.38	586	---	---	---	---	16.49	1,797
Fab Formwork		109.00 SF	4.500	0.222	24	49.99	1,211	---	---	5.38	586	---	---	---	---	16.49	1,797
Erect and Strip Formwork		95 SF															
Totals Formwork						95.00 sf											

DIV 3	DIVISION 3	1.00
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U01 STANDARD-LANDSCAPE-MASTER.RPT

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BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 10 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

DIV 3	DIVISION 3	1.00	LS
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	Form Oil	95	SF	---	---	---	---	---	---	---	0.030000	3	---	---	---	---	0.030000	3
	Erect and Strip Supplies	95	SF	---	---	---	---	---	---	---	0.250000	24	---	---	---	---	0.250000	24
	Filter #4 SOG	95	SF															
	Filter #4 SOG					109	.00											
	SOG & Ftgs	95	SF	1.000	1.000	95	SPC 49.99	4,749	---	---	---	---	---	---	---	---	49.99	4,749
	Filter Equip Pad (3")	14	SF	2.000	0.500	7	SPC 49.99	350	---	---	---	---	---	---	---	---	25.00	350
	Filter #4 SOG	95.00	SF	0.931	1.074	102	49.99	5,099	---	---	---	---	---	---	---	---	53.68	5,099
	Erect and Strip Formwork	95.00	SF	0.931	1.074	102	49.99	5,099	---	---	0.280000	27	---	---	---	---	53.96	5,126
	Concrete Formwork	95.00	SF	0.753	1.329	126	49.99	6,310	---	---	6.45	613	---	---	---	---	72.87	6,923
	03300 Cast In Place Concrete	21.50	CY															
	Concrete Materials	22.50	CY															
	TOTAL CONCRETE					21.50	Cy											
	CONC BASE BID					21.50												
	Conc.4000 Psi	21.50	CY	---	---	---	---	---	---	---	---	---	128.50	2,763	---	---	128.50	2,763
	Conc.4000 Psi Waste 5%	1	CY	---	---	---	---	---	---	---	---	---	128.50	129	---	---	128.50	129
	Environmental Fees	2	LD	---	---	---	---	---	---	---	---	---	25.00	50	---	---	25.00	50
	Fuel Surcharge	2	LD	---	---	---	---	---	---	---	---	---	15.00	30	---	---	15.00	30
	Short Load Fee	1	EA	---	---	---	---	---	---	---	---	---	200.00	200	---	---	200.00	200
	Hot Weather Concrete-Ice					0.00	CY						0.00					
	Cold Weather Concrete-Additive					0.00	CY						0.00					
	Conc. Placing Supplies	21.50	CY	---	---	---	---	---	---	---	0.350000	8	---	---	---	---	0.350000	8
	Concrete Materials	22.50	CY	---	---	---	---	---	---	---	0.334444	8	140.94	3,171	---	---	141.28	3,179

DIV 3	DIVISION 3	1.00
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U01 STANDARD-LANDSCAPE-MASTER.RPT

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BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 11 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

DIV 3	DIVISION 3	1.00	LS
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor		Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost		
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
Concrete Placement		21.50	CY															
Total Concrete CY						21.50												
Filter # 4 SOG		20	CY															
Filter # 4 SOG						21.50	CY											
Sog & Ftgs'		20	CY	1.000	1.000	20	SPC 49.99	1,000	---	---	---	---	---	---	---	49.99	1,000	
Equipment Pad		1.50	CY	0.500	2.000	3	SPC 49.99	150	---	---	---	---	---	---	---	99.99	150	
Filter # 4 SOG		20.00	CY	0.870	1.150	23	49.99	1,150	---	---	---	---	---	---	---	57.49	1,150	
Pumping		21	CY															
Tailgate						21.00	CY											
Pumping		21.00	CY	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Concrete Placement		21.50	CY	0.935	1.070	23	49.99	1,150	---	---	---	---	---	---	---	53.48	1,150	
03300 Cast In Place Concrete		21.50	CY	0.935	1.070	23	49.99	1,150	---	---	0.350000	8	147.50	3,171	---	---	201.33	4,329
03251 Concrete Joints		21.50	CY															
Concrete Joint Qty						32.00												
1/2" Isolation Joint		32	SF															
Expansion Joint						32.00	SF		8.000		SPCR							
Expansion Material						32.00	SF						3.28					
STS						1.00	LS						200.00					
1/2" Isolation Joint		32.00	SF	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Joint Prep - Sandblast		119	SF															
Filter Equipment Pad																		
Joint Prep		119	SF	3.700	0.270	32	SPC 49.99	1,608	---	---	---	---	---	---	---	13.51	1,608	
Comp 185 CFM Diesel		119	SF	3.700	0.270	---	---	---	16.04	516	---	---	---	---	---	4.34	516	
Greencut Supplies		119	SF	---	---	---	---	---	---	---	0.150000	18	---	---	---	0.150000	18	

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DIV 3	DIVISION 3	1.00
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BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 12 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

DIV 3 **DIVISION 3** **1.00** **LS**

Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	Joint Prep - Sandblast	119.00	SF	3.700	0.270	32	49.99	1,608	4.34	516	0.150000	18	---	---	---	---	18.00	2,142
	03251 Concrete Joints	21.50	CY	0.668	1.496	32	49.99	1,608	24.00	516	0.830233	18	---	---	---	---	99.61	2,142
	Curing	21.50	CY															
	Curing	930	SF															
	Quantities					930.00	SF											
	Curing Labor	930	SF	200.000	0.005	5	SPC 49.99	232	---	---	---	---	---	---	---	---	0.249970	232
	Water Curing Supplies	930	SF	---	---	---	---	---	---	---	0.100000	93	---	---	---	---	0.100000	93
	Curing	930.00	SF	200.000	0.005	5	49.99	232	---	---	0.100000	93	---	---	---	---	0.349970	325
	Curing	21.50	CY	4.624	0.216	5	49.99	232	---	---	4.33	93	---	---	---	---	15.14	325
	03200 Conc Reinforcement	1	LS															
	Rebar Sub: Supply & Install	1	LS															
	No Reinforcement included for 3" Equipment Pad																	
	Reinforcement Dowels					65.00	EA											
	#6 Reinforcement Dowels	65	EA	---	---	---	---	---	---	---	---	---	8.00	520	---	---	8.00	520
	Epoxy 1 Box	1	LS	---	---	---	---	---	---	---	---	---	---	500	---	---	---	500
	Install Dowels	65	EA	2.000	0.500	33	SPC 49.99	1,625	---	---	---	---	---	---	---	---	25.00	1,625
	STS	1	LS	---	---	---	---	---	---	---	---	---	---	300	---	---	---	300
	Rebar Subcontractor																	
	03200 Concrete Rebar Sub	1	LS	---	---	---	---	---	---	---	---	---	---	---	---	5,300	---	5,300
	Rebar Sub: Supply & Install	1.00	LS	---	---	33	49.99	1,625	---	---	---	---	---	1,320	---	5,300	---	8,245
	03200 Conc Reinforcement	1.00	LS	---	---	33	49.99	1,625	---	---	---	---	---	1,320	---	5,300	---	8,245

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DIV 3 **DIVISION 3** **1.00**



BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 13 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

DIV 3	DIVISION 3	1.00	LS
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	CONCRETE	21.50	CY	0.080	12.511	269	50.10	13,476	105.82	2,275	34.00	731	223.82	4,812	246.51	5,300	1,236.96	26,595
	DIVISION 3	1.00	LS	---	---	269	50.10	13,476	---	2,275	---	731	---	4,812	---	5,300	---	26,595



BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 14 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

DIV 4	DIVISION 4	1.00	LS
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
04000 - Masonry		240 SF																
	PER DWGS: S-200 / S-201 CMU TYPE: Per Specification Hollow Light Weight Load-Bearing Concrete Masonry Units - Meeting 2,000psi at 28 Days Split Face CMU No Sample Panel Indicted in General Masonry Specs																	
	CMU REBAR					240.00	SF											
	Tie Into Existing CMU Wall					24.00	EA											
	G&G Masonry	1	LS	---	---	---	---	---	---	---	---	---	---	---	---	6,840	---	6,840
	Blockouts Material					15.00	SF											
	CMU Wall Penetration per Detail 2 DWG S-003																	
	Wall Penetration Blockout					15.00	SF											
	Dimen. Lumber (2x4-2x10)	33	BF	---	---	---	---	---	---	---	1.50	50	---	---	---	---	1.50	50
	Grout	1	CF	---	---	---	---	---	---	---	---	---	25.00	25	---	---	25.00	25
	Blockout Install																	
	16" x 8" HDG Wall Sleeve 1/4" Thick	1	EA	---	---	---	---	---	---	---	---	---	500.00	500	---	---	500.00	500
	08000 - Wall Penetration	1	EA	0.125	8.000	8	SPC 49.99	400	---	---	---	---	---	---	---	---	399.95	400
	TOTAL Block-Out STS	1	LS	---	---	---	---	---	---	---	---	300	---	---	---	---	---	300
	Joint Sealant	16	LF	4.000	0.250	4	SPC 49.99	200	---	---	---	---	---	---	---	---	12.50	200
	Sealant	1	LS	---	---	---	---	---	---	---	---	---	---	150	---	---	---	150
	Grout Placement																	
	Grout	1	EA	0.250	4.000	4	SPC 49.99	200	---	---	---	---	---	---	---	---	199.98	200
04000 - Masonry		240.00	SF	15.000	0.067	16	49.99	800	---	---	1.46	350	2.81	675	28.50	6,840	36.10	8,664

DIV 4	DIVISION 4	1.00
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U01 STANDARD-LANDSCAPE-MASTER.RPT

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BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Item Analysis Sheet

Detail Page 15 of 46
May 12, 2021
12:19:32 PM

DIV 4	DIVISION 4	1.00	LS
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
DIVISION 4		1.00	LS	---	---	16	49.99	800	---	---	---	350	---	675	---	6,840	---	8,664

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DIV 4	DIVISION 4	1.00
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BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 16 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

DIV 5	DIVISION 5	1.00	LS
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	05500 Misc Metals	1	LS															
	Install Misc Metals	1	LS															
	Temp Chain Link Fence	30	LF															
	8'-0" Tall Fence per 90% Design Meeting / Not 6' per drawing note Two (2) Options provided for Fence Install - Went with option 2 Alternate to anchor into concrete slab																	
	American Fence	1	LS	---	---	---	---	---	---	---	---	---	---	---	---	4,700	---	4,700
	Temp Chain Link Fence	30.00	LF	---	---	---	---	---	---	---	---	---	---	---	156.67	4,700	156.67	4,700
	Install Bollards	2	EA															
	Install Per MAG STD DTL 140, Type 1																	
	Bollards	2	EA	---	---	---	---	---	---	---	---	---	300.00	600	---	---	300.00	600
	Install Bollards	2	EA	0.250	4.000	8	SPC 49.99	400	---	---	---	---	---	---	---	---	199.98	400
	Bckho-Ldr Ct 420C 1.0cy	2	EA	0.500	2.000	4	OP2 51.17	205	48.51	194	---	---	---	---	---	---	199.36	399
	Auger Attachment	2	EA	0.500	2.000	---	---	---	5.97	24	---	---	---	---	---	---	11.93	24
	Place Concrete	2	CY	1.000	1.000	2	SPC 49.99	100	---	---	---	---	---	---	---	---	49.99	100
	Class "B" Concrete MAG 725																	
	3,000psi Concrete	2	CY	---	---	---	---	---	---	---	---	---	115.00	230	---	---	115.00	230
	3,000psi Waste (5%)	1	CY	---	---	---	---	---	---	---	---	---	115.00	115	---	---	115.00	115
	Short Load Fee	1	EA	---	---	---	---	---	---	---	---	---	200.00	200	---	---	200.00	200
	Environmental Fee	1	EA	---	---	---	---	---	---	---	---	---	25.00	25	---	---	25.00	25
	Fuel Surcharge	1	EA	---	---	---	---	---	---	---	---	---	15.00	15	---	---	15.00	15
	Install Bollards	2.00	EA	0.143	7.000	14	50.33	705	108.95	218	---	---	592.50	1,185	---	---	1,053.77	2,108
	Install Covers For Concrete Holes	5	EA															
	Refer to Drawing M- 101, 102 & DTL 10/S-004 16" Lines (2' x 2' SQ)																	
						3.00	EA				450.00		1,350.00					

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DIV 5	DIVISION 5	1.00
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BE Number BE210840

Opportunity No

Owner File No

Project EI Mirage WRF Filter Upgrades 90%

Location EI Mirage, AZ, USA

Detail Page 17 of 46

May 12, 2021

12:19:32 PM

Item Analysis Sheet

DIV 5 DIVISION 5 1.00 LS

Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	14" Line (18" x 18" SQ)					1.00	EA				400.00		400.00					
	2" Discharge Pipe (9" x 9" SQ)					1.00	EA						325.00					
	1" CPVC Line (9" x 9" SQ)					1.00	EA						325.00					
	Type of Steel not Indicated Estimating with HDG																	
	Steel Plates	6	EA	---	---	---	---	---	---	---	---	---	1,050.00	6,300	---	---	1,050.00	6,300
	Anchor Bolts (3/4")	12	EA	4.000	0.250	3	SPC 49.99	150	---	---	---	---	---	---	---	---	12.50	150
	Anchor Bolts (1")	16	EA	4.000	0.250	4	SPC 49.99	200	---	---	---	---	---	---	---	---	12.50	200
	STS	1	LS	---	---	---	---	---	---	---	---	---	---	200	---	---	---	200
Install Covers For Concrete Holes		5.00	EA	0.714	1.400	7	49.99	350	---	---	---	---	1,300.00	6,500	---	---	1,369.99	6,850
Pipe Support Install		1	LS															
Grouting Covered in DIV 15																		
	Pipe Supports (SH Engineering)	1	LS	---	---	---	---	---	---	---	---	---	---	10,930	---	---	---	10,930
	20" Adjustable Pipe Supports	4	EA	0.250	4.000	16	SPC 49.99	800	---	---	---	---	---	---	---	---	199.98	800
	20" Fixed Flange Support	1	EA	0.250	4.000	4	SPC 49.99	200	---	---	---	---	---	---	---	---	199.98	200
	16" Adjustable Pipe Supports	5	EA	0.333	3.000	15	SPC 49.99	750	---	---	---	---	---	---	---	---	149.98	750
	14" Pipe Saddle Adj. Support	5	EA	0.333	3.000	15	SPC 49.99	750	---	---	---	---	---	---	---	---	149.98	750
	14" Fixed Flg Support	1	EA	0.333	3.000	3	SPC 49.99	150	---	---	---	---	---	---	---	---	149.98	150
	14" Adjustable Pipe Support	1	EA	0.333	3.000	3	SPC 49.99	150	---	---	---	---	---	---	---	---	149.98	150
	12" Adjustable Pipe Support	7	EA	0.333	3.000	21	SPC 49.99	1,050	---	---	---	---	---	---	---	---	149.98	1,050
	Anchors	75	EA	4.000	0.250	19	SPC 49.99	937	---	---	---	---	5.00	375	---	---	17.50	1,312
	3/4" SST All Thread (6' Long)	4	EA	---	---	---	---	---	---	---	---	---	144.05	576	---	---	144.05	576
	Epoxy	1	LS	---	---	---	---	---	---	---	---	---	---	200	---	---	---	200
	STS	1	LS	---	---	---	---	---	---	---	---	---	---	500	---	---	---	500
	Unistrut Supports					1.00	LS											
	1/2" CL2 Line / 6" Drain Line / 3" Filter Drain Line																	
	1/2" Chlorine Line					1.00	LS											

DIV 5 DIVISION 5**1.00**

U01 STANDARD-LANDSCAPE-MASTER.RPT

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BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 18 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

DIV 5	DIVISION 5	1.00	LS
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	5' of HDG Unistrut / 5 EA 1/2" Hose Clamps / 10 Anchors																	
	Anchor Bolts (5/8")	10	EA	4.000	0.250	3	SPC 49.99	125	---	---	---	---	10.00	100	---	---	22.50	225
	McMaster Carr																	
	1 5/8" Galv Strut	5	LF	3.170	0.315	2	SPC 49.99	79	---	---	---	---	6.70	33	---	---	22.47	112
	1/2" Hose Clamps	5	EA	5.000	0.200	1	SPC 49.99	50	---	---	---	---	3.00	15	---	---	13.00	65
	6" Drain Line																	
	McMaster Carr																	
	Anchor Bolts	6	EA	4.000	0.250	2	SPC 49.99	75	---	---	---	---	10.00	60	---	---	22.50	135
	1 5/8" Strut	5	LF	3.170	0.315	2	SPC 49.99	79	---	---	---	---	6.70	33	---	---	22.47	112
	6" Hose Clamps	3	EA	---	---	---	---	---	---	---	---	---	10.64	32	---	---	10.64	32
	3" Filter Line																	
	Anchor Bolts (5/8")	6	EA	4.000	0.250	2	SPC 49.99	75	---	---	---	---	10.00	60	---	---	22.50	135
	1 5/8" Strut	12	LF	3.170	0.315	4	SPC 49.99	189	---	---	---	---	6.70	80	---	---	22.47	270
	6" Hose Clamps	12	EA	---	---	---	---	---	---	---	---	---	20.15	242	---	---	20.15	242
	Uni-Strut STS	1	LS	---	---	---	---	---	---	---	---	---	---	100	---	---	---	100
	Pipe Support Install	1.00	LS	---	---	109	49.99	5,459	---	---	---	---	---	13,337	---	---	---	18,796
	Filter Access Platform	2	EA															
	New Filter Platform Between Filtes #3 & #4 and West Side of Filter #4																	
	Includes Stamped AZ Engineered Drawings per Wood Request																	
	2 EA (Assuming Aluminum)																	
	3'-6" x 11'-7" Platform																	
	Height = 5'-7" from F.F. to CL of Platform																	
	Stairs = 9 Treads (Steep Pitch)																	
	Stairs / Landing	2	EA	---	---	---	---	---	---	---	---	---	13,982.25	27,965	---	---	13,982.25	27,965
	Set Platforms	2	EA	0.083	12.048	24	SPC 49.99	1,205	---	---	---	---	---	---	---	---	602.34	1,205
	Rigging STS	1	LS	---	---	---	---	---	---	---	---	---	---	300	---	---	---	300

U01 STANDARD-LANDSCAPE-MASTER.RPT

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DIV 5	DIVISION 5	1.00
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BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 19 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

DIV 5	DIVISION 5	1.00	LS
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	Crane Ruff Ter 65 Ton	8	HR	1.000	1.000	8	OP3 61.76	494	119.78	958	---	---	---	---	---	---	181.54	1,452
	Anchor / Secure Landings / Stairs																	
	Anchor Bolts (1")	40	EA	---	---	---	---	---	---	---	---	---	15.00	600	---	---	15.00	600
	Install Anchors	40	EA	4.000	0.250	10	SPC 49.99	500	---	---	---	---	---	---	---	---	12.50	500
	Connection to Filters	16	HR	1.000	1.000	16	SPC 49.99	800	---	---	---	---	---	---	---	---	49.99	800
	STS	1	LS	---	---	---	---	---	---	---	---	---	---	300	---	---	---	300
	Filter Access Platform	2.00	EA	0.034	29.048	58	51.61	2,999	479.12	958	---	---	14,582.25	29,165	---	---	16,560.66	33,121
	20" Pipe Penetration	1	EA															
	Assuming No Floor Sleeve. Utilize Link Seal and Grout Top section of Core Drill																	
	Core Drill (24" Opening)																	
	Ferro Scanning	1	LS	---	---	---	---	---	---	---	---	---	---	---	---	425	---	425
	Core Drill Sub	1	LS	---	---	---	---	---	---	---	---	---	---	---	---	576	---	576
	Link Seal Install	1	EA	0.333	3.003	3	SPC 49.99	150	---	---	---	---	---	---	---	---	150.13	150
	Non-Shrink Grout	3	CF	1.500	0.667	2	SPC 49.99	100	---	---	---	---	25.00	75	---	---	58.33	175
	20" Pipe Penetration	1.00	EA	0.200	5.003	5	49.99	250	---	---	---	---	75.00	75	1,001.00	1,001	1,326.12	1,326
	Install Misc Metals	1.00	LS	---	---	193	50.51	9,762	---	1,176	---	---	---	50,262	---	5,701	---	66,901
	05500 Misc Metals	1.00	LS	---	---	193	50.51	9,762	---	1,176	---	---	---	50,262	---	5,701	---	66,901
	DIVISION 5	1.00	LS	---	---	193	50.51	9,762	---	1,176	---	---	---	50,262	---	5,701	---	66,901



BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Item Analysis Sheet

Detail Page 20 of 46
May 12, 2021
12:19:32 PM

DIV 9	DIVISION 9	1.00	LS
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	No Coating included for New Filter - It will come with Finish Coating No Pavement Markings Included Painting of CMU Interior and Exterior Side Included / Existing CMU Wall Excluded Above Grade Pipe Coatings including existing pipe to match within Filter Gallery Only Painting of Vertical Curb and Bollards Added \$2,115.00 for Prep & Coating of PVC Piping																	
	Painting Subcontractor	1	LS	---	---	---	---	---	---	---	---	---	---	---	---	16,920	---	16,920
DIVISION 9		1.00	LS	---	---	---	---	---	---	---	---	---	---	---	---	16,920	---	16,920



BE Number BE210840
Opportunity No
Owner File No
Project **EI Mirage WRF Filter Upgrades 90%**
Location EI Mirage, AZ, USA

Detail Page 21 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

DIV 11 **DIVISION 11** **1.00** **LS**

Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	Aqua Disk Tertiary Filter	1	EA															
	Purchase of Tertiary Filter Covered in Pre-Design																	
	Note: Drawing D (Filter Project Note "E") - Recommends a Minimum 3" Thick Equipment Pad (Flat)																	
	This allows for the pipe drainage piping / valve																	
	No Anchors required as they did not see any seismic requirements in specifications																	
	Installation																	
	During Assembly, Complete the Package Filter Shop Check-Out EP-10176																	
	Utilize Anti Seize for SS Connections																	
	Utilize Underwater Rating For Sealing (Example: DOW Corning #732 Silicone Sealant)																	
	Unload / Handling	8	HR	1.000	1.000	8	SPC 49.99	400	---	---	---	---	---	---	---	---	49.99	400
	Set Equipment																	
	Weight of Filter = 12,000lbs																	
	Set Filter	3	HR	0.094	10.667	32	SPC 49.99	1,600	---	---	---	---	---	---	---	---	533.27	1,600
	Crane Ruff Ter 65 Ton	8	HR	1.000	1.000	8	OP3 61.76	494	119.78	958	---	---	---	---	---	---	181.54	1,452
	Rigging STS	1	LS	---	---	---	---	---	---	---	---	---	---	300	---	---	---	300
	Install STS	1	LS	---	---	---	---	---	---	---	---	---	---	150	---	---	---	150
	Assembly																	
	4 Assembly	40	HR	1.000	1.000	160	SPC 49.99	7,999	---	---	---	---	---	---	---	---	199.98	7,999
	STS	1	LS	---	---	---	---	---	---	---	---	---	---	1,000	---	---	---	1,000
	Influent Wier Modifications																	
	Per 90% Design review meeting added in modification costs for Weirs																	
	Weir Modifications	18	HR	1.000	1.000	18	SPC 49.99	900	---	---	---	---	---	---	---	---	49.99	900
	STS	1	LS	---	---	---	---	---	---	---	---	---	---	100	---	---	---	100
	Quality Control																	
	Witness testing of coatings for both exterior and interior applications at MFR Facility																	
	Air Fair	1	LS	---	---	---	---	---	---	---	---	---	---	1,100	---	---	---	1,100

DIV 11 **DIVISION 11**

1.00



BE Number BE210840

Opportunity No

Owner File No

Project **El Mirage WRF Filter Upgrades 90%**

Location El Mirage, AZ, USA

Detail Page 22 of 46

May 12, 2021

12:19:32 PM

Item Analysis Sheet

DIV 11 **DIVISION 11** **1.00** **LS**

Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	Rental Car / Gas	1	LS	---	---	---	---	---	---	---	---	---	---	500	---	---	---	500
	Subsistence	1	LS	---	---	---	---	---	---	---	---	---	---	500	---	---	---	500
	QC Inspector	16	HR	1.000	1.000	16	116.61	1,866	---	---	---	---	---	---	---	---	116.61	1,866
	Aqua Disk Tertiary Filter	1.00	EA	0.004	242.000	242	54.79	13,258	958.24	958	---	---	3,650.00	3,650	---	---	17,866.66	17,867
	DIVISION 11	1.00	LS	---	---	242	54.79	13,258	---	958	---	---	---	3,650	---	---	---	17,867



BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 23 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

DIV 15 **DIVISION 15** **1.00** **LS**

Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor		Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit
Exposed Pipe Removal		1 LS															
Penetration Pipe Covers covered in DIV 5																	
	Rigging STS	1 LS		---	---	---	---	---	---	---	---	---	500	---	---	---	500
Exposed Piping Removal		1 LS															
Utilize Crane To Remove Pipe Runs and Dismantle On Ground																	
	16" Pipe EF	23 JT	0.231	4.320	99	SPC 49.99	4,967	---	---	---	---	---	---	---	---	215.97	4,967
	14" Pipe EF	7 JT	0.231	4.320	30	SPC 49.99	1,512	---	---	---	---	---	---	---	---	215.97	1,512
1" CPVC Line																	
Assuming Penetration Receives Plate Cover - This is Covered in Division 5																	
	1" CPVC Line	3 JT	2.632	0.380	1	SPC 49.99	57	---	---	---	---	---	---	---	---	19.00	57
6" PVC Upper Elbow																	
	6" PVC Removal	1 JT	1.000	1.000	1	SPC 49.99	50	---	---	---	---	---	---	---	---	49.99	50
3" Temporary Discharge Piping																	
3" Temp Piping is PVC																	
Plate Cover for 3" Temp Piping Covered in DIV 5																	
	12" Blind Flange	1 JT	0.542	1.845	2	SPC 49.99	92	---	---	---	---	---	---	---	---	92.24	92
	3" PVC Piping	20 LF	26.667	0.038	1	SPC 49.99	37	---	---	---	---	---	---	---	---	1.87	37
Exposed Piping Removal		1.00 LS	---	---	134	49.99	6,716	---	---	---	---	---	---	---	---	---	6,716
Exposed Pipe Removal		1.00 LS	---	---	134	49.99	6,716	---	---	---	---	---	500	---	---	---	7,216
MOPO / Shutdowns		1 LS															
MOPO / Shutdown																	
	Temp Pipe Materials (ALB)	1 LS	---	---	---	---	---	---	---	---	---	9,545	---	---	---	---	9,545
Direct Manhours		1 LS															
	Temp Pipe Install					146.00 MH											
	Temp Pipe Removal					112.00 MH											

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DIV 15 **DIVISION 15**

1.00



BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 24 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

DIV 15 DIVISION 15 1.00 LS

Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	Temp Pipe Install / Removal	258	HR	1.000	1.000	258	SPC 49.99	12,898	---	---	---	---	---	---	---	---	49.99	12,898
	STS	1	LS	---	---	---	---	---	---	---	---	---	---	500	---	---	---	500
	Direct Manhours	1.00	LS	---	---	258	49.99	12,898	---	---	---	---	---	500	---	---	---	13,398
	MOPO / Shutdowns	1.00	LS	---	---	258	49.99	12,898	---	---	---	---	---	10,045	---	---	---	22,943
	Exposed Pipe	1	LS															
	Purchase Pipe Materials (Exposed)	1	LS															
	Exposed Pipe Materials	1	LS															
	Purchase Pipe Materials (ALB)	1	LS	---	---	---	---	---	---	---	---	---	---	113,871	---	---	---	113,871
	Inline Static Mixer KOFLO	1	EA	---	---	---	---	---	---	---	---	---	14,676.00	14,676	---	---	14,676.00	14,676
	Injection Quill (KOFLO)	1	LS	---	---	---	---	---	---	---	---	---	---	180	---	---	---	180
	Flow Meter (DIV 16)					1.00	EA											
	12" & 14" DI OF/SERV Line					1.00	LS											
	16" & 20" DI Filter Eff.					1.00	LS											
	1/2" CPVC Chlorine Line					1.00	LS											
	6" CPVC Drain / Backwash					1.00	LS											
	Unload & Store Pipe Materials																	
	Forklift, RT 8000# Reach	8	HR	1.000	1.000	8	OP2 51.17	409	63.12	505	---	---	---	---	---	---	114.29	914
	2 Yard Pipe Crew	8	HR	1.000	1.000	16	SPC 49.99	800	---	---	---	---	---	---	---	---	99.99	800
	Exposed Pipe Materials	1.00	LS	---	---	24	50.39	1,209	---	505	---	---	---	128,727	---	---	---	130,441
	Temporary Pipe Materials	1	LS															
P	STS - Installation (Exposed)	1	LS	---	---	---	---	---	---	---	---	500	---	---	---	---	---	500
	Include carts, chain falls, furniture movers, hoists etc...																	
P	STS - Rigging (Exposed)	1	LS	---	---	---	---	---	---	---	---	500	---	---	---	---	---	500

DIV 15 DIVISION 15

1.00

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BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 25 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

DIV 15	DIVISION 15	1.00	LS
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
P	STS - Testing (Exposed)	1	LS	---	---	---	---	---	---	---	---	500	---	---	---	---	---	500
	PIPE SUPPORTS GROUTING Non-Shrink Grout @ 0.3 CF/EA SUPP Pipe Supports Q-ty:																	
	Non-Shrink Grout	5.10	CF	0.250	4.000	17.00 20 SPC	EA 49.99	1,020	---	---	25.00	128	---	---	---	---	224.98	1,147
	Temporary Pipe Materials	1.00	LS	---	---	20	49.99	1,020	---	---	---	1,628	---	---	---	---	---	2,647
	Purchase Pipe Materials (Exposed)	1.00	LS	---	---	44	50.21	2,229	---	505	---	1,628	---	128,727	---	---	---	133,089
	Install Piping (Exposed)	1	LS															
	Direct Manhours	1	LS															
	Filter Influent / OF Line Filter Effluent / Inj. Quill 6" Filter Drain / Backwash 3" Drain Pipe From Filter 4 1/2" CPVC CL2 Line					268.00 206.00 6.25 7.50 6.25	MHR MHR MHR MHR MHR											
	Process Pipe Install	494	HR	1.000	1.000	494 SPC	49.99	24,697	---	---	---	---	---	---	---	---	49.99	24,697
	Direct Manhours	1.00	LS	---	---	494	49.99	24,697	---	---	---	---	---	---	---	---	---	24,697
	Pipe Testing	1	LS															
	2 Test Pipe Crew	4	EA	0.125	8.000	64 SPC	49.99	3,200	---	---	---	---	---	---	---	---	799.90	3,200
	Comp 185 CFM Diesel	4	EA	0.125	8.000	---	---	---	16.04	513	---	---	---	---	---	---	128.33	513
	Pipe Testing	1.00	LS	---	---	64	49.99	3,200	---	513	---	---	---	---	---	---	---	3,713
	Equipment	1	LS															

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DIV 15	DIVISION 15	1.00
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BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 26 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

DIV 15	DIVISION 15	1.00	LS
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
Forklift	1 LS Staging Pipe for Crane Picks and support for Exposed Piping Operations																	
	Forklift, RT 8000# Reach	1	MO	1.000	1.000	---	---	---	63.12	10,919	---	---	---	---	---	---	10,919.06	10,919
Forklift		1.00	LS	---	---	---	---	---	---	10,919	---	---	---	---	---	---	---	10,919
Crane	1 LS Utilize Crane to Remove and Set New Piping / Install & Remove Temp Piping Filter Influent / OF / Eff Lines (829.5 MH / 32HR/DY = 25.92)																	
	Crane Ruff Ter 65 Ton	1.25	MO	1.000	1.000	217 ^{OP2}	51.17	11,087	119.78	25,902	---	---	---	---	---	---	29,591.43	36,989
Crane		1.00	LS	---	---	217	51.17	11,087	---	25,902	---	---	---	---	---	---	---	36,989
Equipment		1.00	LS	---	---	217	51.17	11,087	---	36,821	---	---	---	---	---	---	---	47,908
Install Piping (Exposed)		1.00	LS	---	---	775	50.32	38,984	---	37,335	---	---	---	---	---	---	---	76,318
Exposed Pipe		1.00	LS	---	---	819	50.32	41,213	---	37,840	---	1,628	---	128,727	---	---	---	209,407
DIVISION 15		1.00	LS	---	---	1,211	50.21	60,827	---	37,840	---	1,628	---	139,272	---	---	---	239,566



BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 27 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

DIV 16	DIVISION 16	1.00	LS
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	MAG Flow Meter	1	EA															
	MAG Flow Meter	1	EA	---	---	---	---	---	---	---	---	---	12,000.00	12,000	---	---	12,000.00	12,000
	MAG Flow Meter	1.00	EA	---	---	---	---	---	---	---	---	---	12,000.00	12,000	---	---	12,000.00	12,000
	Electrical Subcontractor	1	LS															
	A New Variable Frequency Drive on existing second filter feed pump to vary pump speeds based on the surge basin level																	
	Relocate Exterior Lights 2 EA																	
	Includes: Furnish & Install 3/4" GRC Conduit, Communication Cabling, Power Conductors to instrumentation equipment																	
	install VFD, install filter panel, electronically connect flow meter, grounding of flow meter and Programming by Vertech																	
	Electrical Subcontractor	1	LS	---	---	---	---	---	---	---	---	---	---	---	---	41,802	---	41,802
	VFD Modifications	1	LS	---	---	---	---	---	---	---	---	---	---	---	---	32,500	---	32,500
	Electrical Subcontractor	1.00	LS	---	---	---	---	---	---	---	---	---	---	---	---	74,302	---	74,302
	DIVISION 16	1.00	LS	---	---	---	---	---	---	---	---	---	---	12,000	---	74,302	---	86,302



BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 28 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

CON	CONTINGENCY	1.00	LS
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	90% Cost Model Contingency	1	LS															
	Escalation Contingency	1	LS	---	---	---	---	---	---	---	---	---	---	40,000	---	---	---	40,000
	Escalation of varies Materials from Submittals to Contract Date																	
	Construction Contingency	1	LS	---	---	---	---	---	---	---	---	---	---	25,000	---	---	---	25,000
	90% to 100% Permit Contingency	1	LS	---	---	---	---	---	---	---	---	---	---	25,000	---	---	---	25,000
	Design / Construction Cost Changes based on ADEQ / Permit design changes																	
	90% Cost Model Contingency	1.00	LS	---	---	---	---	---	---	---	---	---	---	90,000	---	---	---	90,000
	Shut Down / MOPO	1	LS															
	MOPO / Unknown Conditions	1	LS	---	---	---	---	---	---	---	---	---	---	50,000	---	---	---	50,000
	Unforeseen conditions / Or Owner Changes based off MOPO Plans																	
	Shut Down / MOPO	1.00	LS	---	---	---	---	---	---	---	---	---	---	50,000	---	---	---	50,000
	CONTINGENCY	1.00	LS	---	---	---	---	---	---	---	---	---	---	140,000	---	---	---	140,000

CON	CONTINGENCY	1.00
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BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 29 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

GE 1	GENERAL EXPENSE	1.00	LS
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	SCHEDULE : ----- SPECIFIED SCHEDULE = __154__ CALENDER DAYS = __5__ MONTHS = __20__ WEEKS CONTRACT AWARD DATE:____TBD____ START DATE: __June__, 2021__ COMPLETION DATE: __November__, 2021__ JOB DURATION = __5__ MOS/WKS																	
GENERAL EXPENSE		1.00	LS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

GE 1	GENERAL EXPENSE	1.00
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BE Number BE210840

Opportunity No

Owner File No

Project **El Mirage WRF Filter Upgrades 90%**

Location El Mirage, AZ, USA

Detail Page 30 of 46

May 12, 2021

12:19:32 PM

Item Analysis Sheet

GE 3 F1 MOBILIZE & DEMOBILIZE 100.00 %

Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor		Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit
MOBILIZE		100 %															
Freight In		100 %															
	Load at Yard	--- HR	1.000	1.000	---	SPC 49.99	---	---	---	---	---	---	---	---	---	---	---
	Unload at Job Site	16 HR	1.000	1.000	16	SPC 49.99	800	---	---	---	---	---	---	---	---	49.99	800
	Equipment Freight -IN	1 LS	---	---	---	---	---	---	---	---	2,385	---	---	---	---	---	2,385
Freight In		100.00 %	6.250	0.160	16	49.99	800	---	---	23.85	2,385	---	---	---	---	31.85	3,185
MOBILIZE		100.00 %	6.250	0.160	16	49.99	800	---	---	23.85	2,385	---	---	---	---	31.85	3,185
DEMOBILIZE		100 %															
Freight Out		100 %															
	Load at Site	16 HR	1.000	1.000	16	SPC 49.99	800	---	---	---	---	---	---	---	---	49.99	800
	Equipment Freight -OUT	1 LS	---	---	---	---	---	---	---	---	2,385	---	---	---	---	---	2,385
Freight Out		100.00 %	6.250	0.160	16	49.99	800	---	---	23.85	2,385	---	---	---	---	31.85	3,185
DEMOBILIZE		100.00 %	6.250	0.160	16	49.99	800	---	---	23.85	2,385	---	---	---	---	31.85	3,185
F1 MOBILIZE & DEMOBILIZE		100.00 %	3.125	0.320	32	49.99	1,600	---	---	47.70	4,770	---	---	---	---	63.70	6,370

GE 3 F1 MOBILIZE & DEMOBILIZE 100.00



BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 31 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

GE 5	F3 CONST TEMP BLDGS-FACL	100.00	%
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor		Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit
Traffic Control		1 LS															
	Barricades / Traffic Control	1 LS	---	---	---	---	---	---	---	---	---	---	500	---	---	---	500
	Set up / Tear Down / Maintain	16 HR	1.000	1.000	16	SPC 49.99	800	---	---	---	---	---	---	---	---	49.99	800
Traffic Control		1.00 LS	---	---	16	49.99	800	---	---	---	---	---	500	---	---	---	1,300
Set-Up Trailers & Vans		100 %															
	Set-up costs are per Trailer																
	Set Up Container-Labor	16 HR	1.000	1.000	16	SPC 49.99	800	---	---	---	---	---	---	---	---	49.99	800
	Set Up Container-Materia	1 LS	---	---	---	---	---	---	---	---	250	---	---	---	---	---	250
Set-Up Trailers & Vans		100.00 %	6.250	0.160	16	49.99	800	---	---	2.50	250	---	---	---	---	10.50	1,050
Temp Power		1 LS															
	Assuming we can use City Power																
	Generator	5 MO	---	---	---	---	---	---	---	---	---	---	750.00	3,750	750.00	3,750	
	25kW Generator: Est. 490 GAL Capacity with 8GAL/HOUR full load																
	1 Service Call Per week																
	\$301/GAL + \$95 Charge = \$396/WK x 4 = \$1,584/MO x 5 MO = \$7,920.00																
	Fuel Service	5 MO	---	---	---	---	---	---	---	---	---	1,584.00	7,920	---	---	1,584.00	7,920
Temp Power		1.00 LS	---	---	---	---	---	---	---	---	---	---	7,920	---	3,750	---	11,670
F3 CONST TEMP BLDGS-FACL		100.00 %	3.125	0.320	32	49.99	1,600	---	---	2.50	250	84.20	8,420	37.50	3,750	140.20	14,020

GE 5	F3 CONST TEMP BLDGS-FACL	100.00
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BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 32 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

GE 6	F4 INSTAL TEMP UTILITIES	100.00	%
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	Instal Power	1	EA															
	Assuming can connect to Plant Power																	
	Power Main Connection	1	LS	---	---	---	---	---	---	---	---	1,000	---	---	---	---	---	1,000
	Temporary Const Power Set-up	1	LS	---	---	---	---	---	---	---	---	2,500	---	---	---	---	---	2,500
	Instal Power	1.00	EA	---	---	---	---	---	---	---	3,500.00	3,500	---	---	---	---	3,500.00	3,500
	F4 INSTAL TEMP UTILITIES	100.00	%	---	---	---	---	---	---	---	35.00	3,500	---	---	---	---	35.00	3,500



BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Item Analysis Sheet

Detail Page 33 of 46
May 12, 2021
12:19:32 PM

GE 7	F5 DISMAN & RESTORE SITE	100.00 %
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	Dismantle Buildings	100 %																
	Dismantle Office-Labor	16 HR		1.000	1.000	16	SPC 49.99	800	---	---	---	---	---	---	---	---	49.99	800
	Dismantle Buildings	100.00 %		6.250	0.160	16	49.99	800	---	---	---	---	---	---	---	---	8.00	800
	Cleanup & Restore Site	100 %																
	Allowance	1 LS		---	---	---	---	---	---	---	---	2,000	---	---	---	---	---	2,000
	Cleanup & Restore Site	100.00 %		---	---	---	---	---	---	---	20.00	2,000	---	---	---	---	20.00	2,000
	F5 DISMAN & RESTORE SITE	100.00 %		6.250	0.160	16	49.99	800	---	---	20.00	2,000	---	---	---	---	28.00	2,800



BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 34 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

GE 8	F6 BOND	100.00 %
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor		Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit
US CONTRACT BOND Class B		100 %															
	US CONTRACT BOND Class B	1,409,676 TB		---	---	---	---	---	---	0.005000	7,048	---	---	---	---	0.005000	7,048
US CONTRACT BOND Class B		100.00 %		---	---	---	---	---	---	70.48	7,048	---	---	---	---	70.48	7,048
SUBCONTRACT BOND		100 %															
	Sub-Contract	173,376 SC		---	---	---	---	---	---	0.013500	2,341	---	---	---	---	0.013500	2,341
	SH Engineering (3%)	45,795 \$		---	---	---	---	---	---	---	---	---	---	0.030000	1,374	0.030000	1,374
SUBCONTRACT BOND		100.00 %		---	---	---	---	---	---	23.41	2,341	---	---	13.74	1,374	37.14	3,714
Equipment BONDS		100 %															
	Equipment BONDS	384,832 MC		---	---	---	---	---	---	0.013500	5,195	---	---	---	---	0.013500	5,195
Equipment BONDS		100.00 %		---	---	---	---	---	---	51.95	5,195	---	---	---	---	51.95	5,195
F6 BOND		100.00 %		---	---	---	---	---	---	145.84	14,584	---	---	13.74	1,374	159.58	15,958



BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 35 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

GE 9	F7 INSURANCE	100.00	%
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor		Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit
General Liability																	
	Gen Liab-USA	8.50/M	1,409,676 TB	---	---	---	---	---	---	0.007500	10,573	---	---	---	---	0.007500	10,573
General Liability				100.00	%	---	---	---	---	105.73	10,573	---	---	---	---	105.73	10,573
Builders Risk Insurance																	
	Builders Risk		1,409,676 TB	---	---	---	---	---	---	0.004000	5,639	---	---	---	---	0.004000	5,639
Builders Risk Insurance				100.00	%	---	---	---	---	56.39	5,639	---	---	---	---	56.39	5,639
E&O Insurance																	
	E&O Insurance		1,409,676 TB	---	---	---	---	---	---	0.008000	11,277	---	---	---	---	0.008000	11,277
E&O Insurance				100.00	%	---	---	---	---	112.77	11,277	---	---	---	---	112.77	11,277
F7 INSURANCE				100.00	%	---	---	---	---	274.89	27,489	---	---	---	---	274.89	27,489



BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 36 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

GE 12	V2 OPERATE BLDGS-FACIL	100.00	%
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	Oper Office Bldg	100	%															
	Trailr Office 12'x60'	5	MO	1.000	1.000	---	---	---	2.03	1,760	---	---	---	---	---	---	352.04	1,760
	Oper Office Bldg	100.00	%	---	---	---	---	---	17.60	1,760	---	---	---	---	---	---	17.60	1,760
	Oper Trailers & Vans	100	%															
	Tcon Tool 8'x40' - C	5	MO	1.000	1.000	---	---	---	0.5683	492	---	---	---	---	---	---	98.31	492
	Oper Trailers & Vans	100.00	%	---	---	---	---	---	4.92	492	---	---	---	---	---	---	4.92	492
	Oper Const'n Water	100	%															
	Royalty-Const.Water	5	MO	---	---	---	---	---	---	---	400.00	2,000	---	---	---	---	400.00	2,000
	Operate pumps																	
	Storage (surge) tanks																	
	Maintain system.																	
	Oper Const'n Water	100.00	%	---	---	---	---	---	---	---	20.00	2,000	---	---	---	---	20.00	2,000
	V2 OPERATE BLDGS-FACIL	100.00	%	---	---	---	---	---	---	2,252	20.00	2,000	---	---	---	---	42.52	4,252



BE Number BE210840

Opportunity No

Owner File No

Project **El Mirage WRF Filter Upgrades 90%**

Location El Mirage, AZ, USA

Detail Page 37 of 46

May 12, 2021

12:19:32 PM

Item Analysis Sheet

GE 14 V4 OPERATE UTILITIES 100.00 %

Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor		Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit
Oper Telephone System		100 %															
	Tele/Fax Billing	--- MO		---	---	---	---	---	---	500.00	---	---	---	---	---	---	---
	Cellular Billing	10.50 MO		---	---	---	---	---	---	150.00	1,575	---	---	---	---	150.00	1,575
Oper Telephone System		100.00 %		---	---	---	---	---	---	15.75	1,575	---	---	---	---	15.75	1,575
Oper Potable Water Suply		100 %															
	Water Billing	5 MO		---	---	---	---	---	---	100.00	500	---	---	---	---	100.00	500
Oper Potable Water Suply		100.00 %		---	---	---	---	---	---	5.00	500	---	---	---	---	5.00	500
Site Services		100 %															
	Portable Toilets	5 MO		---	---	---	---	---	---	250.00	1,250	---	---	---	---	250.00	1,250
	Garbage Pickup	5 MO		---	---	---	---	---	---	800.00	4,000	---	---	---	---	800.00	4,000
Site Services		100.00 %		---	---	---	---	---	---	52.50	5,250	---	---	---	---	52.50	5,250
V4 OPERATE UTILITIES		100.00 %		---	---	---	---	---	---	73.25	7,325	---	---	---	---	73.25	7,325



BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 38 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

GE 15	V5 OPERATE SUPPORT EQUIP	100.00	%
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor		Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit
VEHICLES		100 %															
Cars & Pickups		100 %															
	Trc Pickup 4x2	5 MO	1.000	1.000	---	---	---	18.43	15,944	---	---	---	---	---	---	3,188.76	15,944
	Truck Allowance	3 MO	---	---	---	---	---	---	---	600.00	1,800	---	---	---	---	600.00	1,800
Cars & Pickups		100.00 %	---	---	---	---	---	159.44	15,944	18.00	1,800	---	---	---	---	177.44	17,744
VEHICLES		100.00 %	---	---	---	---	---	159.44	15,944	18.00	1,800	---	---	---	---	177.44	17,744
EQUIPMENT		100 %															
Backhoe		100 %															
	Bckho-Ldr Ct 420C 1.0cy	0.50 MO	1.000	1.000	87 ^{OP2}	51.17	4,435	48.51	4,196	---	---	---	---	---	---	17,261.83	8,631
Backhoe		100.00 %	1.154	0.867	87	51.17	4,435	41.96	4,196	---	---	---	---	---	---	86.31	8,631
Project Dust Control (Water Trucks)		1 LS															
No Dust Control Permit Requied as we are disturbing less than .10/Acre																	
Will Utililze Water Wagon for Site																	
	Tank Trl Water 500 Gal	--- MO	1.000	1.000	---	---	---	---	---	---	---	---	---	---	---	---	---
	Water Standby Rent																
	Tank Trl Water 500 Gal	--- MO	1.000	1.000	---	---	---	---	---	---	---	---	---	---	---	---	---
Project Dust Control (Water Trucks)		1.00 LS	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
EQUIPMENT		100.00 %	1.154	0.867	87	51.17	4,435	41.96	4,196	---	---	---	---	---	---	86.31	8,631

GE 15	V5 OPERATE SUPPORT EQUIP	100.00
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U01 STANDARD-LANDSCAPE-MASTER.RPT

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CONSTRUCTION

Location	El Mirage, AZ, USA
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12:19:32 PM

Item Analysis Sheet

GE 15	V5 OPERATE SUPPORT EQUIP	100.00	%
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
V5 OPERATE SUPPORT EQUIP		100.00	%	1.154	0.867	87	51.17	4,435	---	20,140	18.00	1,800	---	---	---	---	263.75	26,375



BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 40 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

GE 17	V7 PROJECT STAFF	100.00 %
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor		Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost		
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
Management		100 %																
	Project Manager - Construction	2.50	MO	1.000	1.000	433	ST ¹ 116.61	50,529	---	---	---	---	---	---	---	20,211.57	50,529	
	Proj Eng. - Construction	3	MO	1.000	1.000	520	EN ¹ 97.18	50,536	---	---	---	---	---	---	---	16,845.33	50,536	
Management		100.00 %		0.105	9.533	953	106.01	101,065	---	---	---	---	---	---	---	1,010.65	101,065	
Supervision		100 %																
	Project Superintendent	5	MO	1.000	1.000	867	SU ¹ 126.33	109,486	---	---	---	---	---	---	---	21,897.29	109,486	
Supervision		100.00 %		0.115	8.667	867	126.33	109,486	---	---	---	---	---	---	---	1,094.86	109,486	
Management Assessment		100 %																
	Pipe Shop Drawings	1	LS	---	---	---	---	---	---	---	---	---	10,200	---	---	---	10,200	
Management Assessment		100.00 %		---	---	---	---	---	---	---	---	102.00	10,200	---	---	102.00	10,200	
Laser Scanning		1 LS																
	Laser Scan Existing Conditions to assist in pre-fabrication and Procurement																	
	Lazer Scanning	1	LS	---	---	---	---	---	---	---	---	---	---	---	2,775	---	2,775	
Laser Scanning		1.00 LS		---	---	---	---	---	---	---	---	---	---	---	2,775	---	2,775	
V7 PROJECT STAFF		100.00 %		0.055	18.200	1,820	115.69	210,551	---	---	---	---	102.00	10,200	27.75	2,775	2,235.26	223,526

GE 17	V7 PROJECT STAFF	100.00
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BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 41 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

GE 19	V9 MANAGEMENT SERVICE	100.00 %
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor		Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit
Engineering		100 %															
No Removal of Hazardous Materials Included in Proposal																	
	Asbestos Testing / Hazardous Material	1	LS	---	---	---	---	---	---	---	1,500	---	---	---	---	---	1,500
	Exisiting MH Condition Testing	1	LS	---	---	---	---	---	---	---	1,500	---	---	---	---	---	1,500
Engineering		100.00 %		---	---	---	---	---	---	30.00	3,000	---	---	---	---	30.00	3,000
Survey STS		100 %															
	Survey Sub Contract	1	LS	---	---	---	---	---	---	---	---	---	---	---	2,500	---	2,500
Survey STS		100.00 %		---	---	---	---	---	---	---	---	---	---	25.00	2,500	25.00	2,500
Quality Control STS		100 %															
Wood Engineers will be providing costs for Construction Services																	
	Woods Construction Costs	1	LS	---	---	---	---	---	---	---	---	---	---	---	44,260	---	44,260
Quality Control STS		100.00 %		---	---	---	---	---	---	---	---	---	---	442.60	44,260	442.60	44,260
Permits		1 LS															
PCL is responsible for following Permit Costs Maricopa County Approval to Construct / City of El Mirage Building Permit / Permits does not include; ADEQ / Dust Control ACT = \$1,500 / Building Permit Est. cost = \$1,000/ Demo Permit (NESHAP)\$500																	
	Permits	1	LS	---	---	---	---	---	---	---	---	---	3,000	---	---	---	3,000
Permits		1.00 LS		---	---	---	---	---	---	---	---	---	3,000	---	---	---	3,000
Office STS		100 %															
	Furniture	1	EA	---	---	---	---	---	---	1,000.00	1,000	---	---	---	---	1,000.00	1,000
	Office Equipment	5	MO	---	---	---	---	---	---	300.00	1,500	---	---	---	---	300.00	1,500
	Computer Equipment per Ea	10.50	MO	---	---	---	---	---	---	150.00	1,575	---	---	---	---	150.00	1,575

GE 19	V9 MANAGEMENT SERVICE	100.00
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BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 42 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

GE 19	V9 MANAGEMENT SERVICE	100.00	%
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	T1 Connection and Virtual Private Network	---	MO	---	---	---	---	---	---	---	750.00	---	---	---	---	---	---	---
	Computer Software	1	LS	---	---	---	---	---	---	---	---	500	---	---	---	---	---	500
	Office Supplies	5	MO	---	---	---	---	---	---	---	50.00	250	---	---	---	---	50.00	250
	*** Total Labor Cost x 0.4%																	
	Office STS	100.00	%	---	---	---	---	---	---	---	48.25	4,825	---	---	---	---	48.25	4,825
	First Aid & Safety STS	100	%															
	Medical/Drug Testing	---	EA	---	---	---	---	---	---	---	75.00	---	---	---	---	---	---	---
	*** Estimate for local requirements																	
	Training & Orientation	---	EA	---	---	---	---	---	---	---	35.00	---	---	---	---	---	---	---
	*** Estimate for local requirements																	
	F.A. & Safety Supplies	4,345	MH	---	---	---	---	---	---	---	0.120000	521	---	---	---	---	0.120000	521
	*** Allow 0.120 per Total Man Hours																	
	Fire Protection	4,345	MH	---	---	---	---	---	---	---	0.070000	304	---	---	---	---	0.070000	304
	*** Allow 0.07 per Total Man Hours																	
	Mercy Flights					0.00	EA						0.00					
	Casualty Carrier					0.00	MO		1.000									0.00
	Ambulance					0.00	MO		1.000									0.00
	Water Coolers	2	EA	---	---	---	---	---	---	---	50.00	100	---	---	---	---	50.00	100
	Drinking Water & Ice	5	MO	---	---	---	---	---	---	---	100.00	500	---	---	---	---	100.00	500
	Air Monitors	5	MO	1.000	1.000	---	---	---	0.9263	801	---	---	---	---	---	---	160.25	801
	Rescue Tripod w/yo yo	5	MO	1.000	1.000	---	---	---	0.9263	801	---	---	---	---	---	---	160.25	801
	Yo Yo Winch	5	MO	1.000	1.000	---	---	---	0.3906	338	---	---	---	---	---	---	67.57	338
	First Aid & Safety STS	100.00	%	---	---	---	---	---	19.40	1,940	14.26	1,426	---	---	---	---	33.66	3,366
	SMALL Tools-Expendables	100	%															
	Small Tool Assess	4,345	MH	---	---	---	---	---	---	---	1.00	4,345	---	---	---	---	1.00	4,345
	Expendables Assess	4,345	MH	---	---	---	---	---	---	---	0.700000	3,041	---	---	---	---	0.700000	3,041

GE 19	V9 MANAGEMENT SERVICE	100.00
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BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Item Analysis Sheet

Detail Page 43 of 46
May 12, 2021
12:19:32 PM

GE 19	V9 MANAGEMENT SERVICE	100.00	%
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	SMALL Tools-Expendables	100.00	%	---	---	---	---	---	---	---	73.86	7,386	---	---	---	---	73.86	7,386
	V9 MANAGEMENT SERVICE	100.00	%	---	---	---	---	---	---	1,940	166.37	16,637	30.00	3,000	467.60	46,760	683.37	68,337



BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Detail Page 44 of 46
May 12, 2021
12:19:32 PM

Item Analysis Sheet

GE 22	V12 ESCAL/TAX/UNINSURED	100.00	%
-------	-------------------------	--------	---

Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
TAXES																		
Arizona Gross Receipts Tax				1,409,676	TB	---	---	---	---	---	0.057004	80,357	---	---	---	---	0.057004	80,357
TAXES				100.00	%	---	---	---	---	---	803.57	80,357	---	---	---	---	803.57	80,357
V12 ESCAL/TAX/UNINSURED				100.00	%	---	---	---	---	---	803.57	80,357	---	---	---	---	803.57	80,357



BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Item Analysis Sheet

Detail Page 45 of 46
May 12, 2021
12:19:32 PM

GE 23	V13 RENTAL ADJUSTMENTS	100.00	%
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Proprietary and Confidential

No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor		Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit
OUTSIDE RENT ADJUSTMENT		100 %															
=====																	
Allowance for lost time vs Invoice Monthly Charges																	
=====																	
Standby Rental Allowance			OE\$		0	0.040											
*** Other Rent x 4.0%																	
Stanby Rental COSTS: (Enter Actual Amount from Equipment Reconciliation Report)																	
Equipment Standby Report		1 LS		---	---	---	---	---	---	---	11,600	---	---	---	---	---	11,600
OUTSIDE RENT ADJUSTMENT		100.00 %		---	---	---	---	---	---	116.00	11,600	---	---	---	---	116.00	11,600
V13 RENTAL ADJUSTMENTS		100.00 %		---	---	---	---	---	---	116.00	11,600	---	---	---	---	116.00	11,600



BE Number BE210840
Opportunity No
Owner File No
Project **El Mirage WRF Filter Upgrades 90%**
Location El Mirage, AZ, USA

Item Analysis Sheet

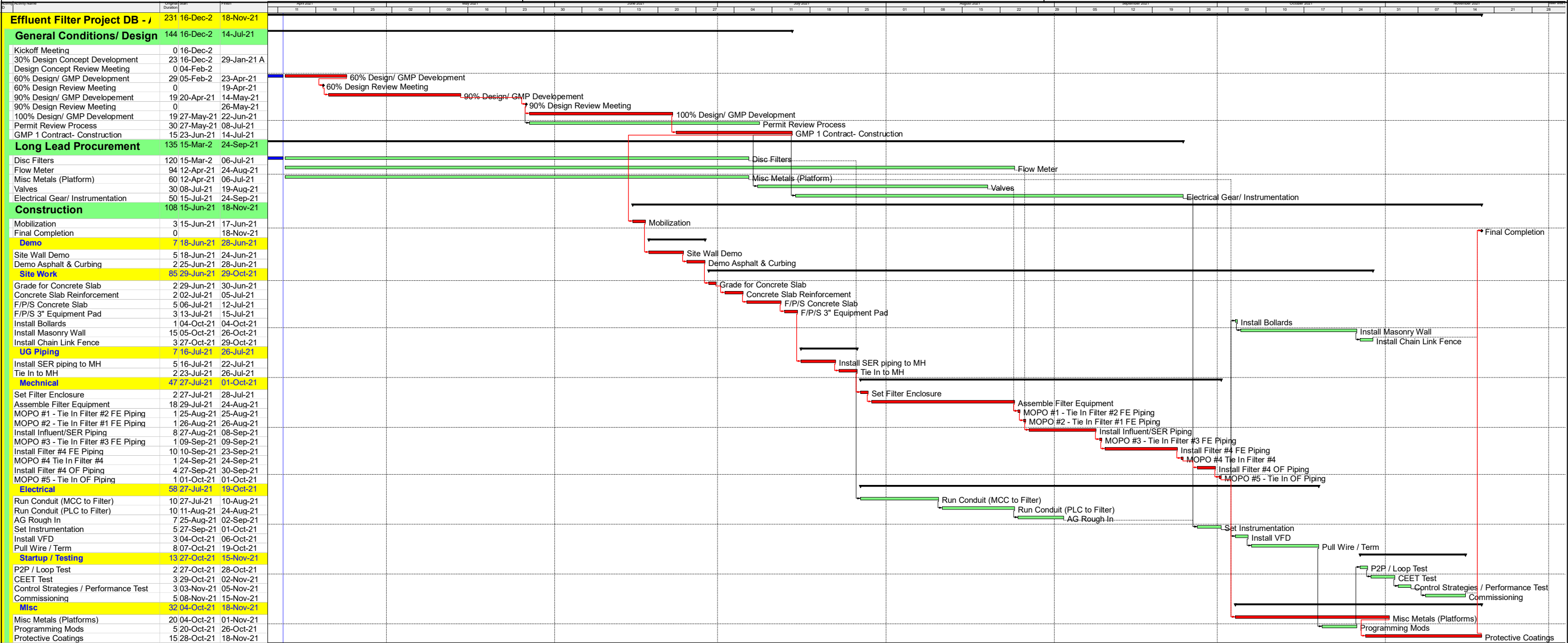
Detail Page 46 of 46
May 12, 2021
12:19:32 PM

OWN	Owners Contingency	1.00	LS
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Proprietary and Confidential

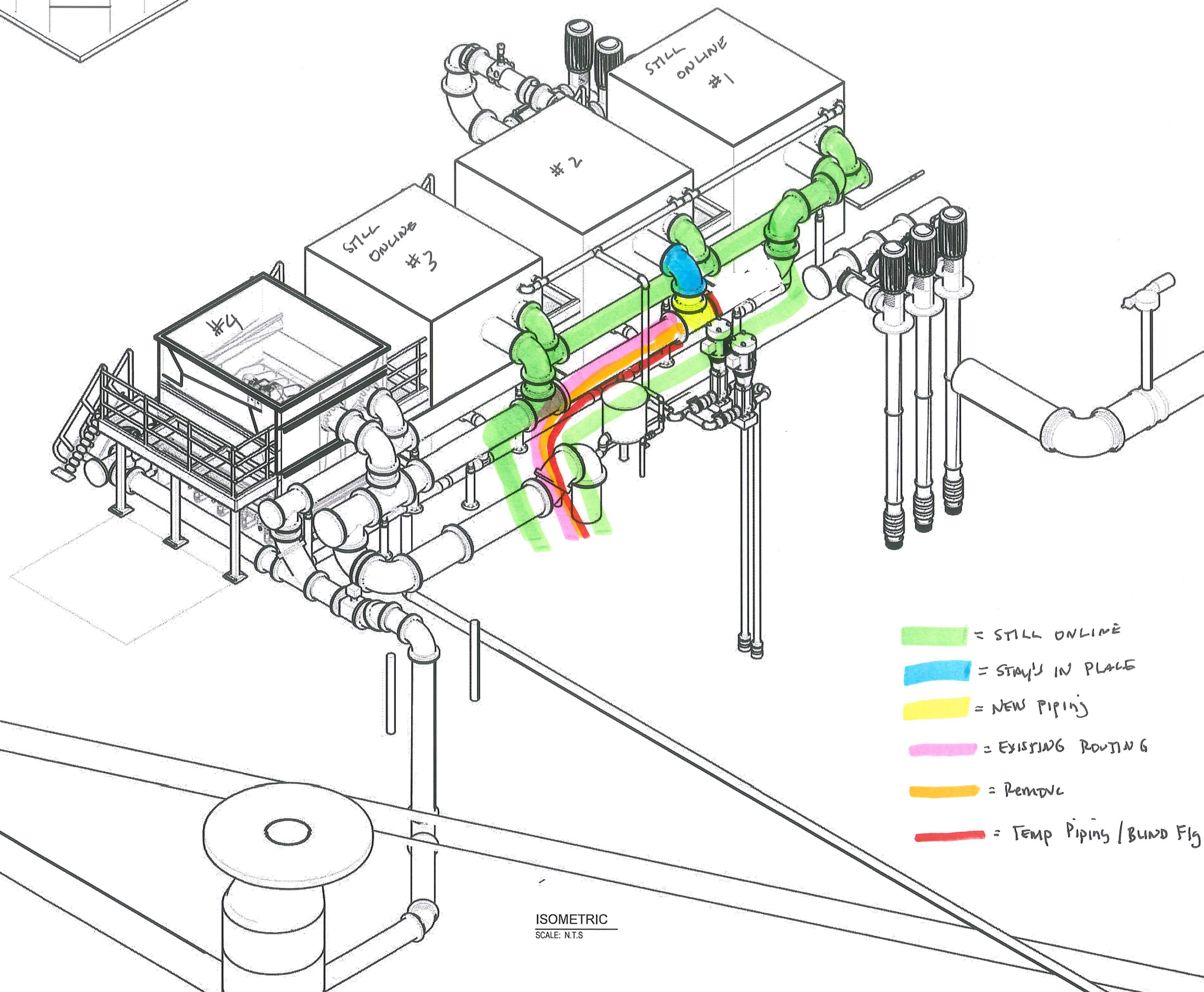
No.	Description	Quantity	UOM	Units Per Hours	ManHrs Per Unit	Labor			Equipment		Services/ Tools/Supplies		Perm. Material		SubContract		Total Cost	
						Hours	\$ / hr	Total	\$ / hr	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	\$/ItemUnit	Total	Unit	Total
	Owners Contingency (10%)																	
	Owners Contingency	1,155,469	\$	---	---	---	---	---	---	---	---	---	0.100000	115,547	---	---	0.100000	115,547
	Owners Contingency	1.00	LS	---	---	---	---	---	---	---	---	---	---	115,547	---	---	---	115,547

OWN	Owners Contingency	1.00
-----	--------------------	------



FILTER #2 PIPING

UNLESS OTHERWISE AGREED IN A WRITTEN CONTRACT BETWEEN WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC. AND ITS CLIENT: (I) THIS DOCUMENT CONTAINS INFORMATION AND DESIGN THAT IS CONFIDENTIAL AND MAY NOT BE COPIED OR DISCLOSED; AND (II) IT MAY ONLY BE USED BY THE CLIENT IN THE CONTEXT AND FOR THE EXPRESS PURPOSE FOR WHICH IT HAS BEEN DELIVERED. ANY OTHER USE OR RELIANCE ON THIS DOCUMENT BY ANY THIRD PARTY IS AT THAT PARTY'S SOLE RISK AND RESPONSIBILITY.



10

Environment & Infrastructure Solutions, Inc.
1600 E. WASHINGTON STREET, SUITE 600

wood

GENERAL ARRANGEMENT ISOMETRIC

**EL MIRAGE WRF
FILTER UPGRADES**
CITY OF EL MIRAGE, ARIZONA

DESIGNED BY: ALK/BR
DRAWN BY: MG/RFS
CHECKED BY: TSL
DATE: 03-05-2021



PRELIMINARY
NOT FOR
CONSTRUCTION
OR
RECORDING

PROJECT NO.
3720201015

DRAWING NAME
M-ISO

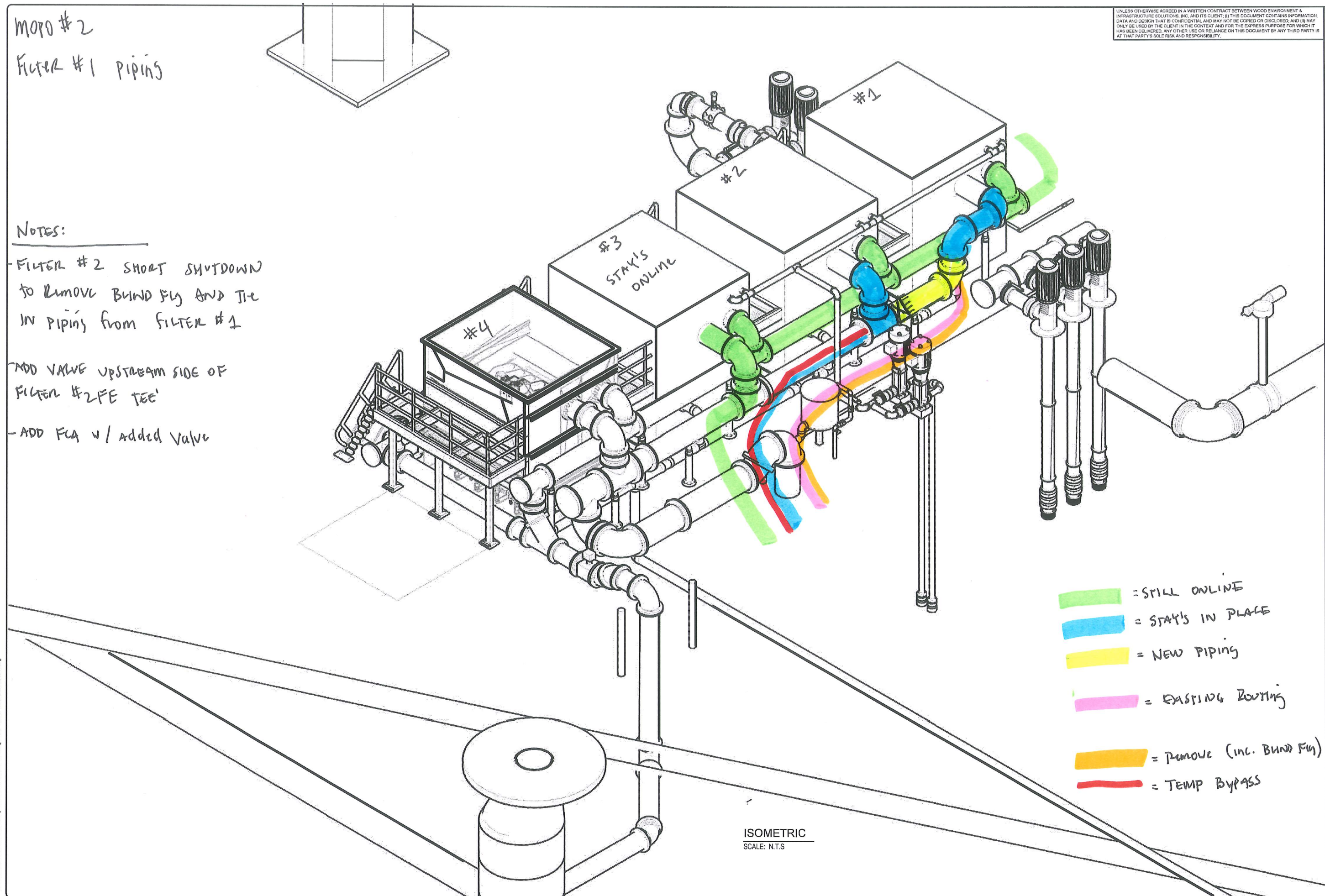
MOPD #2
Filter #1 Piping

NOTES:

- FILTER #2 SHORT SHUTDOWN
to REMOVE BLIND FLG AND THE
IN PIPING FROM FILTER #1

- ADD VALVE UPSTREAM SIDE OF
FILTER #2 FE TEE'

- ADD FLG w/ Added Valve



ISOMETRIC
SCALE: N.T.S

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REVISIONS:

Environment & Infrastructure Solutions, Inc.
4800 E. WASHINGTON STREET, SUITE 600
PHOENIX, ARIZONA 85034
PHONE: 602-733-6000
FAX: 602-733-6100

wood.

GENERAL ARRANGEMENT
ISOMETRIC

EL MIRAGE WRF
FILTER UPGRADES
CITY OF EL MIRAGE, ARIZONA

DESIGNED BY: ALK/BR
DRAWN BY: MG/RFS
CHECKED BY: TSL
DATE: 03-05-2021



PRELIMINARY
NOT FOR
CONSTRUCTION
OR
RECORDING

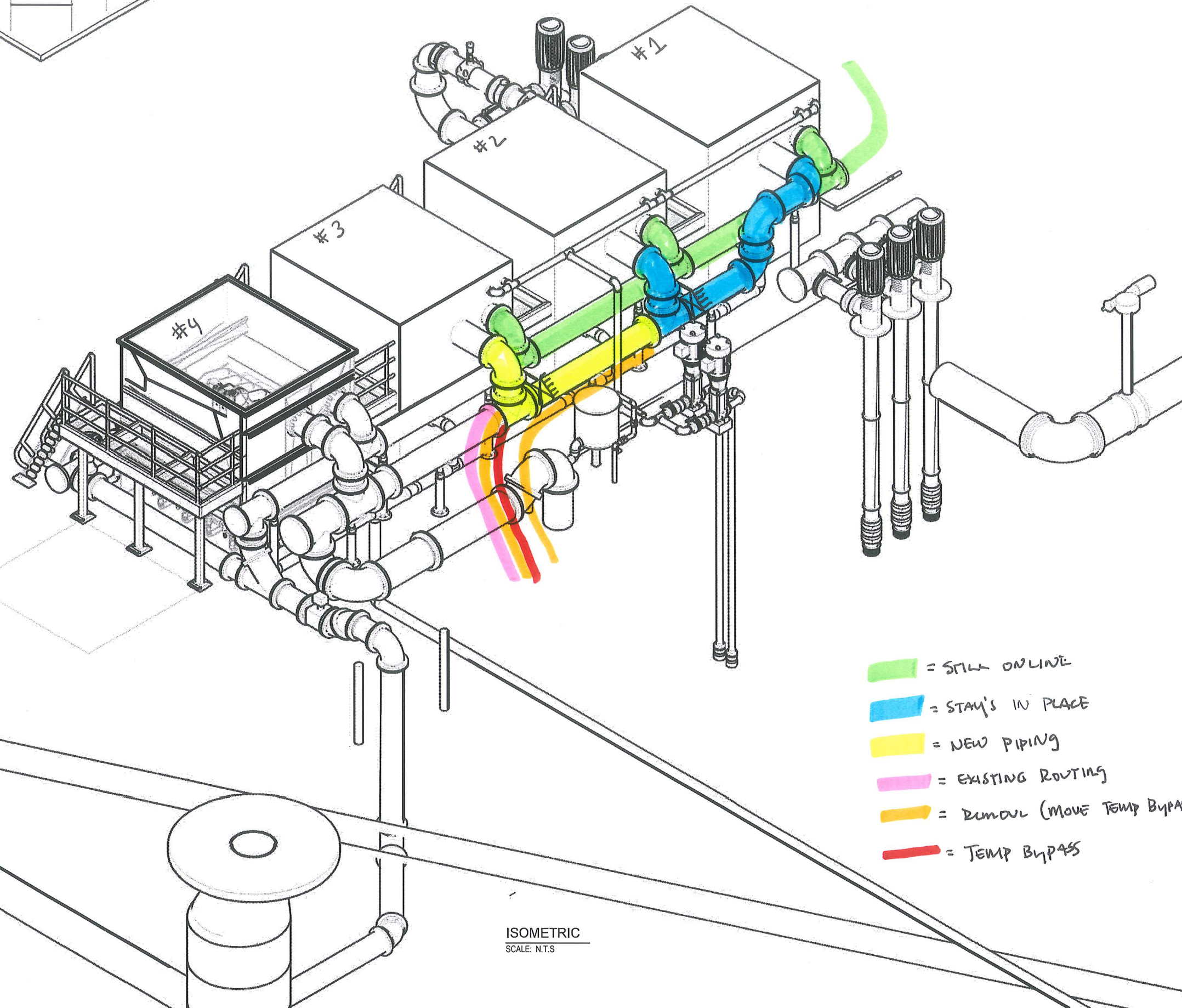
PROJECT NO.
3720201015

DRAWING NAME
M-ISO

Filter #3 piping

NOTES:

- FILTER #1 & #2 SHORT SHUTDOWN TO REMOVE TEMP BYPASS AND TIE IN PIPING FROM FILTER #3
- ADD VALVE UPSTREAM OF FILTER #3 FE TEE
- ADD FCA W/ Added VALVE



ISOMETRIC
SCALE: N.T.S

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Environment & Infrastructure Solutions, Inc.
4600 E. WASHINGTON STREET, SUITE 600

Down

GENERAL ARRANGEMENT ISOMETRIC

**EL MIRAGE WRF
FILTER UPGRADES**

1000

DESIGNED BY: ALK/B
DRAWN BY: MG/RFS
CHECKED BY: TSL
DATE: 03-05-2021



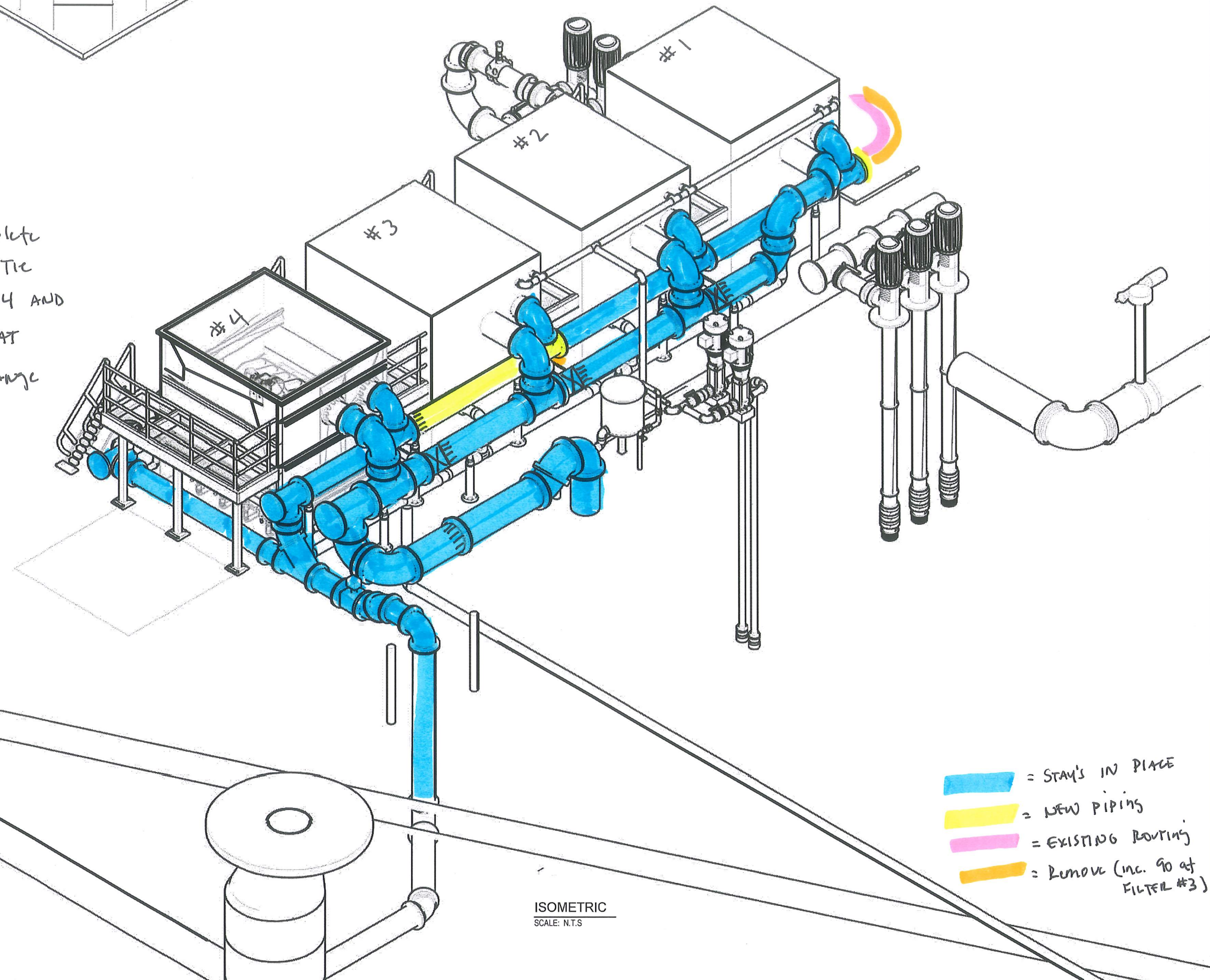
PRELIMINARY
NOT FOR
CONSTRUCTION
OR
RECORDING

PROJECT NO
3720201015

DRAWING NAME
M-ISO

MOPD #5 Filter Overflow Pipe

- NOTES:
- NEW PIPING TO ALREADY BE COMPLETE TO FILTER #4. SHUT DOWN TO TIC IN OVER FLOW FROM FILTER #4 AND REMOVE EXISTING DISCHARGE AT FILTER #1, INSTALL BLIND FLANGE ONCE REMOVED.
 - ADD FCA AT FILTER #4 TEE ON OF.



ISOMETRIC
SCALE: N.T.S

- █ = STAY'S IN PLACE
- █ = NEW PIPING
- █ = EXISTING ROUTING
- █ = REMOVE (INC. 90 at FILTER #3)

UNLESS OTHERWISE AGREED IN A WRITTEN CONTRACT BETWEEN WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS, INC. AND ITS CLIENT, (I) THIS DOCUMENT CONTAINS INFORMATION, DATA AND DESIGN THAT IS CONFIDENTIAL AND MAY NOT BE COPIED OR DISCLOSED; AND (II) MAY ONLY BE USED BY THE CLIENT IN THE CONTEXT AND FOR THE EXPRESS PURPOSE FOR WHICH IT HAS BEEN DELIVERED. ANY OTHER USE OR RELIANCE ON THIS DOCUMENT BY ANY THIRD PARTY IS AT THAT PARTY'S SOLE RISK AND RESPONSIBILITY.

REVISIONS: <table border="1"> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>																						wood. Environment & Infrastructure Solutions, Inc. 4600 E. WASHINGTON STREET, SUITE 600 PHOENIX, ARIZONA 85034 PHONE: 602-733-6000 FAX: 602-733-6100
GENERAL ARRANGEMENT ISOMETRIC																						
PROJECT: EL MIRAGE WRF FILTER UPGRADES CITY OF EL MIRAGE, ARIZONA		DESIGNED BY: ALK/VBR DRAWN BY: MG/RFS CHECKED BY: TSL DATE: 03-05-2021																				
CITY OF EL MIRAGE GRAND HERITAGE, BRIGHTER FUTURE		PRELIMINARY NOT FOR CONSTRUCTION OR RECORDING																				
PROJECT NO. 3720201015		DRAWING NAME M-ISO																				

ESTIMATE#: 7249

Revision#:



A-Core Concrete Cutting, Inc. | 605 S Drew St. Mesa, AZ 85210 | Phone# (480) 964-8662
 Fax# (480) 964-8696 | Toll Free# (888) 846-7070 | License# ROC196637 CR-5
www.a-core.com

Customer

Name: PCL CONTRACTING
Address: 1711 W. GREENTREE
 PHOENIX, AR 85041
Phone#: (602) 501-3382
Contact Name: MICHAEL COX **Phone#:** (480) 353-8761
Email: mtcox@pcl.com

Quoted By

Name: David Riley **Date:** 5/3/2021
Phone#: (480) 797-9629
Email: davidr@a-core.com
A-Core Job#:
Addenda:

Job Information

Job Name: EL MIRAGE LIFT STATION **RFQ#:**
Job Location: 10355 N. 121 ST AVE **Project#:**
City: PHOENIX **State:** Arizona **Customer PO#:**
Customer Job#:
Bid Due Date: 3/24/2021

Scope Of Work

Quantity	Unit Type	Description of Work	Unit Price
200	LF	FLAT SAW 200 FT AC 4" THICK MIN. WITH MOB	\$250.00
2	ea	CORE DRILL UP TO 12" DEEP WALL AND LID 24" DIA. CORE	\$576.00
2	ea	WALL SAW 2 CUTS 8 FT TALL @ 8" BLOCK WALL	\$376.00
		EACH MOB TO SITE	\$100.00
		MIN CHARGE 150.00	
		A-CORE NOW OFFERS GPR CONCRETE SCANNING	
1	ea	20" DIA. CORE @ 8" DEEP	\$360.00
		MOB TO SITE	\$100.00

Total

General Terms & Conditions

This document is to be accepted within 45 days; otherwise, price is subject to change.

- Protection of existing conditions by others.
- If we hit extra heavy amounts of rebar/steel or anything else unforeseen buried in the concrete that would cause excessive wear or damage to our diamond bits, blades or equipment, we will charge you accordingly for this.
- A-Core Inc. will not be responsible for repairs from cutting buried utilities or structures.
- Contractor is responsible for all layout of cut lines & holes.
- Overtime will be charged for work over 8 hrs per day, nights, after 5 pm and Saturdays
- Double time will apply for work on Sundays and holidays.
- If job does not start on start date, price will change.
- Any added work or change order work will not be done without signed and dated authorized change order, regardless of job schedule.
- Price subject to change if conditions and scope on job vary from this quotation
- If a bond is required there will be a 3% charge
- A-Core Payments terms are Net 30 with 0% retention
- A-Core reserves the right to have an escalation clause as part of this estimate
- THIS SUBCONTRACT IS CONTINGENT ON A LACK OF IMPACT BY THE CORONAVIRUS NATIONAL EMERGENCY. Given the existence of the coronavirus pandemic, A-Core will use its best efforts to staff and supply this project to meet the scheduled completion date. However, A-Core reserves its right to seek an excusable extension of time if A-Core or its subcontractors and suppliers are unable to maintain planned crew sizes due to the illness, supply shortages or governmental restraints on business, travel and/or assembly. To the extent that the project is suspended pursuant to the terms of the purchase order/subcontract, A-Core intends to seek additional costs associated with the suspension.

Job Exclusions

- All layout to be completed by contractor
- All shoring to be installed and provided by contractor (when applicable)
- X-Raying or scanning by contractor or can be provided by A-Core at an additional charge
- All traffic control, barricades, message boards etc. is to be provided by Contractor
- Any slurry/water control to be provided by & disposed of by Contractor
- Any standby time waiting for access, layout, traffic control, engineer's decision, plant operations, etc., will be charged at an hourly rate
- Contractor to provide all Blue staking & add A-Core Inc. as a duplicate permit holder/rental agreement
- Contractor to provide all access via scaffold, lifts, hoists, etc. to work areas when applicable

Special Instructions

CORE 2- 24" DIA. CORE S , FLAT SAW 200 FT AC , CUT 2- 8" BLOCK WALLS 8 FT HIGH ADDED 1- 20" @ 8" THICK

Accepted By (Customer)

Signature: _____
Date: _____

A-Core Concrete Specialists

Signature: David Riley
Date: 5/3/2021

Montana (406) 388-9513	Murray (801) 261-5552	New Mexico (505) 873-6561	Texas (817) 564-0188	Twin Falls (208) 734-5664	Washington (509) 582-1676
Arizona (480) 964-8696	Boise (208) 384-0500	Colorado (720) 899-4899	Idaho Falls (208) 523-3930	Missoula (406) 543-2305	Oregon (541)-382-4633

Service



Demolition



Joint Saw & Seal



Grinding & Grooving



Concrete Pouring

ALB PIPING PRODUCTS & SERVICES, LLC

P (480) 753-1719

5303 E. FAIRVIEW STREET

F (480) 753-1799

CHANDLER, AZ 85226

BID DATE:

MAY 10, 2021

BID TIME:

AM

ESTIMATOR:

B. SALCIDO

EL MIRAGE WRF FILTER UPGRADES

OWNER: CITY of EL MIRAGE

ENGINEER: WOOD

LINE	QTY	UNIT	SIZE	x	SIZE	DESCRIPTION	LINING	PRIMER	UNIT PRICE	SUB TOTAL	TOTAL
10											
20											
30											
40											
50	YARD PIPING <> BURIED										
60											
70	36	LF	14"	x	18'-0"	DI PC350 <PO> PIPE - TJ B&S w/ GASKET	CEMENT	TARCOAT	\$ 47.00	\$ 1,692.00	
80											
90	220	LF	37"	x	220'	POLYWRAP - BLACK (08 mil THICK) w/ 22' PERFORATIONS	14"-18" DIP		\$ 0.65	\$ 143.00	
100	12	RL	02"	x	100'	POLYWRAP - TAPE (10 mil THICK) {36 ROLLS per CASE}			\$ 5.00	\$ 60.00	
110											
120	1	RL	06"	x	1,000'	DETECT TAPE - BLUE <> "CAUTION - BURIED WATERLINE BELOW"			\$ 75.00	\$ 75.00	
130	1	RL	12 Ga	x	500'	TRACER WIRE - COPPER w/ BLUE INSULATING JACKET			\$ 90.00	\$ 90.00	
140											
150	2	EA	14"			MJ DI C153 - 90 BEND L/ ACCs	CEMENT	TARCOAT	\$ 462.00	\$ 924.00	
160	2	EA	14"			MJ DI C153 - 45 BEND L/ ACCs	CEMENT	TARCOAT	\$ 360.00	\$ 720.00	
170	1	EA	14"	x	14"	MJ DI C153 - WYE L/ ACCs	CEMENT	TARCOAT	\$ 1,230.00	\$ 1,230.00	
180											
190	11	EA	14"			MJ DI C153 - DI WEDGE ACTION RESTRAINT w/ ACCs			\$ 144.00	\$ 1,584.00	
200											
210						16"(MOPO MATERIALS)					
220	1	EA	16"			FLG DI C110 - BLIND FLANGE	CEMENT	N-69	\$ 407.00	\$ 407.00	
230	2	KIT	16"			A307B ZP B&N KIT - TAG: DIP FLG B&N KIT			\$ 46.00	\$ 92.00	
240	1	EA	16"	x	1/8"	150lb "FF" EPDM RUBBER FLG GASKET			\$ 16.00	\$ 16.00	
250											
260	54	LF	16"	x	18'-0"	DI PC350 <PO> PIPE - TJ B&S w/ GASKET	CEMENT	TARCOAT	\$ 63.00	\$ 3,402.00	
270											
280	4	EA	16"			MJ DI C153 - 90 BEND L/ ACCs	CEMENT	TARCOAT	\$ 627.00	\$ 2,508.00	
290	16	EA	16"			MJ DI C153 - DI WEDGE ACTION RESTRAINT w/ ACCs			\$ 195.00	\$ 3,120.00	
300											
310						06"					
320	20	LF	06"	x	20'-0"	SCH80 PVC PIPE (PE)			\$ 18.00	\$ 360.00	
330	2	EA	06"	x	06"	SCH80 CPVC FITTING - SxSxS TEE			\$ 135.00	\$ 270.00	
340	2	EA	06"	x	02"	SCH80 CPVC FITTING - SxS BELL REDUCER			\$ 167.00	\$ 334.00	

LINE	QTY	UNIT	SIZE	x	SIZE	DESCRIPTION	LINING	PRIMER	UNIT PRICE	SUB TOTAL	TOTAL
350											
360	20	LF	02"	x	20'-0"	SCH80 PVC PIPE (PE)			\$ 3.00	\$ 60.00	
370	3	EA	02"			SCH80 CPVC FITTING - SxS 90 BEND			\$ 12.00	\$ 36.00	
380											
390											
400											
410	MECHANICAL PIPING <> EXPOSED										
420						20"					
430	1	EA	20"	x	04'-06"	DI CL53 SPOOL - FLG x FLG	CEMENT	TN-140	\$ 1,746.00	\$ 1,746.00	
440	1	EA	20"	x	00'-11"	DI CL53 SPOOL - FLG x FLG	CEMENT	TN-140	\$ 1,153.00	\$ 1,153.00	
450											
460	1	EA	20"	x	05'-06"	DI CL53 SPOOL - FLG x PE	CEMENT	TN-140	\$ 1,470.00	\$ 1,470.00	
470	1	EA	20"	x	03'-00"	DI CL53 SPOOL - FLG x PE	CEMENT	TN-140	\$ 1,011.00	\$ 1,011.00	
480	1	EA	20"	x	00'-10"	DI CL53 SPOOL - FLG x PE	CEMENT	TN-140	\$ 673.00	\$ 673.00	
490											
500	2	EA	20"			FLG DI C110 - 90 BEND	CEMENT	N-69	\$ 1,425.00	\$ 2,850.00	
510	2	EA	20"			FLG DI C110 - 45 BEND	CEMENT	N-69	\$ 1,197.00	\$ 2,394.00	
520	1	EA	20"	x	20"	FLG DI C110 - TEE	CEMENT	N-69	\$ 2,105.00	\$ 2,105.00	
530	1	EA	20"	x	16"	FLG DI C110 - TEE	CEMENT	N-69	\$ 2,455.00	\$ 2,455.00	
540	1	EA	20"	x	16"	FLG DI C110 - CONCENTRIC REDUCER	CEMENT	N-69	\$ 965.00	\$ 965.00	
550	2	EA	20"			FLG DI C110 - BLIND FLANGE	CEMENT	N-69	\$ 742.00	\$ 1,484.00	
560											
570	1	EA	20"			RFCA - DI BODY [F/ DIP] w/ STD HARD & GASKET	EPOXY	EPOXY	\$ 2,105.00	\$ 2,105.00	
580						Pipe Supports Provided by SH Engineering					
590	0	EA	20"			HDG FIXED FLG SUPPORT (F/ DIP) {FFLR-PIPE C/L=4'-3"}	DTL 4	SHT S-003	\$ -	\$ -	
600	0	EA	20"			HDG ADJ SADDLE SUPPORT w/ U-BOLT (F/ DIP) {FFLR-PIPE C/L=4'-3"}	DTL 5	SHT S-003	\$ -	\$ -	
610	0	EA	20"			HDG PIPE SUPPORT (F/ DIP) {FFLR-PIPE C/L=7'-0"}	DTL 11	SHT S-004	\$ -	\$ -	
620											
630	12	KIT	20"			A307B ZP B&N KIT - TAG: DIP FLG B&N KIT			\$ 85.00	\$ 1,020.00	
640	12	EA	20"	x	1/8"	150lb "FF" EPDM RUBBER FLG GASKET			\$ 20.00	\$ 240.00	
650											
660						16"					
670	3	EA	16"	x	01'-02"	DI CL53 SPOOL - FLG x FLG	CEMENT	TN-140	\$ 897.00	\$ 2,691.00	
680											
690	1	EA	16"	x	08'-11"	DI CL53 SPOOL - FLG x PE	CEMENT	TN-140	\$ 1,563.00	\$ 1,563.00	
700	2	EA	16"	x	04'-00"	DI CL53 SPOOL - FLG x PE	CEMENT	TN-140	\$ 890.00	\$ 1,780.00	
710	1	EA	16"	x	01'-00"	DI CL53 SPOOL - FLG x PE	CEMENT	TN-140	\$ 505.00	\$ 505.00	
720	3	EA	16"	x	00'-08"	DI CL53 SPOOL - FLG x PE	CEMENT	TN-140	\$ 490.00	\$ 1,470.00	
730											
740	2	EA	16"			FLG DI C110 - 90 BEND	CEMENT	N-69	\$ 835.00	\$ 1,670.00	
750	2	EA	16"	x	16"	FLG DI C110 - TEE	CEMENT	N-69	\$ 1,300.00	\$ 2,600.00	
760	1	EA	16"	x	14"	FLG DI C110 - CONCENTRIC REDUCER	CEMENT	N-69	\$ 764.00	\$ 764.00	
770											

LINE	QTY	UN IT	SIZE	x	SIZE	DESCRIPTION	LINING	PRIMER	UNIT PRICE	SUB TOTAL	TOTAL
780	3	EA	16"			BUTTERFLY VALVE - FLG [C504] w/ HANDWHEEL	EPOXY	EPOXY	\$ 3,345.00	\$ 10,035.00	
790											
800	5	EA	16"			RFCA - DI BODY [F/ DIP] w/ STD HARD & GASKET	FBE	FBE	\$ 1,675.00	\$ 8,375.00	
810						Pipe Supports Provided by SH Engineering					
820	0	EA	16"			HDG ADJ SADDLE SUPPORT w/ U-BOLT (F/ DIP) {FFLR-PIPE C/L=4'-3"}	DTL 5	SHT S-003	\$ -	\$ -	
830											
840	17	KIT	16"			A307B ZP B&N KIT - TAG: DIP FLG B&N KIT			\$ 46.00	\$ 782.00	
850	17	EA	16"	x	1/8"	150lb "FF" EPDM RUBBER FLG GASKET			\$ 16.00	\$ 272.00	
860											
870						14"					
880	1	EA	14"	x	10'-06"	DI CL53 SPOOL - FLG x FLG	CEMENT	TN-140	\$ 1,755.00	\$ 1,755.00	
890	1	EA	14"	x	07'-00"	DI CL53 SPOOL - FLG x FLG	CEMENT	TN-140	\$ 1,362.00	\$ 1,362.00	
900	1	EA	14"	x	02'-06"	DI CL53 SPOOL - FLG x FLG	CEMENT	TN-140	\$ 857.00	\$ 857.00	
910	1	EA	14"	x	02'-00"	DI CL53 SPOOL - FLG x FLG	CEMENT	TN-140	\$ 801.00	\$ 801.00	
920	2	EA	14"	x	01'-00"	DI CL53 SPOOL - FLG x FLG	CEMENT	TN-140	\$ 689.00	\$ 1,378.00	
930											
940	1	EA	14"	x	12'-00"	DI CL53 SPOOL - FLG x PE	CEMENT	TN-140	\$ 1,641.00	\$ 1,641.00	
950											
960	2	EA	14"			FLG DI C110 - 90 BEND	CEMENT	N-69	\$ 678.00	\$ 1,356.00	
970	3	EA	14"			FLG DI C110 - 45 BEND	CEMENT	N-69	\$ 515.00	\$ 1,545.00	
980	3	EA	14"	x	14"	FLG DI C110 - TEE	CEMENT	N-69	\$ 1,185.00	\$ 3,555.00	
990	3	EA	14"	x	14"	FLG DI C110 - WYE	CEMENT	N-69	\$ 1,650.00	\$ 4,950.00	
1000	1	EA	14"	x	12"	FLG DI C110 - ECCENTRIC REDUCER	CEMENT	N-69	\$ 615.00	\$ 615.00	
1010	2	EA	14"			FLG DI C110 - BLIND FLANGE	CEMENT	N-69	\$ 330.00	\$ 660.00	
1020											
1030	4	EA	14"			RFCA - DI BODY [F/ DIP] w/ STD HARD & GASKET	FBE	FBE	\$ 1,212.00	\$ 4,848.00	
1040						Pipe Supports Provided by SH Engineering					
1050	0	EA	14"			HDG FIXED FLG SUPPORT (F/ DIP) {FFLR-PIPE C/L=5'-7"}	DTL 4	SHT S-003	\$ -	\$ -	
1060	0	EA	14"			HDG FIXED FLG SUPPORT (F/ DIP) {FFLR-PIPE C/L=1'-6"}	DTL 4	SHT S-003	\$ -	\$ -	
1070	0	EA	14"			HDG PIPE SUPPORT (F/ DIP) {FFLR-PIPE C/L=0'-6"}	DTL 11	SHT S-004	\$ -	\$ -	
1080											
1090	23	KIT	14"			A307B ZP B&N KIT - TAG: DIP FLG B&N KIT			\$ 35.00	\$ 805.00	
1100	23	EA	14"	x	1/8"	150lb "FF" EPDM RUBBER FLG GASKET			\$ 16.00	\$ 368.00	
1110											
1120	WALL PENETRATION										
1130	1	EA	18"	x	00'-08"	HDG CS WALL SLEEVE - 1/4 WALL w/ SEEP RING ON CENTER	DTL 2	SHT S-003	\$ 390.00	\$ 390.00	
1140	14	EA	425			IL ### - MECHANICAL RUBBER LINKS w/ 316SS HARDWARE			\$ 22.00	\$ 308.00	
1150											
1160						12"					
1170	1	EA	12"	x	09'-06"	DI CL53 SPOOL - FLG x FLG	CEMENT	TN-140	\$ 1,277.00	\$ 1,277.00	
1180	1	EA	12"	x	08'-03"	DI CL53 SPOOL - FLG x FLG	CEMENT	TN-140	\$ 1,203.00	\$ 1,203.00	
1190	2	EA	12"	x	03'-00"	DI CL53 SPOOL - FLG x FLG	CEMENT	TN-140	\$ 677.00	\$ 1,354.00	
1200	1	EA	12"	x	01'-00"	DI CL53 SPOOL - FLG x FLG	CEMENT	TN-140	\$ 492.00	\$ 492.00	

LINE	QTY	UN IT	SIZE	x	SIZE	DESCRIPTION	LINING	PRIMER	UNIT PRICE	SUB TOTAL	TOTAL
1210											
1220	2	EA	12"			FLG DI C110 - 90 BEND	CEMENT	N-69	\$ 515.00	\$ 1,030.00	
1230	3	EA	12"	x	12"	FLG DI C110 - TEE	CEMENT	N-69	\$ 822.00	\$ 2,466.00	
1240											
1250	1	EA	12"			BUTTERFLY VALVE - FLG [C504] w/ HAND WHEEL	EPOXY	EPOXY	\$ 2,265.00	\$ 2,265.00	
1260	1	EA	12"			KNIFE GATE VALVE - FLG w/ HAND WHEEL	EPOXY	EPOXY	\$ 3,115.00	\$ 3,115.00	
1270						Pipe Supports Provided by SH Engineering					
1280	0	EA	12"			HDG PIPE SUPPORT (F/ DIP) {FFLR-PIPE C/L=0'-6"}	DTL 11	SHT S-004	\$ -	\$ -	
1290											
1300	12	KIT	12"			A307B ZP B&N KIT - TAG: DIP FLG B&N KIT			\$ 20.00	\$ 240.00	
1310	12	EA	12"	x	1/8"	150lb "FF" EPDM RUBBER FLG GASKET			\$ 16.00	\$ 192.00	
1320											
1330						SMALL BORE					
1340	NOTE: SMALL BORE NOT CLEARLY DEFINED ON DWGS, ADJUST QTY'S BELOW AS NEEDED. <> PLEASE VERIFY UPON RELEASE										
1350	20	LF	02"	x	20'-0"	SCH80 CPVC PIPE			\$ 5.00	\$ 100.00	
1360	20	LF	01"	x	20'-0"	SCH80 CPVC PIPE			\$ 2.00	\$ 40.00	
1370	20	LF	1/2"	x	20'-0"	SCH80 CPVC PIPE			\$ 1.00	\$ 20.00	
1380											
1390	1	EA	02"			SCH80 CPVC FITTING - SxS 90 BEND			\$ 13.00	\$ 13.00	
1400	1	EA	01"			SCH80 CPVC FITTING - SxS 90 BEND			\$ 4.00	\$ 4.00	
1410	1	EA	1/2"			SCH80 CPVC FITTING - SxS 90 BEND			\$ 2.00	\$ 2.00	
1420	1	EA	02"			SCH80 CPVC FITTING - SxS 45 BEND			\$ 14.00	\$ 14.00	
1430	1	EA	01"			SCH80 CPVC FITTING - SxS 45 BEND			\$ 6.00	\$ 6.00	
1440	1	EA	1/2"			SCH80 CPVC FITTING - SxS 45 BEND			\$ 3.00	\$ 3.00	
1450	1	EA	02"			SCH80 CPVC FITTING - SxS COUPLING			\$ 9.00	\$ 9.00	
1460	1	EA	01"			SCH80 CPVC FITTING - SxS COUPLING			\$ 4.00	\$ 4.00	
1470	1	EA	1/2"			SCH80 CPVC FITTING - SxS COUPLING			\$ 2.00	\$ 2.00	
1480	1	EA	02"			SCH80 CPVC FITTING - SxS UNION			\$ 40.00	\$ 40.00	
1490	1	EA	01"			SCH80 CPVC FITTING - SxS UNION			\$ 12.00	\$ 12.00	
1500	1	EA	1/2"			SCH80 CPVC FITTING - SxS UNION			\$ 9.00	\$ 9.00	
1510	1	EA	02"			SCH80 CPVC FITTING - SxS VAN STONE FLANGE			\$ 18.00	\$ 18.00	
1520	1	EA	01"			SCH80 CPVC FITTING - SxS VAN STONE FLANGE			\$ 11.00	\$ 11.00	
1530	1	EA	1/2"			SCH80 CPVC FITTING - SxS VAN STONE FLANGE			\$ 10.00	\$ 10.00	
1540											
1550	20	LF	16"	x	20'-0"	SCH80 PVC PIPE			\$ 95.00	\$ 1,900.00	
1560											
1570	1	EA	16"			SCH80 PVC FITTING - SxS 90 BEND			\$ 1,300.00	\$ 1,300.00	
1580	1	EA	16"			SCH80 PVC FITTING - VANSTONE FLANGE			\$ 1,980.00	\$ 1,980.00	
1590											
1600	1	EA	16"			GATE VALVE - FLG [C515] RW NRS w/ SS HARDWARE & HANDWHEEL	FBE	FBE	\$ 5,295.00	\$ 5,295.00	
1610											
1620	1	KIT	16"			A307B ZP B&N KIT - TAG: PVC FLG B&N KIT w/ WASHERs			\$ 105.00	\$ 105.00	
1630	2	KIT	16"			A307B ZP B&N KIT - TAG: PVC to DIP FLG B&N KIT w/ WASHERs			\$ 171.00	\$ 342.00	

[illegible]

**AMERICAN FENCE COMPANY OF ARIZONA, INC.**

2502 N. 27th Ave.

Phoenix, AZ 85009

Telephone (602)272-2333 Fax (602)278-6068

License #'s ROC 103476 - 069389 - 16349

TO: PCL Construction Inc

1711 W Greentree Dr., Suite 201

Tempe, AZ 85284

Project: EI Mirage WRF

Project Address:

Date	05/06/21	
Customer Account #	Michael Cox	
Phone Number	(480) 353-8761	
Fax Number		
Branch Mgr Approval	Branch Admin Approval	RO#

SCOPE OF WORK: American Fence Company of Arizona is pleased to submit this proposal for the WORK as listed below:

Labor and Materials to Install Approximately 31LF of 8' Tall Chain Link Fence
6 5/8" SCH40 Terminal Posts - 64" x 12" Set or 12" x 12" x 1/2" Base Plate
2 7/8" AP40 Line Posts - 64" x 10" Set or 10" x 10" x 1/2" Base Plate
1 5/8" AP40 Brace with 3/8" Truss Assembly
7 gauge Top & Bottom Tension Wire
9 gauge Chain Link Fabric
PDS Slats

EXCLUSIONS:

Grading, Staking, Clearing, Permits, Engineered Drawings, Core Drills, Grounding & Lines not Marked by Blue stake Taxes

SPECIAL PROVISIONS:

Taxes are excluded with proof of Valid Az 5005 Form

TOTAL COST \$ 4,700.00

TERMS:

(To be determined by Corporate Credit)

Price is valid for 15 days

By signature below, the customer acknowledges that he/she is duly authorized to sign this agreement, has read and accepts the Contract terms and conditions set forth on page 2 and inclusive of any attachments.

AMERICAN FENCE COMPANY OF ARIZONA, INC.

Accepted By:

(Company Name)

By: Les Biernot

By:

Its: Senior Estimator - Project Manager

Its:

Print Name and Title

Page 1 of 2

Print Name and Title

TERMS AND CONDITIONS

- 1 **General Terms.** AMERICAN FENCE AND SECURITY COMPANY, INC. or its subsidiary ("CONTRACTOR") agrees to provide the labor and materials (collectively the "WORK") specified on the proposal set forth on the reverse side hereof (the "front page") within a reasonable time. BUYER agrees to pay the amount shown in current U.S. funds upon substantial completion of the work per the payment terms on the reverse side hereof.
- 2 **Installation of Fence.** Unless otherwise agreed to in writing, BUYER shall fully cooperate in allowing CONTRACTOR'S installation of the fence by doing each of the following: (a) clearing a sufficient working area of all obstructions and removable hazards; (b) surveying, grading, locating and staking the fence line and by verifying all property lines and identifying all utility lines; (c) notifying CONTRACTOR'S crew of all potential work area hazards; (d) coordinating CONTRACTOR'S work with the activities of all other persons at the job site, including others contractors, crews, supervisors, architects and owners; and (e) obtaining all appropriate building permits or other form of governmental permission. The estimated completion date shall be extended for as long as BUYER fails to comply with this provision, and for all delays reasonably beyond CONTRACTOR'S control. BUYER shall be deemed to have accepted the goods and work performed upon payment in full.
- 3 **Payment, Default and Remedies.** If BUYER does not make payment in full upon substantial completion, CONTRACTOR may pursue any and all collection activity it deems necessary to collect on BUYER'S obligation. BUYER shall be responsible for all costs of collection, including but not limited to, all collection agency charges, court costs, attorneys' fees and lien fees, and all costs and attorneys' fees incurred in collecting upon any judgment. Interest will accrue on all unpaid balances, lien expenses, collection expenses and attorneys' fees from the date incurred at the rate of twenty-one percent (21%) per year or at the highest rate allowed by applicable law. CONTRACTOR may apply all payment or portions thereof to any outstanding attorney fees, court costs, collection expenses, interest and principal as CONTRACTOR, in its sole discretion, deems appropriate. This Agreement shall be construed in accordance with the laws of the State and County in which the project is located.
- 4 **Changes and BUYER'S Cancellation.** If BUYER requests any change in the type, quality or quantity of the fencing to be provided by CONTRACTOR hereunder, BUYER shall pay, in addition to the purchase price shown on the front page, CONTRACTOR'S standard charge for all additional fence and for such additional labor material and travel expenses as are incurred by CONTRACTOR in connection with such change. If, prior to CONTRACTOR'S delivery of the fencing, BUYER cancels such delivery of the fencing, BUYER shall be obligated to pay CONTRACTOR, as liquidated damages and a restocking fee, but not as a penalty, the amount equal to twenty-five percent (25%) of the CONTRACTOR'S standard charge for all special order materials. After CONTRACTOR has begun delivery of the fence, but before installation has begun, BUYER may cancel this Agreement by paying CONTRACTOR, as liquidated damages and as a restocking and transportation fee, but not as a penalty, the amount equal to fifty percent (50%) of the purchase price shown on the front page.
- 5 **Cumulative Remedies.** To the greatest extent permitted by applicable law, BUYER'S obligation hereunder and all of CONTRACTOR'S rights and remedies provided by herein and/or by applicable law, are cumulative, and CONTRACTOR shall be entitled to exercise any and all rights and remedies. BUYER acknowledges that its obligation to pay CONTRACTOR is an independent covenant, and BUYER acknowledges that it shall have no offset rights and may not withhold payment of any monies owing to CONTRACTOR hereunder. Nothing herein, however, shall be construed to release CONTRACTOR from any obligation which it may owe to BUYER.
- 6 **Lien Rights.** BUYER acknowledges that CONTRACTOR has and may exercise all lien rights against the property upon which the work is performed. To the greatest extent permitted by law, BUYER and/or OWNER hereby waive any and all objections to any defects in any such lien documents. Contractor's exercise or non-exercise of such lien rights will not alter or amend this Agreement or release any of Buyer's obligations hereunder.
- 7 **Amendments; Waivers; Entire Agreement.** Except by a specific written document executed by the parties hereto, none of the terms, covenants, representations, warranties or conditions hereof may be waived, amended, modified, superseded or canceled. Forbearance or delay shall not be deemed a waiver. A single or partial exercise of any right or remedy shall not preclude further exercise thereof or of any other right or remedy. Any written waiver shall be strictly construed and shall not be extendable. This Agreement contains the parties' entire understanding and supersedes and replaces all prior and contemporaneous agreements and understandings, oral written or implied. All documents and instruments created hereafter and concerning this transaction, including any one or more work orders or purchase orders, shall not prevail over the terms of this Agreement.
- 8 **Limited Warranty.** All goods, supplied are warranted to be fit for the intended purposes for which such goods are used for a period of one (1) year. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION OF THE GOODS AND WORK TO BE PERFORMED AS CONTAINED ON THE FRONT PAGE. BUYER shall have no claim for incidental, consequential, special or proximate damages.
- 9 **Indemnity.** To the greatest extent permitted by law, BUYER shall indemnify, defend, hold and save CONTRACTOR (and its officers, shareholders, directors, agents, employees, servants and independent contractors) harmless from all claims and expenses, including court costs and attorneys' fees, for damages or injuries to persons or property which are related in any manner, directly or indirectly to this Agreement or to the fence (including its location) regardless of whether the injury or damage is caused in part by CONTRACTOR'S negligence or any other act or omission of CONTRACTOR or its agents, provided however, that BUYER shall not be obligated to indemnify CONTRACTOR for his sole negligence or willful misconduct.
- 10 **Successors and Assigns.** This Agreement shall be binding upon and shall inure to the benefit of the heirs, personal representatives, successors and assigns of the parties hereto.
- 11 **Severability.** If any provision of this Agreement is held unenforceable, CONTRACTOR may sever from this Agreement the language which makes such provision unenforceable and this Agreement shall be construed as if it did not contain the language and the rights and obligations of the parties shall be enforced accordingly. Alternatively, CONTRACTOR, at its sole option, may cancel this entire Agreement.
- 12 **Headings.** All paragraph headings and other headings set forth in this Agreement are for reference only and shall not be considered in interpreting the intent of the parties with respect to the matters set forth in this Agreement.
- 13 **Representations and Warranties.** Despite any agency capacity, the person signing this Agreement, *personally* and on behalf of BUYER, warrants and affirms to CONTRACTOR that the person signing this Agreement for any entity has full authority to do so and to thereby bind such entity.
- 14 **BUYER MUST HAVE A CURRENT CREDIT APPLICATION ON FILE WITH CONTRACTOR.** All credit and financial information provided by BUYER to Contractor is true, accurate and complete, contains no material omissions, and may be reasonably relied upon by CONTRACTOR.

Rental Rate Blue Book®
Miscellaneous 4X2 3/4 285 CONV GAS
On-Highway Light Duty Trucks

Size Class:
200 - 299 HP
Weight:
N/A

Configuration for 4X2 3/4 285 CONV GAS

Axle Configuration	4X2	Cab Type	Conventional
Horsepower	285.0	Power Mode	Gasoline
Ton Rating	3/4		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	USD \$675.00	USD \$190.00	USD \$48.00	USD \$7.00	USD \$14.59	USD \$18.43
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2021: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	USD \$675.00	USD \$190.00	USD \$48.00	USD \$7.00	USD \$14.59	USD \$18.43

Non-Active Use Rates

Standby Rate	Hourly	USD \$2.72
Idling Rate		USD \$15.16

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	57%	USD \$384.75/mo
Overhaul (ownership)	29%	USD \$195.75/mo
CFC (ownership)	3%	USD \$20.25/mo
Indirect (ownership)	11%	USD \$74.25/mo
Fuel (operating) @ USD 2.09	78%	USD \$11.32/hr

Revised Date: 1st half 2021

These are the most accurate rates for the selected Revision Date(s). However, due to more frequent online updates, these rates may not match Rental Rate Blue Book Print. Visit the Cost Recovery Product Guide on our Help page for more information.

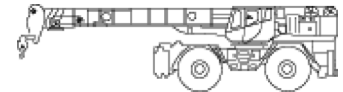
The equipment represented in this report has been exclusively prepared for CRAIG YAKUBOW
(cyakubow@pcl.com)

Rental Rate Blue Book®

March 31, 2021

Terex RT 555-1

Rough Terrain Hydraulic Cranes



Size Class:

50.0 - 65.9 MTons

Weight:

83561 lbs
Configuration for RT 555-1

Axle Configuration	4 X 4 X 4	Maximum Boom Length	110.0 ft
Maximum Lift Capacity	50.0 mt	Power Mode	Diesel

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	USD \$10,505.00	USD \$2,940.00	USD \$735.00	USD \$110.00	USD \$60.09	USD \$119.78
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2021: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	USD \$10,505.00	USD \$2,940.00	USD \$735.00	USD \$110.00	USD \$60.09	USD \$119.78

Non-Active Use Rates

	Hourly
Standby Rate	USD \$31.63
Idling Rate	USD \$78.85

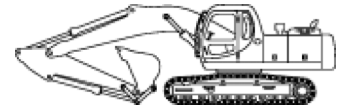
Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	42%	USD \$4,412.10/mo
Overhaul (ownership)	47%	USD \$4,937.35/mo
CFC (ownership)	4%	USD \$420.20/mo
Indirect (ownership)	7%	USD \$735.35/mo
Fuel (operating) @ USD 2.53	32%	USD \$19.16/hr

Revised Date: 1st half 2021

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(cyakubow@pcl.com)

Rental Rate Blue Book®
Caterpillar 325D L (disc. 2009)
Crawler Mounted Hydraulic Excavators

Size Class:
28.1 - 33.0 MTons
Weight:
64500 lbs
Configuration for 325D L (disc. 2009)

Operating Weight **29.2 mt** Power Mode **Diesel**
Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	USD \$13,935.00	USD \$3,900.00	USD \$975.00	USD \$145.00	USD \$65.99	USD \$145.17
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2009: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	USD \$13,935.00	USD \$3,900.00	USD \$975.00	USD \$145.00	USD \$65.99	USD \$145.17

Non-Active Use Rates

	Hourly
Standby Rate	USD \$41.17
Idling Rate	USD \$99.13

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	42%	USD \$5,852.70/mo
Overhaul (ownership)	48%	USD \$6,688.80/mo
CFC (ownership)	3%	USD \$418.05/mo
Indirect (ownership)	7%	USD \$975.45/mo
Fuel (operating) @ USD 2.53	30%	USD \$19.95/hr

Revised Date: 1st half 2021

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Rental Rate Blue Book®

April 22, 2021

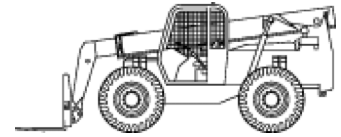
Manitou MLT 840 145 PS

Telescoping Boom Rough Terrain Lift Trucks

Size Class:

4.0 - 4.4 MTons

Weight:

N/A

Configuration for MLT 840 145 PS

Base Capacity	9000 lbs	Horsepower	141 hp
Maximum Lift Height	297 in	Maximum Reach	175 in
Power Mode	Diesel		

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	USD \$6,085.00	USD \$1,705.00	USD \$425.00	USD \$64.00	USD \$28.55	USD \$63.12
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2021: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	USD \$6,085.00	USD \$1,705.00	USD \$425.00	USD \$64.00	USD \$28.55	USD \$63.12

Non-Active Use Rates

	Hourly
Standby Rate	USD \$14.52
Idling Rate	USD \$44.58

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	33%	USD \$2,008.05/mo
Overhaul (ownership)	58%	USD \$3,529.30/mo
CFC (ownership)	2%	USD \$121.70/mo
Indirect (ownership)	7%	USD \$425.95/mo
Fuel (operating) @ USD 2.53	35%	USD \$10.01/hr

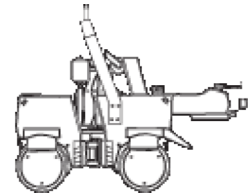
Revised Date: 1st half 2021

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(cyakubow@pcl.com)

Rental Rate Blue Book®
Ingersoll Rand DX700E (disc. 2007)
Manually Guided Vibratory Compactors

Size Class:
To 899 Kg
Weight:
1635 lbs


Configuration for DX700E (disc. 2007)

Drum Type **Smooth** Drum Width **25.5'**
Number Of Drums **2.0** Power Mode **Diesel**

Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	USD \$2,305.00	USD \$645.00	USD \$160.00	USD \$24.00	USD \$8.45	USD \$21.55
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2007: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	USD \$2,305.00	USD \$645.00	USD \$160.00	USD \$24.00	USD \$8.45	USD \$21.55

Non-Active Use Rates

	Hourly
Standby Rate	USD \$5.37
Idling Rate	USD \$13.78

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	32%	USD \$737.60/mo
Overhaul (ownership)	59%	USD \$1,359.95/mo
CFC (ownership)	2%	USD \$46.10/mo
Indirect (ownership)	7%	USD \$161.35/mo
Fuel (operating) @ USD 2.53	8%	USD \$0.68/hr

Revised Date: 1st half 2021

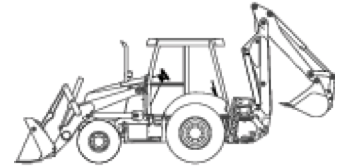
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(cyakubow@pcl.com)

Rental Rate Blue Book®

April 22, 2021

Caterpillar 420F2
Tractor-Loader-Backhoes

Size Class:
14' to Under 15'
Weight:
N/A

Configuration for 420F2

Power Mode **Diesel**
Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	USD \$4,645.00	USD \$1,300.00	USD \$325.00	USD \$49.00	USD \$22.12	USD \$48.51
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2021: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	USD \$4,645.00	USD \$1,300.00	USD \$325.00	USD \$49.00	USD \$22.12	USD \$48.51

Non-Active Use Rates

	Hourly
Standby Rate	USD \$13.46
Idling Rate	USD \$35.53

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	38%	USD \$1,765.10/mo
Overhaul (ownership)	49%	USD \$2,276.05/mo
CFC (ownership)	4%	USD \$185.80/mo
Indirect (ownership)	9%	USD \$418.05/mo
Fuel (operating) @ USD 2.53	41%	USD \$9.14/hr

Revised Date: 1st half 2021

These are the most accurate rates for the selected Revision Date(s). However, due to more frequent online updates, these rates may not match Rental Rate Blue Book Print. Visit the Cost Recovery Product Guide on our Help page for more information.

The equipment represented in this report has been exclusively prepared for CRAIG YAKUBOW
(cyakubow@pcl.com)

Rental Rate Blue Book®

March 31, 2021

Ingersoll Rand P185WIR (disc. 2008)
Portable Rotary Screw Air Compressors

Size Class:
125 - 249 cfm
Weight:
2325 lbs

Configuration for P185WIR (disc. 2008)

Air Delivery Rating **185.0 cu ft/min** Horsepower **65.0**
Power Mode **Diesel**
Blue Book Rates

** FHWA Rate is equal to the monthly ownership cost divided by 176 plus the hourly estimated operating cost.

	Ownership Costs				Estimated Operating Costs	FHWA Rate**
	Monthly	Weekly	Daily	Hourly	Hourly	Hourly
Published Rates	USD \$980.00	USD \$275.00	USD \$69.00	USD \$10.00	USD \$10.47	USD \$16.04
Adjustments						
Region (100%)	-	-	-	-		
Model Year (2008: 100%)	-	-	-	-		
Adjusted Hourly Ownership Cost (100%)	-	-	-	-		
Hourly Operating Cost (100%)					-	
Total:	USD \$980.00	USD \$275.00	USD \$69.00	USD \$10.00	USD \$10.47	USD \$16.04

Non-Active Use Rates

	Hourly
Standby Rate	USD \$1.95
Idling Rate	USD \$11.48

Rate Element Allocation

Element	Percentage	Value
Depreciation (ownership)	27%	USD \$264.60/mo
Overhaul (ownership)	65%	USD \$637.00/mo
CFC (ownership)	2%	USD \$19.60/mo
Indirect (ownership)	6%	USD \$58.80/mo
Fuel (operating) @ USD 2.53	56%	USD \$5.91/hr

Revised Date: 1st half 2021

These are the most accurate rates for the selected Revision Date(s). However, due to more frequent online updates, these rates may not match Rental Rate Blue Book Print. Visit the Cost Recovery Product Guide on our Help page for more information.

The equipment represented in this report has been exclusively prepared for CRAIG YAKUBOW
(cyakubow@pcl.com)

Michael Cox

From: Jeffrey Price <jprice@cactusasphalt.com>
Sent: Tuesday, March 23, 2021 10:58 AM
To: Michael Cox
Subject: RE: El Mirage 60% Design Cost

Add \$1,500.00 for mob.
Thanks,

Jeffrey Price
Business Development
jprice@cactusasphalt.com
(480)298-3040
Cactus Asphalt
8211 W. Sherman St.
Tolleson, AZ 85353

-----Original Message-----

From: Michael Cox <mtcox@pcl.com>
Sent: Tuesday, March 23, 2021 10:52 AM
To: Jeffrey Price <jprice@cactusasphalt.com>
Subject: RE: El Mirage 60% Design Cost

Jeff,

Does the 5K include Mobilization?

Regards,

Michael Cox
Estimator

PCL Constuction, Inc.
1711 W. Greentree Drive, Suite #201
Tempe, AZ 85284
T: 480-535-7593
M: 480-353-8761
mtcox@pcl.com

www.pcl.com
TOGETHER WE BUILD SUCCESS

-----Original Message-----

From: Jeffrey Price <jprice@cactusasphalt.com>
Sent: Wednesday, March 17, 2021 2:30 PM
To: Michael Cox <mtcox@pcl.com>
Subject: Re: El Mirage 60% Design Cost

Just plug in \$5,000.00.

Sent from my iPhone

> On Mar 17, 2021, at 5:28 PM, Jeffrey Price <jprice@cactusasphalt.com> wrote:



TO: BIDDER

Attn: ESTIMATING

Proposal Number:

Date: May 3, 2021

Project Name: El Mirage WRF Filter Upgrades

Location:

El Mirage, Arizona

E21A-062R1

Page 1 of 6

CMC REBAR WEST, hereinafter called Subcontractor, proposes subject to the terms and conditions herein to **FURNISH, FABRICATE, AND PLACE** ASTM A615 Grade 60 deformed reinforcing bars in accordance with the CRSI Manual of Standard Practice and based on the following documents:

Documents: 90% DESIGN DATED 4/16/21 SHEET S-201
Specifications: None Provided
Addenda: None Provided

Job Scope:

Reinforcing Steel in Cast in Place Concrete

Prices are based on NON-PREVAILING WAGES

**Prices are based on commencement of Subcontractor's scope of work by
07/01/21 and completion of the same by 09/30/21.**

Price Schedule:

<i>Rebar Package Only</i>	<i>Qty</i>	<i>Unit</i>	<i>Price</i>	<i>Total</i>
01--FILTER SLAB REINFORCING	1	LS	\$5,300.00	\$5,300.00
				\$5,300.00

Escalation Notice:

All projects exceeding completion date beyond one year (1) of proposal date shall be subject to a price escalation for each additional 3 month period as follows:

- **Initial three month period beyond 1 year: Add \$25.00/CWT**
- **Remaining 3 month periods: Add \$25.00/CWT EACH PERIOD**

For unit price/lb bid items (if applicable) the following will apply:

Final subcontract valuation of unit price bid items shall be based upon the application of Subcontractor's unit prices multiplied by the theoretical weight of reinforcing bars and/or post-tensioning strand as shown on Subcontractor's bar lists and will include the weight of the design reinforcing, laps, spacer and support bars deemed necessary by Subcontractor to allow the safe installation and positioning of the design



TO: BIDDER

Attn: ESTIMATING

Proposal Number:

Date: May 3, 2021

Project Name: El Mirage WRF Filter Upgrades

Location:

El Mirage, Arizona

E21A-062R1

Page 2 of 6

requirements and as required to comply with the final project designs and standard industry practice and in accordance with ACI and CRSI Manual of Standard Practice for Reinforcing to apply.

Expiration Date of Proposal: 06-03-2021

Price(s) based on notification of intent to award within 30 days of bid date. Letter of Intent or award must be issued within 30 days of bid date. Any quote exceeding these periods will need to be confirmed and are subject to change due to market conditions. Prices are based on acceptance of all items as listed in proposal. Partial acceptance, changes, revisions, or exclusions of items may require revised pricing on remaining items.

****** SPECIAL CONDITIONS******

1. All rebar is figured to be Grade 60, Black Bar
2. REINF SHOWN ON S-201 FILTER SLAB MAT FURNISH AND INSTALL
3. ISOLATION DOWELS INCLUDED IN ABOVE AND FOB ONLY.

****** SPECIAL EXCLUSIONS ******

1. All Loading/Unloading of Trucks
2. All Hoisting
3. All Sales Tax
4. Masonry Reinforcing
5. Smooth Dowels; labor for same
6. Weld dowels; welding of same to structural or miscellaneous steel members.
7. ALL OTHER REINFORCING OTHER THAN FILTER SLAB A & B/S-201.

Hoisting:

CMC REBAR WEST excludes all equipment (lifts and cranes) unless specifically noted within this proposal. The following equipment will be required to safely and efficiently offload and store or locate for placement of reinforcing bars and WWF as follows:

- a) Forklift or Reach lift:



TO: BIDDER

Attn: ESTIMATING

Proposal Number:

Date: May 3, 2021

Project Name: El Mirage WRF Filter Upgrades

Location:

El Mirage, Arizona

E21A-062R1

Page 3 of 6

b) Crane:

Comments: Front end loaders/backhoes are not suitable for most hoisting requirements due to safety and efficiency of placement of reinforcing. The use of excavating equipment or other equipment not specifically designed for these purposes shall be strictly prohibited.

Freight:

Proposal includes 1 loads/deliveries to site. Additional loads must be mutually agreed upon or an extra charge may occur. Loads are based upon full loads of approximately 38,000 lbs average. Allowances will be made for cages or assemblies of pre-tied rebar as needed.

Off load time of 2 hours allowed. Additional time offloading due to circumstances beyond subcontractors control may incur standby charges.

Expiration:

Price(s) based on notification of intent to award within 30 days of bid date. Letter of Intent or award must be issued within 30 days of bid date. Any quote exceeding these periods will need to be confirmed and are subject to change due to market conditions.

Standard Exclusions:

1. State and local sales taxes (unless specifically noted on price schedule).
2. Testing or inspection other than the furnishing of certified mill test reports.
3. Cost of bonds: Material and Performance Bonds can be provided at cost noted on proposal and is in addition to bid item prices noted in price schedule.
4. Penalties and liquidated damages.
5. Providing and maintaining rebar safety caps.
6. Smooth round bars and dowels.
7. Galvanized and epoxy coated bars (unless specifically noted on price schedule).
8. Form savers, threaded bars, couplers, anchors, bolts, studs, sheathing, sleeves, or inserts (unless specifically noted in price schedule).
9. Wrap, coat, paint, tape or grease any reinforcing steel bars and/or dowels.
10. Cutting, drilling, grouting, dry-packing, applying adhesives or epoxies, or placing of drill dowels of any kind.
11. Welding and/or dowels and welding of the same to structural or miscellaneous iron.
12. Setting Pier/Caisson cages (tied and stockpiled on jobsite only).
13. Providing and/or installing clearance wheels or spacers for caisson cages.
14. Guying and/or bracing requirements for column cages (may be included on certain projects-please confirm).
15. Reinforcing for pre-cast concrete.



TO: BIDDER

Attn: ESTIMATING

Proposal Number:

Date: May 3, 2021

Project Name: El Mirage WRF Filter Upgrades

Location:

El Mirage, Arizona

E21A-062R1

Page 4 of 6

16. Additional reinforcing steel required for lifting or pick-up points in pre-cast panels.
17. Reinforcing for all site work (unless specifically noted in price schedule).
18. Reinforcing for metal stair pans and landings.
19. Dobies, pulling, blocking or chairing of any welded wire fabric (WWF) mesh, unless specifically called out in price schedule or inclusions in proposal.
20. Splices in reinforcing bars, field bending and/or construction joint dowels for Contractor's convenience.
21. Barrier cables.
22. Post-tensioning.
23. Marking slabs for permanent location of tendons. (P/T if applicable)
24. Removing, cutting, or grinding of staples from concrete soffit after deck forms are removed. (P/T if applicable)
25. All masonry reinforcing and associated material (unless specifically noted in price schedule).
26. Cost of pour watchmen other than during normal 40 hour straight-time work week while Subcontractor is performing scheduled work.
27. Cost of remedial work and/or replacement of materials made necessary by water or flood damage to reinforcing steel following delivery or installation as directed by Contractor.
28. Special insurance provisions including "Broad Form", "Type 1" indemnification and Primary & Non-contributory wording.
29. Liability insurance for the construction of any single family dwelling, townhouse, condominium or multi-track housing development.
30. Any liability and defense or indemnification obligations associated with the completed work of apartments converted to condominiums, townhouse or housing.
31. Costs, impacts or liquidated damages as a result of material shortages caused by factors or market conditions beyond Subcontractor's reasonable control.
32. Hoisting (see special note below pricing).
33. All SOG reinforcing at Vapor Barrier Areas unless specifically included in our bid items on our proposal.

Special Exclusions:

1. Prevailing Wages. All projects are quoted assuming to be NON-Prevailing Wages for field labor.

COVID-19:

Notwithstanding any provision(s) of this proposal or potential Subcontract or Purchase Order, if Vendor's work is delayed, disrupted, suspended, or otherwise impacted as a direct result of an epidemic, including, but not limited to, (1) disruptions to material and/or equipment supply; (2) illness of Vendor's workforce and/or unavailability of labor; (3) government quarantines, closures, or other mandates, restrictions, and/or directives; (4) Owner or Contractor restriction and/or directives; and/or (5) fulfillment of Vendor's contractual or legal health and safety obligations associated with an epidemic; then, Vendor shall be entitled to an equitable adjustment to the Subcontract schedule and duration to account for such delays, disruptions, suspensions, and impacts. To the extent the causes identified herein result in an increase in the price of labor, materials, or equipment used in the performance of the Subcontract or Purchase Order, Vendor shall be entitled to an equitable adjustment to the Subcontract or Purchase Order price for such increases, provided Vendor presents documentation of such increases (including the original prices) and evidence of Vendor's reasonable efforts to find alternative sources of material or equipment supply and/or labor at the original / un-impacted prices.



TO: BIDDER

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E21A-062R1

Page 5 of 6

Standard Conditions:

1. All fabrication and placement tolerances shall be in strict conformance to Concrete Reinforcing Steel Institute (CRSI), American Concrete Institute (ACI), common industry standards and specifically CRSI Placement of Reinforcing Steel Standards. Special tolerances noted in specifications and/or plans are not part of this bid proposal and may not be practical due to the nature of reinforcing steel fabrication equipment and jobsite conditions.
2. Performance shall be based on conventional construction; timely receipt of construction documents and information; a written schedule based on a normal 5-day, 40 hour straight-time work week, to which Subcontractor is a party.
3. Re-detailing and/or estimating resulting from design changes shall be billed at the rate of \$75.00 per hour.
4. Subcontractor shall not be required to continue the performance of work considered by the Subcontractor to be outside the scope of the work hereunder unless resolution of Subcontractor's submitted notices and valuation of such previous work is timely (i.e. within 30 days of Contractor's receipt of such notice).
5. Buyer to provide the following at no cost:
 - a. Lines, grades, supporting rebar templates, layout, ramps, and scaffolding.
 - b. Safe access to points of work, including tractor-trailer access to installation locations or within 25 feet of where materials are to be used or hoisted.
 - c. Protection of vertical reinforcing steel where required by safety regulations.
 - d. **Operated Crane* service, operated by a NCCCO-certified operator** during straight-time working hours for unloading of trucks, hoisting and/or lowering of materials to the working levels and adjacent to points of installation, and for setting pre-assembled elements. **(*the use of excavating equipment or other equipment not specifically designed for these purposes shall be strictly prohibited)** (see note on HOISTING at pricing schedule)
 - e. Verification of existing conditions and all field measurements of same for the purpose of shop drawing preparation prior to fabrication of reinforcing steel.
 - f. Adequate areas for staging, storage, and pre-assembly of materials.
 - g. Removal of spoils from footings and small wire clippings caused by normal reinforcing installation.
 - h. Traffic control, flagman, barricades, lane closures and all related permits.
 - i. Two complete sets of construction drawings and one set electronic drawings.
6. In the event either Contractor or Subcontractor institutes a suit against the other in connection with any matter arising from this agreement, the prevailing party shall be entitled to recover from the other its reasonable attorney's fees and costs.
7. In the event the Contractor considers the performance of the Subcontractor to be delaying the progress of the work, Contractor shall provide timely written notification to the Subcontractor.
8. If Subcontractor is directed to proceed with any work in conjunction with this proposal, said direction shall constitute an acceptance of the terms, conditions and exclusions set forth herein and this document shall constitute a formal contract between the Subcontractor and Contractor for the performance of such work. Any contract created hereunder may only be superseded or supplemented by an acceptable written agreement executed by both the Subcontractor and Contractor.



TO: BIDDER

Attn: ESTIMATING

Proposal Number:

Date: May 3, 2021

Project Name: El Mirage WRF Filter Upgrades

Location:

El Mirage, Arizona

E21A-062R1

Page 6 of 6

9. Final subcontract valuation of unit price bid items shall be based upon the application of Subcontractor's unit prices multiplied by the theoretical weight of reinforcing bars and/or post-tensioning strand as shown on Subcontractor's bar lists and will include the weight of the design reinforcing, laps, spacer and support bars deemed necessary by Subcontractor to allow the safe installation and positioning of the design requirements and as required to comply with the final project designs and standard industry practice and in accordance with ACI and CRSI Manual of Standard Practice for Reinforcing to apply.
10. Prices are based on acceptance of all items as listed in proposal. Partial acceptance, changes, revisions, or exclusions of items may require revised pricing on remaining items.

Terms of Payment:

1. Materials (including tied and stockpiled items net by the 10th of the month following subcontractor acquisition of the same.
2. Installed work – 100% of the contract value of work performed by the end of each month to be paid by the 30th day of the following month. No retention unless mutually agreed upon by GRS/buyer.
3. Any Owner reduction of retention percentage shall be applied concurrently to payments to the Subcontractor.
4. Final payment to be made within 30 days after substantial completion of the work under this agreement.

The above proposal is accepted

By (signature/title)

Date

James E. Del Re, Director, Sales

Date



PO Box 5277
Peoria, AZ 85385
(602) 942-1983 Main
(602) 978-8806 Fax
License 321570

Masonry Bid Proposal

Date: March 29, 2021

To: Michael Cox - PCL

From: Melonie Leslie, President

Project: El Mirage WRF Filter Upgrades

Project Address: El Mirage, AZ

Masonry bid proposal:	\$ 6,840.00
------------------------------	--------------------

Inclusions:

- 1) Labor
- 2) Equipment
- 3) Block - 8-8-16 splitface one side
- 4) Mortar
- 5) Duro wire
- 6) Grout
- 7) Rebar (furnished and installed)
- 8) Two new CMU walls per S200 and C/S201
- 9) Masonry trash cleanup to dumpster (dumpster and dumpster removal to be provided by others)

Exclusions:

- 1) Caulking and sealing
- 2) Dry packing
- 3) Miscellaneous steel embeds, angles or lintels
- 4) Flashing
- 5) Footings
- 6) Masonry Stem
- 7) Crane hoisting
- 8) Site dust control
- 9) Sales tax
- 10) Bond
- 11) Permits
- 12) Water supply
- 13) Inspection/testing fees
- 14) Surveying

Bid proposal based on:

- 1) 60% Drawings

Note: The above bid proposal is valid for 30 days and is subject to change upon receiving city approved construction documents. Bid proposal subject to receiving a job specific AZ5005 form. Sufficient survey points and/or corner pins and/or gridlines must be provided to us in order to layout the building.

Hardened Super-Corrosion-Resistant 316 Stainless Steel Threaded Rods—Grade B8M



These hardened 316 stainless steel threaded rods are 40% stronger than standard Grade B8M threaded rods. They meet the pressure and temperature requirements of ASTM A193 and are often used to secure pressure tanks, valves, and flanges. They have excellent resistance to chemicals and salt water and may be mildly magnetic.

 For technical drawings and 3-D models, click on a part number.

Lg.	Tensile Strength, psi	Hardness	Fabrication	Specifications Met		Each
316 Stainless Steel						
3/4"-10						
4"	100,000	Not Rated	Cold Worked	ASTM A193	98865A760	\$12.99
4 1/2"	100,000	Not Rated	Cold Worked	ASTM A193	98865A765	14.63
5"	100,000	Not Rated	Cold Worked	ASTM A193	98865A770	14.27
6"	100,000	Not Rated	Cold Worked	ASTM A193	98865A775	17.87
1ft.	100,000	Not Rated	Cold Worked	ASTM A193	93565A255	30.62
3ft.	100,000	Not Rated	Cold Worked	ASTM A193	93565A245	73.26
6ft.	100,000	Not Rated	Cold Worked	ASTM A193	93565A145	144.05



INDUSTRIAL COATING DIVISION
PROTECTIVE COATING & LINING SERVICES

PPS COATINGS

406 E. Pioneer Street
Phoenix, AZ 85040

 602-497-4997

info@ppscoatings.com

WWW.PPSPHX.COM

4-29-21

El Mirage WWTP – 90% R3

PCL Construction

Mike,

PPS Coatings is pleased to offer you the following quote for the above referenced project:

SCOPE OF WORK INCLUDES:

- Labor, material and equipment to prep and coat the following areas based on 60% design drawings.
 - 30 LF of CMU Wall interior/exterior \$2,450.00
 - Pressure wash
 - 1 coat Primer/sealer
 - 2 coats acrylic
 - Above grade piping at filter gallery - \$10,030.00
 - SP-2/3 prep
 - Spot prime
 - 1 coat of polyurethane
 - 20 LF of curbing - \$1,995.00
 - Pressure wash
 - 2 coats approved coating
 - 2 ea pipe bollards - \$330.00
 - 1 coat of polyurethane (safety yellow)
 - On top of MFG prep/prime

Price \$14,805.00

- **Adder to prep and coat PVC piping - \$2,115.00**

Clarifications:

- All work to be performed according to OSHA and site specific safety regulations
- Quote valid for 30 days from date of proposal
- Pay Terms are Net 30 if not specified in a contract
- PPS to supply coating MFG written submittal/recommendation
- PPS Coatings on top of MFG prep/prime

Excludes:

- Mics Taxes including sales Tax.
- testing or inspection
- Delays in work caused by other trades
- OT/Accelerated schedules
- Bonds and permits
- Hazardous materials
- Buried or encased piping
- Containment

Sincerely,

Tony Bodzione

Professional Piping Systems
480-825-2413

ASME CERTIFICATE HOLDERS / S STAMP #52377 – U STAMP #52378 – ROC #302839





**RURAL
ELECTRIC**

BUILDING POWERFUL CONNECTIONS

9502 East Main Street
Mesa, AZ 85207

Licensed Contractor
ISO 9001:2015 Registered

Office (480) 986-1488
Fax (480) 984-0319

To:	PCL Civil Constructors Inc.	Contact:	Michael T. Cox
Address:	1729 West Greentree Drive, Suite 105 Tempe, AZ 85284 USA	Phone:	480-829-6333
		Fax:	(480) 829-8252
Project Name:	102 El Mirage Water Reclamation Facility - ROM	Bid Number:	
Project Location:		Bid Date:	3/30/2021

Item #	Item Description	Estimated Quantity	Unit	Total Price
001	Furnish And Install Electrical Package	1.00	LS	\$41,802.00
002	VFD & 20A Bucket Modification For Existing MCC	1.00	LS	\$32,500.00

Total Bid Price: \$74,302.00

Notes:

- AZ LICENSE #075367 & 074573
- **Scope of Work Includes:**
 - Based 5-8hr days
 - Based on 90% design
 - Make safe electrical prior to MCC modifications
 - Provide & Install VFD (BSE - Rockwell)
 - Provide & install 20A 480 3Ph bucket for filter control panel
 - Provide & install 3/4" GRC conduit
 - Provide & install conduit supports
 - Install GRC conduit on chain link fence in lieu of underground
 - Reuse existing conductors for filter feed pump No. 2
 - Provide & install communication cabling
 - Provide & install power conductors to instrumentation equipment
 - Provide & install (x3) Sunco light fixtures
 - Relocate existing light fixture per note 3 sheet E-004
 - Core drill through existing building and new CMU walls for light fixtures
 - Seal core drill holes
 - Electrically connect filter panel
 - Electrically connect flow meter
 - Provide & install Grounding of flow meter
 - Includes 4 hour startup for the new VFD (Rockwell to perform)
 - Provide programming (Vertech)
 - 20k allowance is included within the VFD price

Spec Sections:

- N/a

Plan Sheets:

- Electrical plans

• **Excludes:**

- Taxes, permits, fees or allowances
- Utility company permits, fees or allowances
- Temporary power or lighting
- The removal of all the underground structures (i.e., conduits, duct banks, concrete boxes, concrete bases, and foundations) is by others
- Sawcutting, removal or patching of asphalt or concrete
- Engineering, design, surveying, and staking for line and / or grade are excluded. Elevations must be provided where required
- IFC estimate or take-offs
- Excavating or backfilling for electrical or communication ductbanks
- Concrete forms or house keeping pads
- Painting/coating or welding
- Flow Meter or transmitter
- Filter Control Panel
- Conduit, flex, fittings or conductors to existing filter feed pump No. 2
- Bonding is NOT included in these bid amounts. If a bond is requested, it will be billed outside the contract value and will become due and payable immediately upon presentation of bond. Our bond rate for this project is 1.20%.
- For Demolition and Salvage our work will be limited to the disconnection and removal of all salvageable electrical materials only (i.e., light fixtures, signs, transformers, wire, etc.). The removal of all the underground structures (i.e., conduits, duct banks, concrete boxes, concrete bases, and foundations) is by others.
- All Division 1 requirements are to be furnished by the Prime Contractor or others. This includes but is not limited to preparation of construction schedules, contractor quality control program, QA and QC testing, temporary construction trailers or facilities, construction lighting and power, maintenance of site access, site dust control, temporary site environmental protection, permits and/ or fees, and builders-risk or all risk insurance policies.
- Where the electrical drawings and electrical specifications conflict with other contract documents, our pricing is based on the electrical drawings.
- Prime contractor is to furnish a source for construction water at no cost to the subcontractor.
- Pay when paid clauses will not be accepted.
- Rural Electric, Inc. maintains its own job documentation system. Any additional requirements by the GC to complete job documentation on GC supplied forms will require additional subcontractor administration time and additional cost. This proposal excludes the use of GC supplied documents (i.e. Special GC daily reports, RFIs, certified payrolls, submittal/transmittal forms, etc.).
- This proposal is made with the understanding that we will enter into a mutually acceptable subcontract agreement. We will not accept any terms or conditions that are less favorable to Rural than those imposed in the Prime contract by the Owner. The conditions of this proposal must be attached or incorporated into our subcontract agreements.
- Prices quoted herein are those in effect today, and are predicated on immediate release for manufacture and shipment. These prices are subject to adjustment for changes in the base price of commodity items such as: Copper, Steel, Lead, Aluminum, or Resins), which may occur between the date of quotation and the date(s) shipments are made.
- Our Quote is valid for 30 days
- Rural shall not be liable for any losses, damages or delays due to causes beyond our reasonable control, including without limitations, acts of God, epidemics, extreme weather events, fire, delays by others, or any acts, conduct, or omission from unrelated third-parties outside of our direct control
- Liquidated damages (if applicable) shall be limited to the proportion of our subcontract to the General Contract.
- Retention shall be reduced by 50% upon substantial completion and released once beneficial occupancy or final acceptance has been received.
- If a subcontract payment bond is requested of Rural, then providing monthly lien releases shall not be a condition precedent for payment and all payment will be made to Rural as single party checks.

Payment Terms:

Net payment is expected within 30 days.

ACCEPTED: The above prices, specifications and conditions are satisfactory and are hereby accepted. Buyer: _____ Signature: _____ Date of Acceptance: _____	CONFIRMED: Rural Electric, Inc. Authorized Signature: _____ Estimator: Cameron Claussen cameronc@ruralelectric.com
--	--



PROPOSAL

May 3, 2021

Project Name:

El Mirage WRF Filter Upgrades 90%

To:

PCL Civil Constructors Inc. Michael Cox

SH Engineering & Mfg. is pleased to offer the following proposal for your consideration.

SH will provide the following materials FOB project

Sheet S-004

21 - 6" X 7'-0" Galvanized steel bollard 300.00 each

1 - 24" x 24" x 1" 316SS cover plate with four ¾" anchors - 1,050.00 each

Sheet M-200

2 - 10'-0" x 4'-0" elevated aluminum platform with 10'-0" ships ladder and railing 13,575.00 each - 27,150.00 total

Includes sealed design drawings with calculations

5 - 16" x 4'-6" HDG adjustable supports per detail 5 sheet S-03 430.00 each

5 - 14" x 5'-7" HDG adjustable supports per detail 4 sheet S-03 470.00 each

1 - 14" x 1'-6" HDG adjustable supports per detail 4 sheet S-03 390.00 each

3 - 14" HDG clamp style support per detail 11 sheet S-04 320.00 each

2 - 20" x 4'-3" HDG adjustable supports per detail 4 sheet S-03 465.00 each

2 - 20" x 4'-3" HDG adjustable supports per detail 5 sheet S-03 465.00 each

3 - 20" HDG clamp style support per detail 11 sheet S-04 420.00 each

7 - 12" HDG clamp style support per detail 11 sheet S-04 280.00 each

Included is shop drawings and delivery to the site, off loading at the site is the responsibility of the purchaser, it is the purchasers responsibility to review shop drawings for accuracy and to obtain all field verification information.

Excluded are all taxes, bonds, permits, fees, engineering (unless specifically listed above) testing, inspections, field verification of provided shop drawings, installation (unless specifically listed above) jobsite safety plans, cost of jobsite safety training, safety engineering/design work, coatings, epoxies for anchors, field touch up of shop primers or coatings, special or additional insurances including professional liability, builders risk, or any other item not specifically mentioned above.

Railings quoted are Golden Railings clear anodized sub-assembled riveted system and may or may not meet the specifications.

Installation of railings excludes cutting or coring through rebar that is in the base plate locations

All aluminum and stainless steel is mill finished unless noted otherwise

SH Engineering & Mfg. is not an AISC certified shop

SH Engineering & Mfg. does not utilize an onsite CWI at all times and excludes the cost to provide shop inspections

If utilized, the AZ PE is not an employee of SH Engineering & Mfg. but a subcontractor to SH Engineering & Mfg.

Term: Per SH Engineering and Mfg. Standard Purchase Agreement or

SH Engineering & Mfg. will only accept an agreement that has all materials itemized and mutually agreeable

This quote is good for 15 days.

Shop drawings are 4 to 16 weeks upon receipt of PO

Materials are 4 to 16 weeks after approval of shop drawings

100% due net 30 days from delivery to site (unit pricing) no retention allowed

Potential Escalation Pricing for some of the products included in our quotes may be impacted by USTR Section 301 Proposed China tariff. In the event that any tariff is implemented beyond the date of this proposal that affect the price of materials, we will be forced to pass it on to the purchaser. The actual price of these affected items may increase up to the rate of the tariff that is imposed. Pricing checks / clarifications will be made prior to any contract being executed

Sincerely,

Bob Skiles

shengmfg@shengmfg.com

Cell - 602 370-0656

Rental Quote

Order Date: 03/23/21
Quoted By: Cisco Sarmiento
Mobile Number: (602) 350-1569
E-mail: cisco@tsraz.com

Sold to: PCL

Attn: Mike Cox
Phone: 480 353 8761
Fax:

Job Name: El Mirage Filler
Job Location: 10355 N. 121st Ave

Customer E-mail: mtcox@PCL.com

Qty	Equipment Description	Per Day Each	Per Week Each	Per Month Each	Monthly Price Line Item Total
1	8'T x 8'W x 8L 4-Sided Manhole Box	\$ 62.08	\$ 186.24	\$ 558.72	\$ 558.72
1	Set 2' Legs	\$ 3.83	\$ 15.32	\$ 45.96	\$ 45.96
1	Ladder Hook	\$ 2.55	\$ 10.20	\$ 30.60	\$ 30.60
1	4-Way Bridle	\$ 12.69	\$ 50.76	\$ 152.28	\$ 152.28
5	7' 28-46" Shores W/Finn	\$ 4.56	\$ 18.24	\$ 54.72	\$ 273.60
1	Pump	\$ 5.09	\$ 20.36	\$ 61.08	\$ 61.08
1	Tool	\$ 1.04	\$ 4.16	\$ 12.48	\$ 12.48
1	Lift Bar	\$ 4.07	\$ 16.28	\$ 48.84	\$ 48.84
2	5' x 10' x 1" Steel	\$ 4.52	\$ 31.64	\$ 126.56	\$ 253.12
1	3-Way Bridle	\$ 2.55	\$ 17.85	\$ 71.40	\$ 71.40
1	Actek	\$ 2.55	\$ 17.85	\$ 71.40	\$ 71.40
		DAILY TOTAL	WEEKLY TOTAL	MONTHLY EQUIPMENT TOTAL	
		\$ 128.29	\$ 493.50	\$ 1,579.48	

Unit	Service/Item Description	Unit Price	Quantity	Total
Load	Delivery	\$ 135.00	\$ 2.00	\$ 270.00
Load	Pick Up	\$ 135.00	\$ 2.00	\$ 270.00
Each	Site Specific Engineering (For excavations over 20+ depth if required)			
	Delivery is to Metropolitan Phoenix Unless Noted			

AfterHours/WideLoad charge of \$150/Load if applicable/Freight is for Metro Phoenix unless noted.

Notes: Customers will be responsible for equipment assembly/dissassembly. Customer must remove equipment from site

Cisco Sarmiento

Quoted By

Date

Customer Signature

Date

We reserve the right to change/cancel terms with out written notice

Quote is good for up to 30 days. Thank you for giving us the opportunity to serve you!



Wood Environment & Infrastructure Solutions, Inc.
4600 East Washington Street, Suite 600
Phoenix, Arizona 85034
T: (602) 733-6000
F: (602) 733-6100
www.woodplc.com

March 26, 2021
Wood Proposal No.: PW20-08-01 CO#1

PCL Construction, Inc.
1711 W. Greentree Dr. Unit 201
Tempe, AZ 85284

**RE: El Mirage WRF Filter Design-Build Project
Lump Sum Fee Proposal for Construction Engineering Services (CO#1)**

Dear Mr. Gordon:

Attached is our scope of work and fee proposal for providing construction engineering for the City of El Mirage Filter Design-Build project. This proposal is for change order (CO) #1 to add construction services for the existing design services contract.

The scope of work in this proposal includes construction engineering services, including inspections, record drawings and AOC permitting. The fee also includes materials testing for quality assurance work during construction. Please contact Ms. Kagie-Hay at (602) 733-6149, (480) 241-6622, or at andrea.kagie@woodplc.com with any comments or questions.

We look forward to the opportunity to working with PCL Construction on this project.

Respectfully submitted,

Wood Environment & Infrastructure Solutions, Inc.

Reviewed by:

Andrea L Kagie-Hay, PE
Project Manager

Tim LeClair, PE
Sr. Project Manager



TABLE OF CONTENTS

	Page
1.0 Introduction	1
2.0 Task Descriptions	1
2.1 Task 1 – Project Management	1
Task 1101 – Project Management and Coordination	1
Task 1201 – Project Meetings.....	1
2.2 Task 4 – Permitting Closeout	2
Task 4300 – MCESD AOC	2
2.3 Task 5 – Construction Engineering Services	2
Task 5100 – Submittal Review / RFI Response / Issue Resolution	2
Task 5200 – MOPO Review.....	3
Task 5300 – Inspection Services	3
Task 5400 – Record Drawings / As-Builts	3
3.0 Task 6 – Other Direct Costs	3
Task 6100 – Materials Testing / QC.....	3
4.0 Fee Proposal	3



1.0 Introduction

The City of El Mirage (City) contracted with PCL as the prime on a design-build project for the installation of a new tertiary filter and associated improvements. Wood is currently under contract for design engineering services. The project GMP has been separated into two phases:

- GMP 1 was proposed and accepted by the city and included Wood's design fees to reach full design with required pre-construction permitting assistance, PCL's preconstruction services, and the costs required for the purchase of the tertiary filter.
- GMP 2 will include the remainder of the costs associated with project, including all construction scope, construction engineering services, record drawings, close-out permitting, inspections, and materials testing.

This change order is to cover Wood's proposed costs for construction services required to complete the project and provide costs for GMP 2. This document provides details of the scope of services that are included in this fee and proposal. The following sections describe the tasks required to complete Wood's scope of work.

2.0 Task Descriptions

The scope of services and fee proposal provided in this proposal are based on providing construction engineering and materials testing services throughout the construction phase of the project.

The following sections review the proposed scope of services, broken down into tasks and sub-tasks.

2.1 Task 1 – Project Management

This task includes the additional project management efforts required for the duration of construction, including project management and coordination. The specific sub-task is described below:

Task 1101 – Project Management and Coordination

Wood will monitor and track the project budget and progress throughout the construction phase to ensure that deadlines are met and that the project budget is not exceeded. Wood will keep PCL and the City informed as needed and prepare consolidated invoices for submittal to PCL on a monthly basis. Wood will communicate with PCL via email and phone calls, as needed throughout the project to ensure the project needs are fully understood and addressed.

Task 1201 – Project Meetings

This task will consist of organizing, attending, and conducting project meetings. Wood will provide an agenda prior to each meeting and will provide meeting notes to the entire Project Team after all project meetings for review and comment. The Project Team, including Wood, PCL, and the City, as required, will meet to review what has been completed and discuss any outstanding issues that could impact the project. This scope of services includes a construction kick-off meeting, and up to seven construction update meetings.

The kick-off meeting will occur prior to construction mobilization and will include Wood, the City, PCL, and any sub-contractors required. The meeting will establish protocols that will be used for submittals, RFIs, scheduling inspections, and communications. The anticipated construction schedule will be reviewed at this



meeting. This scope of work anticipates that update meetings are to be held twice a month at the beginning of construction, and more frequently during critical construction periods. Up to 7 construction update meetings are included in the scope of work. Meetings shall be held at the project site unless otherwise agreed to by all parties.

2.2 Task 4 – Permitting Closeout

Permitting assistance included in this change order includes the time required for the Approval-Of-Construction permit from MCESD. An engineer's certificate of completion (COC) is required by MCESD with the AOC application submittal. Wood will compile the permit application, testing data, O&M manual, and sign the engineer's COC for submittal to MCESD. This proposal does not include any fees associated with the permits. It is assumed the City or PCL will pay all necessary permitting fees.

Task 4300 – MCESD AOC

Wood will fill out the necessary paperwork and compile the required information needed to submit with the AOC permit through MCESD. Wood will address comments received from the MCESD required to obtain the permit. The effort for Record Drawings required for permit approval are covered under Task 5.

2.3 Task 5 – Construction Engineering Services

Wood will provide construction engineering services that include meetings and coordination, submittal reviews and responses to RFIs, issue resolution, MOPO review, limited inspection services, and Record Drawings. Materials Testing is provided as a separate line item. This task does not include start-up assistance.

Task 5100 – Submittal Review / RFI Response / Issue Resolution

Submittals, Requests for Information (RFIs), and Issue Resolution are essential work items during construction to make sure the design is followed as to materials, equipment and intent. Submittals are required to verify materials and equipment are in compliance with the drawings and specifications. Wood will review the required submittals and mark them as Approved, Approved as Noted, or Revise and Resubmit. This task includes up to two reviews per submittal, if necessary.

Wood will communicate with PCL to clarify the intent of the design documents, respond to formal Requests for Information (RFIs) and assist in resolving issues that may come up during construction. As part of this task, Wood will keep detailed records of design clarifications, RFIs, and construction issues to provide post-documentation to the City. Contractor RFIs include interpretations and clarifications of design intent. The RFI process allows the owner, engineer and contractor to communicate the design and contract requirements with minimal cost impacts. Issue resolution will encompass assisting the contractor and City with unforeseen problems or concerns as they may occur and, if necessary, providing written recommendations for solutions or alternatives. Wood will be responsible for assisting in the resolution of these issues, but the task does not include additional engineering work for Contractor- or City-requested changes.



Task 5200 – MOPO Review

Some aspects of the construction may require process shutdowns for tie-ins, piping installation, electrical work or other procedures that could affect the operation of the plant. To minimize the impact of these construction activities, it may be necessary to utilize bypass pumping, temporary piping, early morning work, or other measures. Maintenance of Plant Operations (MOPOs) are developed to minimize the impact of construction on the facility operation. While the development of the MOPOs fall under the responsibility of the Contractor, Wood will provide support and review to ensure that the plan is feasible, minimizes plant shutdowns, and meets the conditions of the client and the design intent.

Task 5300 – Inspection Services

Wood will provide limited inspection services during construction to check for compliance with the contract documents and the design intent. The inspections will include an examination by a licensed engineer where required or appropriate, including a structural or electrical engineer. The scope of services includes a final walkthrough and compilation of a punch list of items for the contractor to complete for final approval.

Task 5400 – Record Drawings / As-Builts

Wood will prepare as-built drawings (as-builts) based on redlines provided to Wood by PCL. A disclaimer will be added to the as-builts that Wood prepared the drawings based on information provided to the engineer by the construction contractor and that the engineer does not warrant these drawings to be complete in all respects. Wood will complete the as-builts in compliance with the City's requirements.

3.0 Task 6 – Other Direct Costs

Other direct costs associated with this proposal include mileage, an allowance for trip charges for non-engineering inspections and an allowance for laboratory testing. Mileage costs are for engineering services. Trip charges will be billed when an inspector or technician from Wood's field services group is on site. The laboratory testing will be billed at the standard pricing shown in the attached fee schedule.

Task 6100 – Materials Testing / QC

For this task, Wood will provide materials testing services to meet the contract requirements. This task includes the time onsite for an inspector to witness construction activities or take samples for laboratory testing. This task will be an allowance and based on a rate of \$75 per hour with a trip charge of \$125 per trip for an inspector or technician from Wood's field services group. Trip charges for the inspector and laboratory costs will be billed under the direct costs section as an allowance.

4.0 Fee Proposal

Based on the scope and schedule outlined above, Wood estimates approximately 270 man-hours for the anticipated tasks, with \$5,750 for Direct Expenses that includes a \$5,250 allowance for materials testing/QC, for a total lump sum contract amount of \$44,260.

A Fee Proposal table, showing the estimated hours by task, is presented in Attachment A. The fee table is not to be considered as the basis for billing but is provided for informational purposes.



Hours are assigned in the Fee Proposal table for the following team members:

- PM – Project Manager
- DsnLd – Design Lead
- PE – Project Engineer
- SrEE – Senior Electrical and Instrumentation & Controls Engineer
- SrSE – Senior Structural Engineer
- C/MCAD – Civil/Mechanical Computer-Aided Designer
- ADM – Administration/Clerical



Attachment A

Fee Tables

PCL / City of El Mirage**El Mirage WRF Filter Design-Build Project - Construction Services****FEE PROPOSAL**

Wood PW 20-08-01, CO#1

Task No.	Description	PM	DsnLd	PE	SrEE	SrSE	C/MCAD	ADM	Total Hours	Total
RATES		\$160	\$185	\$100	\$185	\$165	\$125	\$75		
Task 1 - Project Management										
1101	Project Management and Coordination	14	2					2	18	\$2,760
1201	Project Meetings (8 construction phase)	32	16	24	8	8			88	\$13,280
TOTAL HOURS AND COSTS		46	18	24	8	8	0	2	106	\$16,040
Task 4 – Permitting										
4300	MCESD AOC	2	1	6					9	\$1,105
TOTAL HOURS AND COSTS		2	1	6	0	0	0	0	9	\$1,105
Task 5 – Construction Services										
5100	Submittal Review / RFI Response	8	2	30	8	9			57	\$7,615
5200	MOPO Review	8	4	16					28	\$3,620
5300	Inspection Services	4	4	4	8	8			28	\$4,580
5400	Record Drawings / As-Builts	4	2	8	4		24		42	\$5,550
TOTAL HOURS AND COSTS		24	12	58	20	17	24	0	155	\$21,365
TOTAL PROJECT HOURS AND COSTS		72	31	88	28	25	24	2	270	\$38,510
OTHER DIRECT COSTS										
2.1	Travel, Copies, and Printing									\$500
3	Materials Testing Allowance									\$5,250
TOTAL OTHER DIRECT COSTS										\$5,750
TOTAL PROJECT COST										\$44,260



Construction Materials Testing and Inspection 2020 Fee Schedule



Aggregate Testing

A.	Aggregate Durability Index (ASTM D3744, AASHTO T210).....	\$	210.00/each
B.	Artificial Crushing		200.00/each
C.	Calcium Carbonate Percent by Weight in Aggregates.....		80.00/each
D.	California Bearing Ratio (CBR) with Modified Proctor (ASTM D1883, AASHTO T193)		550.00/each
E.	California Bearing Ratio (CBR) with Standard Proctor (ASTM D1883, AASHTO T193)		500.00/each
F.	Clay Lumps and Friable Particles (ASTM C142, AASHTO T112).....		125.00/each
G.	Cleanliness Value (CTM 227).....		200.00/each
H.	Crushing Coarse Aggregate for Potential Alkali Reactivity		250.00/each
I.	Flakiness Index of Aggregate (ARIZ 233).....		110.00/each
J.	Flat and Elongated Particles (ASTM D4791)		175.00/each
K.	Fractured Faces (ARIZ 212, FLH507)		95.00/each
L.	Freeze / Thaw of Aggregates (AASHTO T103)		325.00/each
M.	Hardness of Aggregates (ASTM D1865).....		90.00/each
N.	L.A. Abrasion of Coarse Aggregate (ASTM C535)		250.00/each
O.	L.A. Abrasion of Coarse Aggregate (ASTM C131) (AASHTO T96)		180.00/each
P.	Lightweight Pieces, Coal and Lignite (ASTM C123).....		250.00/each
Q.	Max. Dry Unit Weight and Water Content Range Using Vibrating Hammer (ASTM D7382)		350.00 each
R.	Max. Index Density and Unit Weight of Soils Using a Vibratory Table (ASTM D4253)		250.00 each
S.	Methylene Blue Value of Mineral Aggregate		285.00/each
T.	Min. Index Density and Unit Weight of Soils and Calculation of Relative Density (ASTM D4254)		250.00 each
U.	Organic Content (ASTM D2975, AASHTO T267).....		125.00/each
V.	Organic Impurities in Fine Aggregate (ASTM C40, AASHTO T21).....		145.00/each
W.	Percent Carbonates in Aggregate (ARIZ 238)		110.00/each
X.	Potential Alkali Reactivity of Aggregate (ASTM C289).....		500.00/each
Y.	Sand Equivalent (ASTM D2419, AASHTO T176).....		90.00/each
Z.	Sand Equivalent, ADOT Wash Method (ARIZ 242).....		125.00/each
AA.	Sieve Analysis, Coarse and Fine, Washed (ASTM C136, AASHTO T27, ARIZ 201).....		70.00/each
BB.	Sieve Analysis, Fine, Washed (ASTM C136, AASHTO T27, ARIZ 201).....		70.00/each
CC.	Slake Durability (ASTM D4644)		175.00/each
DD.	Soundness of Aggregate by Use of Sodium (Magnesium) Sulfate (ASTM C88, AASHTO T104)		250.00/each
EE.	Specific Gravity and Absorption of Coarse Aggregate (ASTM C127, AASHTO T85, ARIZ 210).....		85.00/each
FF.	Specific Gravity and Absorption of Fine Aggregate (ASTM C128, AASHTO T84, ARIZ 211).....		100.00/each
GG.	Uncompacted Void Content (ARIZ 247, & FHWA & AASHTO)		125.00/each
HH.	Unit Weight and Voids in Aggregate (ASTM C29, AASHTO T19)		75.00/each
II.	Unit Weight, Moisture Density Relationship (Bulking Effect) (ASTM C29, AASHTO T19)		95.00/each
JJ.	Vaughan and Soares Testing.....		350.00/each

Soils Testing

A.	ASTM C33 Package	\$	Quote
B.	Bulk Density of Rock Core.....		35.00/each
C.	Collapse Potential of Soils (ASTM D5333).....		200.00/each
D.	Consolidation (ASTM D2435, AASHTO T216).....		285.00/each
E.	Crumb Test Method (USBR 5400-89)		35.00/each
F.	Density of Undisturbed: Ring Samples		30.00/each
G.	Density of Undisturbed: With Porosity Calculation.....		35.00/each
H.	Direct Shear (ASTM D3080).....		350.00/each
I.	Direct Shear Remolded (ASTM D3080).....		375.00/each
J.	Hydrometer Analysis (ASTM D422, AASHTO T88) (includes Sieve Analysis C136).....		280.00/each
K.	Lime Stabilization Mix Design.....		Quote
L.	Minimum Resistivity of Soils and Aggregates (AZ 236)		130.00/each
M.	Moisture Density Relations Test: Single Point (Any Point)		90.00/each
N.	Natural Soil Moisture Content (ASTM D2216, AASHTO T265).....		20.00/each
O.	One-Dimensional Expansion (Swell) (ASTM D4546) Undisturbed.....		160.00/each
P.	Permeability (Flex Wall) – Cohesive (ASTM D5084): In Situ		360.00/each
Q.	Permeability (Flex Wall) – Cohesive (ASTM D5084): Remolded		400.00/each
R.	Permeability (Granular Soil).....	\$	360.00/each
S.	pH and Minimum Resistivity of Soils and Aggregates (ARIZ 236)		160.00/each
T.	pH of Soils and Aggregates (AZ 236).....		40.00/each

Construction Materials Testing and Inspection 2020 Fee Schedule

Soils Testing Continued

U. Pinhole Dispersion Test (ASTM D4647)	250.00/each
V. Plasticity Index (Dry Prep) (ASTM D4318, AASHTO T89/90)	85.00/each
W. Plasticity Index (Wet Prep) (ASTM D4318, AASHTO T89/90/T146)	120.00/each
X. Point Load Index (ISFRM)	60.00/each
Y. Proctor-Modified (ASTM D1557, AASHTO T180)	140.00/each
Z. Proctor-Standard (ASTM D698, AASHTO T99, ARIZ 225/226)	110.00/each
AA. R-Value (ASTM D2844, AASHTO T190, CAL 301)	300.00/each
BB. Sample Preparations	70.00/hour
CC. Sieve Analysis, Coarse (Dry Sieve) (ASTM C136, AASHTO T27, ARIZ 201)	70.00/each
DD. Sieve Analysis, Coarse and Fine, Washed (ASTM C136, AASHTO T27, ARIZ 201)	70.00/each
EE. Sieve Analysis, Fine, Washed (ASTM C136, AASHTO T27, ARIZ 201)	70.00/each
FF. Soil Specific Gravity (ASTM D854, AASHTO T100)	170.00/each
GG. Soil Unit Weight (Undisturbed Sample) with Moisture Content	30.00/each
HH. Sulfate and Chloride Content (ARIZ 733, ARIZ 736)	70.00/each
II. Triaxial – Unconsolidated Undrained	370.00/each
JJ. Triaxial Shear – (Consolidated & Undrained), (ASTM D4767)	1700.00/each
KK. Triaxial Shear – (Consolidated & Undrained), (ASTM D4767)	370.00/each
LL. Unconfined Compression (Remolded Soil Sample), (ASTM D2166)	150.00/each
MM. Unconfined Compression (Rock Core Sample), (ASTM D2166)	55.00/each
NN. Unconfined Compressive Strength, (AASHTO T208), (Set of 3)	150.00/set
OO. Unconfined Compression (Undisturbed Soil Sample), (ASTM D2166)	100.00/each

CONCRETE / SOIL CEMENT

Portland Cement Concrete / Soil Cement

A. Compressive Strength - Concrete Cores (ASTM C42, AASHTO T24)	\$ 35.00/each
B. Compressive Strength - Concrete Cylinders (ASTM C39, AASHTO T22)	20.00/each
C. Compressive Strength - Concrete Masonry Units (ASTM C140)	70.00/each
D. Compressive Strength - Grout Prisms (UBC 21-17)	20.00/each
E. Compressive Strength - Masonry Prisms (ASTM E447, UBC 24-26) (2 High Blocks)	150.00/each
F. Compressive Strength - Mortar Cylinders (ASTM C109, AASHTO T106)	20.00/each
G. Compressive Strength - Soil Cement (ADOT)	20.00/each
H. Flexural Strength of Concrete (ASTM C293)	60.00/each
I. Flexural Strength of Concrete with Mold Cleanup (ASTM C293)	75.00/each
J. Grout or Mortar Mix Design	Quote
K. Length Change (Shrinkage) of Hardened Concrete (ASTM C157) (Set of 3)	550.00/set
L. Portland Cement Concrete Mix Design	Quote
M. Shotcrete Panel Core Testing (ASTM C42)	60.00/each
N. Soil Cement Design	Quote
O. Time of Setting of Concrete Mixtures (ASTM C403)	125.00/each

ASPHALTIC CONCRETE

A. Abson Recovery, Asphalt Content (ASTM D1856 & D2172, AASHTO T170 & T164)	\$ 450.00/each
B. Analysis of Cut Cores	Quote
C. Asphalt Drain Down Test	325.00/each
D. Bulk Specific Gravity of Bituminous Mixtures, SSD (ASTM D2726, AASHTO T166)	35.00/each
E. Bulk Specific Gravity Using Paraffin/Parafilm-Coated Specimens (ASTM D1188, AASHTO T275) ..	65.00/each
F. Centrifuge Extraction of Bituminous Mixture (ASTM D2172, AASHTO T164)	200.00/each
G. Centrifuge Extraction and Gradation of Bituminous Materials (ASTM D2172, AASHTO T164)	255.00/each
H. Coating and Stripping of Bituminous Mixtures (ASTM D1664, AASHTO T182, CTM 302)	120.00/each
I. Effect of Water on Cohesion of Bituminous Mixtures, IMC (ASTM D1075, AASHTO T165, ARIZ 802)	\$ 550.00/each
J. Extraction/Recovery, Absolute Viscosity, Penetration	640.00/each
K. Gyratory Compaction (AASHTO T312) (Set of 2)	160.00/each
L. Hveem (Stabilometer) (Bulk Density) (Set of 3) (ASTM D1559, D1560)	150.00/each
M. Ignition Oven Calibration (ARIZ 427)	700.00/each
N. Ignition-Gradation (ASTM, AASHTO, ADOT)	160.00/each

Construction Materials Testing and Inspection 2020 Fee Schedule

Asphalt Concrete Continued

O. Loaded Wheel	250.00/each
P. Marshall Test - Stability, Flow, Bulk Density (Set of 3) (ASTM D1559, AASHTO T245) (Field Sample)....	135.00/each
Q. Marshall Test - 6-inch Stability, Flow, Bulk Density (Set of 3) ASTM D6927, AASHTO T245	400.00/each
R. Moisture Content of Hot Mix by Oven Method (T329, ARIZ 406)	50.00/each
S. Nuclear Asphalt Content Gauge Calibration	700.00/each
T. Preparation of Slurry Seal Specimens	75.00/each
U. Preparing Nuclear Knowns	700.00/each
V. Reflux Extraction and Gradation of Bituminous Materials (ASTM D2172, AASHTO T164)	295.00/each
W. Rotovapor Recovery of Asphalt, Asphalt Content (ASTM D5404 & D2172)	450.00/each
X. Shultz Breuer Ruck (Additional points \$700 each) (ISSA TB144).....	800.00/each
Y. Tensile Strength Ratio, Root-Tunnicliff Method (ASTM D4867, AASHTO T283).....	550.00/each
Z. Theoretical Maximum Specific Gravity, Rice Test (ASTM D2041, AASHTO T209, ARIZ 417) (Field Sample)	135.00/each
AA. Thickness Determination on AC Cores	15.00/each
BB. Volatile Distillates in Bituminous Paving Mixtures (ASTM D1461, AASHTO T110)	475.00/each
CC. Wet Track Abrasion Test, 1 hour.....	275.00/each
DD. Wet Track Abrasion Test, 6 day	350.00/each

Asphalt Concrete Mix Designs

A. Asphalt Rubber – ARAC Mix Design.....	\$ 2550.00/each
B. Asphalt Rubber – AR-ACFC Mix Design	Quote
C. Asphaltic Concrete Mix Design – Cold Mix Recycled, Marshall Method.....	Quote
D. Asphaltic Concrete Mix Design – Marshall Method, 4 Inch	2350.00/each
E. Hveem Design	Quote
F. Micro Surfacing Job Mix Formula (MAG, ISSA, Various agencies)	1750.00/each
(Cohesion, Consistency, split consistency, mix test, setting, water resistance, wet stripping, WTAT 1 hour, loaded wheel test, Lateral displacement, specific gravity, does not include Aggregate testing)	
G. Micro Surfacing Job Mix Formula (ADOT or other that requires SBR test).....	3250.00/each
(\$1750 plus \$1500 SBR) (Cohesion, Consistency, split consistency, mix test, setting, water resistance, wet stripping, WTAT 1 hour/6 days, loaded wheel test, does not include Aggregate testing)	
H. Superpave Asphalt Mix Designs	3000.00/each
I. Slurry Seal Job Mix Formula (MAG715, ISSA, MCDOT).....	1600.00/each
(Cohesion, Consistency, split consistency, mix test, setting, water resistance, wet stripping, loaded wheel test, does not include Aggregate testing)	
J. Trial Mix Design.....	Quote

ASPHALT BINDER

Superpave PG Binder Testing

A. Bending Beam Rheometer (AASHTO T313)	\$ 225.00/each
B. Bending Beam Rheometer with RTFO/PAV Aging.....	475.00/each
C. Bending Beam with Physical Hardening (AASHTO T313).....	425.00/each
D. Brookfield Viscosity (ASTM D4402, AASHTO T316).....	95.00/each
E. Brookfield Viscosity, Temp Sweep 3 points (ASTM D4402, AASHTO T316).....	225.00/each
F. Brookfield Viscosity, Temp Sweep 4 points (ASTM D4402, AASHTO T316).....	275.00/each
G. Direct Tension (AASHTO T314)	250.00/each
H. Direct Tension with RTFO/PAV Aging.....	495.00/each
I. Dynamic Shear Rheometry (AASHTO T315).....	\$ 175.00/each
J. Dynamic Shear Rheometry, Linearity Test	225.00/each
K. Dynamic Shear Rheometry, Temp. Sweep	225.00/each
L. Multiple Stress Creep Recovery TP-70	375.00/each
M. PG Classification (AASHTO R29).....	1,050.00/each
N. PG Verification with Critical Cracking Temperature (AASHTO M320 Table2).....	1,525.00/each
O. PG Classification with Direct Tension (AASHTO R29/T314)	1,175.00/each
P. PG Grade Blend Development	Quote
Q. PG Verification (AASHTO M320)	850.00/each
R. PG Verification with Direct Tension (AASHTO M320/T314)	1,050.00/each
S. PG Verification, (Caltrans Section 92).....	1,095.00/each

Construction Materials Testing and Inspection

2020 Fee Schedule

Superpave PG Binder Testing Continued

T.	PG Verification, (Caltrans Section 92 w/o Solubility).....	975.00/each
U.	Pressure Aging Vessel (AASHTO R28)	175.00/each
V.	Rolling Thin Film Oven (ASTM D2872, AASHTO T240)	135.00/each
W.	Rolling Thin Film Oven with Mass Loss (ASTM D2872, AASHTO T240)	145.00/each
X.	Temperature Viscosity Curve, Brookfield, specific gravity, DSR.....	450.00/each

Asphalt Cement Testing

A.	Absolute Viscosity (140°F; 60°C) (ASTM D2171, AASHTO T202)	\$ 95.00/each
B.	AR Grade Asphalt Verification (AASHTO M226)	795.00/each
C.	AR Grade Asphalt Verification, Partial Series	Quote
D.	Ash in Bituminous Materials (ASTM D2939, AASHTO T111).....	175.00/each
E.	Asphalt Grade Blend Development	Quote
F.	Brookfield Viscosity, Asphalt (ASTM D2994, ASTM D4878-A or ASTM D5018).....	125.00/each
G.	Brookfield Viscosity, Asphalt (ASTM D4402, AASHTO T316)	95.00/each
H.	Chemical Analysis of Asphalt, Complete Series, Modified Rostler/Sternberg	950.00/each
I.	Crack Sealant Evaluation	Quote
J.	Crack Sealant Verification	Quote
K.	Crack Sealant, Bond Test	400/each
L.	Crack Sealant, Flexibility	Quote
M.	Crack Sealant, Flow	Quote
N.	Crack Sealant, Tensile Adhesion	Quote
O.	Ductility of Bituminous Materials (ASTM D113, AASHTO T51).....	125.00/each
P.	Elastic Recovery (ASTM D6084, AASHTO T301)	150.00/each
Q.	Flash and Fire Point, Cleveland Open Cup (ASTM D92, AASHTO T48).....	95.00/each
R.	Flash and Fire Point, Cleveland Open Cup, co-polymer products (ASTM D92, AASHTO T48)	150.00/each
S.	Flash and Fire Point, Tag Open Cup (ASTM D3143, AASHTO T79)	95.00/each
T.	Haake Viscosity, Asphalt.....	85.00/each
U.	Heptane/Xylene Equivalent (AASHTO T102)	250.00/each
V.	Kinematic Viscosity (275°F; 135°C or 140°F; 60°C) (ASTM D2170, AASHTO T201)	135.00/each
W.	n-Heptane Insolubles (ASTM D3279)	250.00/each
X.	n-Pentane Insolubles	225.00/each
Y.	Penetration (@ Temperatures other than 77°F; 25°C) (ASTM D5, AASHTO T49).....	95.00/each
Z.	Penetration (77°F; 25°C) (ASTM D5, AASHTO T49)	95.00/each
AA.	Penetration Grade Asphalt Verification (AASHTO M20)	595.00/each
AA.	Penetration Grade Asphalt Verification, Partial Series	Quote
BB.	Percent of Ash Content (ASTM D5040).....	200.00/each
CC.	Rolling Thin Film Oven Test (ASTM D2872, AASHTO T240)	135.00/each
DD.	Rolling Thin Film Oven with Mass Loss	145.00/each
EE.	Separation of Asphalt Cement (FHWA Method, TX 540C)	175.00/each
FF.	Smoke Point (ADEQ Procedure).....	175.00/each
GG.	Softening Point of Asphalt, Ring and Ball (ASTM D36, AASHTO T53).....	95.00/each
HH.	Solubility of Bituminous Materials (ASTM D2042, AASHTO T44)	120.00/each
II.	Solubility of Bituminous Materials, Centrifuge (ASTM D5546)	295.00/each
JJ.	Solubility of Bituminous Materials, Modified	165.00/each
KK.	Specific Gravity of Bituminous Materials (ASTM D70, AASHTO T228)	95.00/each
LL.	Specific Gravity (ASTM D1298)	185.00/each
MM.	Spot Test (AASHTO T102).....	\$ 175.00/each
NN.	Thin Film Oven Aging.....	185.00/each
OO.	Torsional Recovery (CTM 332)	250.00/each
PP.	Toughness and Tenacity (ASTM D5801, NEV 745).....	275.00/each
QQ.	Vialit test for chip retention, Single temperature (Modified EN 12272-3)	400.00/each
RR.	Vialit test for chip retention, Three temperatures (Modified EN 12272-3)	500.00/each
SS.	Viscosity Grade Asphalt Verification (AASHTO M226)	795.00/each
TT.	Viscosity Grade Asphalt Verification, Partial Series	Quote
UU.	Water in Petroleum Products (ASTM D95, AASHTO T55).....	250.00/each

Asphalt Rubber Binder Tests

A.	Asphalt Compatibility Test, Crack Sealant.....	\$ 150.00/each
B.	Asphalt Rubber Binder Design Profile (AZ Profile).....	1500.00/each
C.	Asphalt Rubber Binder Design Profile (CA Profile).....	1700.00/each

Construction Materials Testing and Inspection

2020 Fee Schedule



Asphalt Rubber Binder Tests Continued

D.	Asphalt Rubber Binder Evaluation.....	Quote
E.	Asphalt Rubber Binder Verification.....	Quote
F.	Asphalt Rubber Binder Verification, Partial Series	Quote
G.	Asphalt Rubber Blend Submittal Sample.....	300.00/each
H.	Bitumen Content, Carbon Disulfide (ASTM D4)	250.00/each
I.	Bitumen Content, TCE (ASTM D4 modified).....	165.00/each
J.	Brookfield Viscosity, Asphalt (ASTM D2994 or ASTM D5018).....	125.00/each
K.	Brookfield Viscosity, Crack Sealant, (ASTM D2196)	150.00/each
L.	Bulk Density of Crumb Rubber	150.00/each
M.	Crack Sealant Preparation (ASTM D5167 Jacketed Melter).....	175.00/each
N.	Cone Penetration (ASTM D5329).....	95.00/each
O.	Crumb Rubber Chemical Composition	1250.00/each
P.	Fiber Content of Crumb Rubber	60.00/each
Q.	Metal Content of Crumb Rubber.....	60.00/each
R.	Mineral Content of Crumb Rubber.....	75.00/each
S.	Physical Examination and Gradation of Crumb Rubber.....	Quote
T.	Resilience (ASTM D5329).....	95.00/each
U.	Rotational Viscosity	95.00/each
V.	Rubber Gradations (ASTM C136)	85.00/each
W.	Specific Gravity of Crumb Rubber (ASTM D1817, CT 208)	185.00/each
X.	Thermogravimetric Analysis	Quote

EMULSIFIED/CUTBACK

Emulsified/Cutback Asphalt Tests

A.	Cement Mixing Test	\$ 125.00/each
B.	Classification Test, Uncoated Particles	150.00/each
C.	Coating (SE214) T-59.....	65.00/each
D.	Cutback Asphalt Blend Development	Quote
E.	Cutback Asphalt Verification, without Water Content (AASHTO M 81/82).....	795.00/each
F.	Demulsibility (ASTM D244, AASHTO T59)	110.00/each
G.	Direct Flame Test (ASTM D2939)	175.00/each
H.	Distillate Fraction on Cutback (ASTM D402, AASHTO T78).....	275.00/each
I.	Drying Time (ASTM D2939)	250.00/each
J.	Emulsified Rejuvenating Agent, Complete Series (Modified Rostler/Sternberg) (ASTM D2006)	Quote
K.	Emulsified Rejuvenating Agent, Complete Series.....	Quote
L.	Emulsion Verification, RS-1, RS-2, SS-1, SS-1h (ASTM D977, AASHTO M140).....	950.00/each
M.	Emulsion Verification, HFRS-2 (ASTM D977, AASHTO M140).....	1075.00/each
N.	Emulsion Verification, QS-1H (ASTM D977, AASHTO M140).....	695.00/each
O.	Emulsion Verification, CRS-1, CRS-2, CSS-1, CSS-1h (ASTM D2397, AASHTO M208).....	975.00/each
P.	Emulsion Verification, CQS-1h (ASTM D2397, AASHTO M208).....	\$ 795.00/each
Q.	Emulsion Verification, CQS-1h (MAG 713)	950.00/each
R.	Emulsion Verification, Partial Series	Quote
S.	Flexibility (ASTM D2939)	295.00/each
T.	Float Test (ASTM D139).....	125.00/each
U.	Freezing T-59.....	150.00/each
V.	High Float Emulsion Verification (ASTM D977, AASHTO M140).....	1050.00/each
W.	Identification test for Cationic Slow Set (AASHTO T59, Section 27)	275.00/each
X.	Low Temperature Distillation.....	250.00/each
Y.	Low Temperature Vacuum Distillation (ASTM D244, AASHTO T59)	295.00/each
Z.	Miscibility (ASTM D244, AASHTO T59).....	85.00/each
AA.	Particle Charge (ASTM D244, AASHTO T59).....	85.00/each
BB.	pH Determination.....	85.00/each
CC.	Residue and Oil Distillate by Distillation (ASTM D244, AASHTO T59).....	185.00/each
DD.	Residue by Evaporation (ASTM D244, AASHTO T59, ARIZ 512, CTM 331, D2834).....	95.00/each
EE.	Residue by Evaporation (ASTM D2393, CT331 to obtain residue)	150.00/each
FF.	Residue by Evaporation, Low Temperature (ASTM D7497)	250.00/each
GG.	Resistance to Freezing (ASTM D2939)	150.00/each
HH.	Resistance to Water (ASTM D2939)	250.00/each

Construction Materials Testing and Inspection 2020 Fee Schedule



Emulsified/Cutback Asphalt Tests Continued

II.	Resistance to Heat (ASTM D2939)	250.00/each
JJ.	Resistance to Kerosene (ASTM D 2939)	450.00/each
KK.	Saybolt Furol Viscosity (ASTM D88, AASHTO T72)	135.00/each
LL.	Settlement, 5-Day (ASTM D244, AASHTO T59)	195.00/each
MM.	Sieve Test (ASTM D244, AASHTO T59)	95.00/each
NN.	Storage Stability, 1-Day (ASTM D244, AASHTO T59)	150.00/each
OO.	Uniformity, (ASTM D2939)	150.00/each
PP.	Vacuum Distillation of Modified Emulsion (ARIZ 504)	250.00/each
QQ.	Volatile Content of Coatings (ASTM D2369)	250.00/each
RR.	Weight Per Gallon (ASTM D244, ASTM D2939, AASHTO T59)	150.00/each
SS.	Weight Per Gallon, Density of Liquid Coatings (ASTM D1475)	225.00/each
TT.	Wet Film Continuity (ASTM D2939)	95.00/each
UU.	Wet Flow (ASTM D2939)	125.00/each

Asphalt Cement Grade Verification

A.	AR Graded Asphalt (ASTM D3381, AASHTO M226)	\$ 795.00/each
B.	PBA Asphalt	Quote
C.	Penetration Graded Asphalt (ASTM D946, AASHTO M20)	595.00/each
D.	PG Classification (AASHTO R29)	1050.00/each
E.	PG Classification with Direct Tension (AASHTO R29/T316)	1,175.00/each
F.	PG Verification (AASHTO M320)	850.00/each
G.	PG Verification with Direct Tension (AASHTO M320/T316)	1050.00/each
H.	Viscosity Graded Asphalt (ASTM D3381, AASHTO M226)	795.00/each
I.	Identification of Rapid Setting Cationic Emulsion T-59	195.00/each
J.	Identification of Cationic Slow Setting Emulsion T-59	135.00/each
K.	Emulsified Asphalt/Job Aggregate Coating Test T-59	125.00/each
L.	Water Content T-59	375.00/each

Michael Cox

From: Chris Fischer <CFischer@htiaz.com>
Sent: Tuesday, March 23, 2021 10:36 AM
To: Michael Cox
Subject: Re: Contacts

Mike
Abc - \$15.75t
Haul dispose broken asphalt and concrete - \$225 load
Haul dispose dirt - \$200 load

Less than 4 load orders may have a travel charge. ABC quotes will come from closest pit and may contain lime unless non-lime is specifically requested.

3/8 reject chips and recycle products are in limited supply. Heritage will not be responsible for alternative product increased cost. This quote expires in 30 days. Quotes that include material must have a PO with expiration date for supplier protection. All material prices expire in 6 months unless otherwise indicated.

Chris Fischer
480.229.8250
CFischer@htiaz.com

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Tempe, AZ 85284
T: 480-535-7593
M: 480-353-8761
mtcox@pcl.com

www.pcl.com
TOGETHER WE BUILD SUCCESS

From: Chris Fischer <CFischer@htiaz.com>
Sent: Wednesday, March 17, 2021 1:50 PM
To: Chris Fischer <CFischer@htiaz.com>
Subject: Contacts

[External Email]

I lost quite a few phone contacts recently. Would you please reply to this mail so I can get your information.

Chris Fischer
480.229.8250
CFischer@htiaz.com

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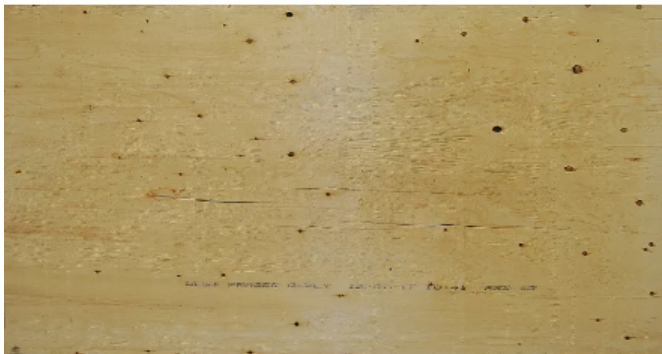
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West Fraser 1/2-inch x 4 ft. x 8 ft. Standard Spruce Plywood Board

Model # 1125STSN48 | Store SKU # 1000173236

★★★★★ (184)

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\(4\)](#)

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Customers Also Viewed



AraucoPly Premium Pine Plywood ACX 1/2 inch x 4 ft. x 8 ft.

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Paulin #8 x 3-inch Flat Head Square Drive Construction Screws in Yellow Zinc - 250pcs

★★★★★ (22)

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Overview

Model # 1125STSN48 Store SKU # 1000173236

Why Plywood? Simply because it outperforms all substitute wood-based panels on the market today. Plywood is a highly stable panel. When exposed to moisture or high humidity, plywood is up to seven times more resistant to thickness swell than substitute wood-based panels. Plywood also returns to its original dimensions when it dries. Plywood is stronger than substitute wood-based panels in the four important engineering strength properties of bending, tension, compression and planar shear and plywood weighs up to 40% less than substitute wood-based panels of equivalent thickness. Plywood is a highly impact-resistant panel and continues to perform even when wet. Plywood has over 50 years of proven service as a structural panel for homes and construction and remains, according to surveys, the panel of choice by home buyers, contractors, architects and engineers.

- Plywood is manufactured from logs averaging 10 inches in diameter from managed sustainable forests. 100% of the log is utilized for either veneer, or by-products, such as 2x4 lumber, landscaping ties or chips for pulp and paper. Nothing is wasted.
- Plywood manufacturing, because it is a value added process, employs four times as many people compared to the manufacture of substitute wood-based panels - using the same volume of logs.
- Limit of 32pc per customer

Specifications

Dimensions

Assembled Depth (in inches)	0.63	Assembled Height (in inches)	48
Assembled Weight (in lbs)	36	Assembled Width (in inches)	96
Packaged Depth (in inches)	96	Packaged Height (in inches)	0.47
Packaged Weight (In lbs)	36	Packaged Width (in inches)	48

Details

Certified	Yes	Country of Origin	CA-Canada
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Edge Profile	Square Edge	Fire Retardant	No
Material	Plywood	Nominal Length (ft.)	8
Nominal Thickness (in.)	0.5	Nominal Width (in.)	48
Performance Category	1/2	Plywood Features	Square Edge
Pressure Treated Wood	No	Tint	Other
Wood Species	Other		

Warranty / Certifications

West Fraser warrant their certified plywood against manufacturing defects.

Customer Reviews



My Store: **Edmonton Strathcona** | **Open** • Closes 9 p.m. ▼

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2-inch x 4-inch x 8 ft. SPF Dimensional Lumber

Model # 112108 | Store SKU # 1000112108

★★★★★ (790)

[Write a Review](#)

[Q&A \(3\)](#)

\$9.65 / each

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Qty

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Customers Also Viewed



Paulin #8 x 2-1/2-inch Flat Head Square Drive Construction Screws in Yellow Zinc - 100pcs

★★★★★ (46)

\$10.94 / each

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Paulin #8 x 3-inch Flat Head Square Drive Construction Screws in Yellow Zinc - 250pcs

★★★★★ (22)

\$25.67 / each

Add to Cart



Overview

Model # 112108 Store SKU # 1000112108

SPF Square Edge Lumber. Every piece meets the highest grading standards for strength and appearance. Dimensional lumber is ideal for a wide range of structural and non-structural applications including framing of houses, barns, sheds, and commercial construction. It can also be used for projects such as furniture and hobbies, and comes in a variety of widths and lengths. Dimensional lumber can also be used in exterior applications as long as it is properly primed and painted or sealed and stained.

- Canfor SPF Square Edge Lumber. Discover the Distinctive Difference You can see for yourself that Canfor lumber is of the highest quality.

- Sourced from sustainably managed forests
- Dimensional lumber can also be used in exterior applications as long as it is properly primed and painted or sealed and stained.
- It can also be used for projects such as furniture and hobbies, and comes in a variety of widths and lengths.

Specifications

Dimensions

Assembled Depth (in inches)	8	Assembled Height (in inches)	2
Assembled Weight (in lbs)	11.1	Assembled Width (in inches)	4
Packaged Depth (in inches)	96	Packaged Height (in inches)	1.5
Packaged Weight (In lbs)	8.9	Packaged Width (in inches)	3.5

Details

Certified	Yes	Country of Origin	CA-Canada
Material	Wood	Nominal Length (ft.)	8
Nominal Size (in.)	2x4	Nominal Size TxW (in.)	2 x 4
Pressure Treated Wood	No	Wood Species	Spruce/Pine/Fir

Warranty / Certifications

For more information please contact 1-800-628-0525.

Customer Reviews
