

February 21, 2018

BOARD OF DIRECTORS

ROBERT E. ALVARADO

Division 1

JOE ESTES

Division 2

MARCO HENRIQUEZ

Division 3

KATHY MAC LAREN

Division 4

VINCENT DINO

Division 5

DENNIS LaMOREAUX General Manager

ALESHIRE & WYNDER LLP Attorneys





AGENDA FOR A SPECIAL MEETING OF THE FACILITIES COMMITTEE OF THE PALMDALE WATER DISTRICT

Committee Members: Vincent Dino-Chair, Joe Estes to be held at the District's office at 2029 East Avenue Q, Palmdale

THURSDAY, FEBRUARY 22, 2018

8:15 a.m.

NOTE: To comply with the Americans with Disabilities Act, to participate in any Board meeting please contact Dawn Deans at 661-947-4111 x1003 at least 48 hours prior to a Board meeting to inform us of your needs and to determine if accommodation is feasible.

Agenda item materials, as well as materials related to agenda items submitted after distribution of the agenda packets, are available for public review at the District's office located at 2029 East Avenue Q, Palmdale (Government Code Section 54957.5). Please call Dawn Deans at 661-947-4111 x1003 for public review of materials.

PUBLIC COMMENT GUIDELINES: The prescribed time limit per speaker is three-minutes. Please refrain from public displays or outbursts such as unsolicited applause, comments, or cheering. Any disruptive activities that substantially interfere with the ability of the District to carry out its meeting will not be permitted and offenders will be requested to leave the meeting. (PWD Rules and Regulations, Appendix DD, Sec. IV.A.)

Each item on the agenda shall be deemed to include any appropriate motion, resolution, or ordinance to take action on any item.

- 1) Roll call.
- 2) Adoption of agenda.
- 3) Public comments for non-agenda items.
- Action Items: (The public shall have an opportunity to comment on any action item as each item is considered by the Committee prior to action being taken.)

- 4.1) Consideration and possible action on approval of minutes of regular meeting held September 11, 2017.
- 4.2) Consideration and possible action to authorize purchasing materials to complete inventory level determined necessary for emergency response. (\$240,000.00 Non-Budgeted Facilities Manager Moore)
- 4.3) Consideration and possible action on declaring District property as surplus and authorizing staff to complete the disposal process. (Revenue anticipated from disposal Facilities Manager Moore)
- 4.4) Consideration and possible action on the lease of five vehicles. (\$40,000.00 Budgeted Facilities Manager Moore)
- 4.5) Discussion and overview of the Leslie O. Carter Water Treatment Plant "Facility Evaluation Results and Recommendations" Report dated December 2017 prepared by Carollo Engineers, Inc. (Operations Manager Masaya)
- 5) Information Items.
 - 5.1) Other.
- 6) Board members' requests for future agenda items.

ins D. La Mneoux

7) Adjournment.

DENNIS D. LaMOREAUX,

General Manager

DDL/dd

PALMDALE WATER DISTRICT BOARD MEMORANDUM

DATE: February 14, 2018 **February 20, 2018**

TO: FACILITIES COMMITTEE Committee Meeting

FROM: Mr. Tim Moore, Facilities Manager

VIA: Mr. Dennis D. LaMoreaux, General Manager

RE: AGENDA ITEM NO. 4.2 - CONSIDERATION AND POSSIBLE ACTION TO

AUTHORIZE PURCHASING MATERIALS TO COMPLETE INVENTORY LEVEL DETERMINED NECESSARY FOR EMERGENCY RESPONSE.

(\$245,000.00 - NON-BUDGETED - FACILITIES MANAGER MOORE)

Recommendation:

Staff recommends the Committee authorize purchasing materials to complete the inventory level determined necessary for emergency response in the not-to-exceed amount of \$245,000.00 and that this item be presented to the full Board for consideration.

Alternative Options:

The alternative option is to continue to delay purchases of the needed disaster supplies.

Impact of Taking No Action:

The District will not have the inventory needed in the event of a natural disaster.

Background:

The District's Emergency Supply Inventory has been on short supply for several years. In 2015, District staff reevaluated our system to update fittings, pipe, valves and other supplies needed to replace areas that would be affected (weak points-critical connections of our infrastructure) and the materials necessary to have in place for Emergency Response.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiative No. 3 – Systems Efficiency. This item directly relates to the District's Mission Statement.

Budget:

This item is not budgeted; however, budget funds can be transferred from the three-month Emergency Reserve to cover these costs.

Supporting Documents:

Bid Proposals from Core & Main and Industrial Rubber Supply.

Bid Proposal for EARTHQUAKE SUPPLIES

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23. 1	13//11/3		STATE OF THE PERSON	DISTRICT

2029 EAST AVENUE Q PALMDALE, CA 93550

Job

EARTHQUAKE SUPPLIES Bid Date: 01/30/2018 05:00 p.m. Bid #: 501908

Sales Representative

Chad.Holt@coreandmain.com

Chad Holt (M) 661-709-8907 (T) 661-945-2881 (F) 661-945-5076

Core & Main

42839 North Sierra Hwy Lancaster, CA 93534 (T) 661-945-2881

OTIES



Bid Proposal for EARTHQUAKE SUPPLIES

PALMDALE WATER DISTRICT

Bid Date: 01/30/2018 05:00 p.m. Core & Main Bid #: 501908 Core & Main 42839 North Sierra Hwy Lancaster, CA 93534 Phone: 661-945-2881

Fax: 661-945-5076

Seq# Qt	Description	Units	Price	Ext Price
10	**********			
20	CORE AND MAIN LP			
30	42839 N SIERRA HWY			
40	LANCASTER CA 93534			
50	PHONE:661-945-2881			
60	FAX: :661-945-5076			
70	DOES NOT GUARANTEE THIS QUOTE			
80	TO BE A COMPLETE AND ACCURATE			
90	ACCOUNTING OF ALL MATERIALS			
100	NEEDED TO COMPLETE THIS JOB.			
110	CORE AND MAIN LP STANDARD			
120	TERMS APPLY.			
130	ALL PRICES SUBJECT TO CHANGE			
140	WITHOUT NOTICE.			
150	QUOTATION GOOD FOR 30 DAYS			
160	CORE AND MAIN LP IS NOT			
170	LIABLE FOR DELIVERY DELAYS,			
180	CANCELLATIONS OR PRICE			
190	INCREASES RESULTING FROM ANY			
200	CAUSE BEYOND OUR CONTROL.			
210	THESE INCLUDE BUT ARE NOT			
220	LIMITED TO: MANUFACTURERS			
230	SHORTAGES, AVAILABILITY OR			
240	TIMELINESS OF TRANSPORTATION,			
250	MATERIALS, FUELS, OR SUPPLIES.			
260	THIS QUOTE IS NOT A CONTRACT			
270	TO SUPPLY MATERIAL OR			
280	GUARANTEE OF PRODUCT			
290	AVAILABILITY.			
300	\$50.00 CASH SALE MINIMUM			
310	ALL CASH SALES ARE FINAL			
320				607.0
330 2	KV43-332WNL 5/8X3/4" ANG. KEY VALVE PILW NO LEAD	EA	34.35	687.00
340 5	KV23-332WNL 5/8X3/4 ANGLE KEY METER VALVE CFXMN NO LEAD	EA	32.23	1,611.50
350 1	P24276N 1-1/2 CPXMF ANGLE MTR NO LEAD	EA	215.24	2,152.40
3,60	B24277N 1-1/2 BALL AMS FLRXFLG W/PLN HEAD 1/4 TURN CHECK NO LEAD	EA	258.96	1,035.84
370	P24276N 2 CPXMF ANGLE METER NO LEAD	EA	274.35	1,097.40
380 1	B25025N 3/4 BALL CORP MIPXCF AWWA IP X COP FLARE NO LEAD	EA	41.12	411.20
390 2	B25025N 1 BALL CORP MIPXCF AWWA IP X COP FLARE NO LEAD	EA	52.79	1,055.80 1,172.10
400 1	E1935 1-1/2 BALL CORP MXPJCTS NO LEAD	EA	117.21 219.78	1,172.10
410	B25025N 2 BALL CORP MIPXCF AWWA IP X COP FLARE NO LEAD	EA EA	193.82	969.1
420	E1935 2 BALL CORP MIPXPICTS NO LEAD	EA	24.74	148.4
430	16" BUTTERFLY VLV BOLT&NUT KIT	EA EA	48.61	194.44
440	20" BUTTERFLY VLV BOLT&NUT KIT	EA	40.01	134,4



Formerly HD Supply Waterworks

Bid Proposal for EARTHQUAKE SUPPLIES

Bid #: 501908

Seq#	Qty	Description	Units	Price	Ext Price
450	2	24" BUTTERFLY VLV BOLT&NUT KIT	EA	62.91	125.82
460	20	245-000400003-800 4"X3" OD CLP	EA	12.38	247.60
470	40	245-00066303-800 6'X3" STD CLP	EA	15.85	634.00
480	20	245-00086303-800 8"X3" STD CLP	EΑ	18.63	372.60
490	12	226-066307-000 6X7-1/2 CLAMP 6.56-6.96 OD	EA	71.69	860.28
500	5	226-060012-000 6X12-1/2 CLAMP 5.95-6.35 OD	EA	113.31	566.55
510	3	226-066315-000 6X15 CLAMP 6.56-6.96 OD	EA	129.95	389.85
520	25	226-086307-000 8X7-1/2 CLAMP 8.54-8.94 OD	EA	84.93	2,123.25
530	2	226-094015-000 8X15 CLAMP 9.27-9.67 OD	EA	169.62	339.24
540	2	226-094020-000 8X20 CLAMP 9.27-9.67 OD	EA	240.21	480.42
550	10	226-100007-000 8X7-1/2 CLAMP 9.70-10.10 OD	EA	95.55	955.50
560	1	226-107507-000 10X7-1/2 CLAMP 10.64-11.04 OD	EA	104.43	104.43
570	4	226-107512-000 10X12-1/2 CLAMP 10.64-11.04 OD	EA	162.30	649.20
580	2	226-111015-000 10X15 CLAMP 11.04-11.44 OD	EA	208.80	417.60
590	2	227-111015-050 10X15 CLAMP FULL CIRCLE 11.04-12.24 OD	· EA	321.03	642.06
600	10	226-132007-000 12X7-1/2 CLAMP 13.10-13.50 OD	EA	120.30	1,203.00
610	4	226-132010-000 12X10 CLAMP 13.10-13.50 OD	EA	160.00	640.00
620	4	226-140010-000 12X10 CLAMP 14.00-14.40 OD	EA	165.69	662.76
630	2	226-127510-000 12X10 CLAMP 12.62-13.02 OD	EA	153.21	306.42
640	2	226-132012-000 12X12-1/2 CLAMP 13.10-13.50 OD	EA	207.78	415.56
650	3	226-127512-000 12X12-1/2 CLAMP 12.62-13.02 OD	EA	190.96	572.88
660	3	227-136510-000 12X10 CLAMP FULL CIRCLE 13.65-14.45 OD	EA	216.53	649.59
670	11	4 WELD SLIP-ON FLANGE 150# FF	EA	11.88	130.68
680	18	6 WELD SLIP ON FLANGE FF 150#	EA	20.20	363.60
690	18	8 WELD SLIP ON FLANGE FF 150#	EA	30.49	548.82
700	6	10 WELD SLIP ON FLANGE FF 150#	EA	35.91	215.46
710	36	12 WELD SLIP-ON FLANGE FF 150#	EA	75.16	2,705.76
720	10	16 WELD SLIP-ON FLANGE FF 150#	EA	123.66	1,236.60
730	5.	4 WELD XH SLIP-ON FLG 300# FF	EA	26.89	134.45
740	9	6 WELD XH SLIP-ON FLG FF 300#	EA	43.02	387.18
750	5	8 WELD XH SLIP-ON FLG FF 300#	EA	69.90	349.50
760	1	4 BLIND FLG DI IMP	EA	25.96	25.96
770	10	6 BLIND FLG DI IMP	EA	39.33	393.30
780	2	8 BLIND FLG DI IMP	EA	65.66	131.32
790	2	12 BLIND FLG DI IMP	EA	132.84	265.68
800	4	461-04460560-000 4X5-1/2 QUANTUM CPLG 4.46-5.60 OD EPOXY W/ALLOY B&N	EA	86.33	345.32
810	4	461-06540765-000 6X6 QUANTUM CPLG 6.54-7.65 OD EPOXY W/ALLOY B&N	EA	121.73	486.92
820	4	461-08540985-000 8X6 QUANTUM CPLG 8.54-9.85 OD EPOXY W/ALLOY B&N	EA	142.04	568.16
830	6	461-12751440-000 12X7-1/2 QUANTUM CPLG 12.75-14.40 OD EPOXY W/ALLOY B&N	EA	211,21	1,267.26
840	1800	3/4X60' (K) SOFT COPPER TUBING	FT	4.28	7,704.00
850		3/4X100'(K) SOFT COPPER TUBING	FT	4.28	856.00
860		1X60' (K) SOFT COPPER TUBING	FT	5.58	4,017.60
870	100	1X100' (K) SOFT COPPER TUBING	FT	5.58	558.00
880		1-1/2X20'(K)SOFT COPPER TUBING	FT	11.30	2,260.00
890	20	2X20' (K) SOFT COPPER TUBING	FT	17.58	351.60
900		6" 10GA CML & CMC STEEL	FT	18.82	3,764.00
910		4 TJ PR350 DI PIPE C/L	FT	16.32	5,548.80
		ABOVE IS DBL LINED			

Bid Proposal for EARTHQUAKE SUPPLIES

Bid.#: 501908

Seq#	Qty	Description	Units	Price	Ext Price
930	1134	6 TJ PR350 CL50 DI PIPE DOUBLE C/L	FT	12.19	13,823.46
940		8 TJ PR350 DI PIPE DBL C/ L CEMENT LINED	FT	16.05	10,689.30
950	324	The state of the s	FT	20.73	6,716.52
960	522		FT	26.61	13,890.42
970	234	16 TJ CL50 PR350 DI PIPE C/L	FT	43.06	10,076.04
980		ABOVE IS DBL LINED			
990	5	6 3006P DI STARGRIP RESTR. (I) W/ACC - SGDPPK06	EA	28.56	142.80
1000	5	8 3008P DI STARGRIP RESTR. (I) W/ACC - SGDPPK08	EA	38.92	194.60
1010		10 3010P DI STARGRIP RESTR (I) W/ACC - SGDPPK10	EA	55.34	276.70
1020		12 3012P DI STARGRIP RESTR (I) WITH ACC - SGDPPK12	EA	74.38	371.90
1030		6 MJXFLG ADPT (I) CP DI C153	EA	38.03	228.18
1040		8 MJXFLG ADPT (I) CP DI C153	EA	57.40	287.00
1050		10 MJXFLG ADPT (I) CP DI C153	EA	99.81	399.24
1060		12 MJXFLG ADPT (I) CP DI C153	EA	127.96	895.72
1070		912-91094008-000 8 FLG ADAPTER 9.05-9.40 OD EPOXY W/ALLOY B&N	EA	251.68	1,006.72
1080		912-91111810-000 10 FLG ADPT EPOXY W/ALLOY B&N 11.65-11.88 (OMNI COMPATIBLE GSKT)	EA	434.91	1,739.64
1090	4	912-91142012-000 12 FLG ADPT 13.90-14.20 OD EPOXY W/ALLOY B&N		483.66	1,934.64
			Sı	ub Total	122,281.58
1		¥ **		Tax	11,616.75
		P v v		Total	133,898.33

	Inv. No.	Qty.	Description	Brand Specific or Equivalent	2016 Bid Price	Ex	Ext. Price
-	SRVC079	20	3/4" comp. (pack joint) angle-stop	Ford KV43-332W-NL	\$30.77	Ş	615.40
2	SRVC080	50	ll l	Ford KV23-332W-NL	\$28.88	\$	1,444.00
6	SRVC085	10	1-1/2" comp. angle-stop	Mueller P-24276N or =	\$187.98	\$	1,879.80
4	SRVC086	4	1-1/2" flare angle-stop	Mueller B-24277N or =	\$226.18	\$	904.72
2	SRVC088	4	2" comp. angle-stop	Mueller P-24276N or =	\$238.48	\$	953.92
9	SRVC067	10	3/4" MIP x flare corp stop	Mueller B-25025 or =	\$35.92	\$	359.20
7	SRVC070	20		Mueller B-25025 or =	\$46.09	\$	921.80
00	SRVC074	10	1-1/2" MIP x comp. (pack joint) corp stop	Jones j-1935 or =	\$109.89	\$	1,098.90
6	SRVC076	5	2" MIP x flare corp stop	Mueller B-25025 or =	\$191.95	\$	959.75
10	SRVC077	5	2" MIP x comp. (pack joint) corp stop	Jones j-1935 or =	\$181.68	\$	908.40
11		9	16" BFV Bolt kit	For Mueller Lineseal type	\$26.67	ş	160.02
12		4	20" BFV Bolt kit	For Mueller Lineseal type	\$50.22	\$	200.88
13		2	24" BFV Bolt kit	For Mueller Lineseal type	\$64.06	\$	128.12
14	CLMP015	20	4" x 3" o.d. leak clamp	S/B 245-00040003-800 or =	\$10.12	\$	202.40
15	CLMP027	40	6" x 3" std. leak clamp	S/B 245-00066303-800 or =	\$12.96	\$	518.40
16	CLMP033	. 20	8" x 3" std. leak clamp	S/B 245-00086303-800 or =	\$15.23	\$	304.60
17	CLMP075	12	6" x 7.5" std. full circle clamp	S/B 226-00066307-000 or =	\$59.82	\$	717.84
18	CLMP078	5	6" x 12" o.d. full circle clamp	S/B 226-00060012-000 or =	\$94.58	\$	472.90
19	CLMP081	2		s/B 226-00066315-000 or =	\$108.46	\$	325.38
20	CLMP088	25	8" x 7.5" std. full circle clamp	S/B 226-00086307-000 or =	\$70.89	<u>ئ</u>	1,772.25
21	CLMP099	2	8" x 15" (9.27 - 9.67) f/c clamp	S/B 226-00094015-000 or =	\$141.58	\$	283.16
22	CLMP102	2	8" x 20" (9.27 - 9.67) f/c clamp	S/B 226-00094020-000 or =	\$200.49	Ş	400.98
23	CLMP105	10	10" x 7.5" o.d. full circle clamp	S/B 226-0010007-000 or =	\$79.76	<i>\$</i>	797.60
24	CLMP106		10" x 7.5" std. full circle clamp	S/B 226-00107507-000 or =	\$87.16	\$	87.16
25	CLMP110	4	10" x 12" std. full circle clamp	S/B 226-00107512-000 or =	\$135.46	\$	541.84
26	CLMP112	2	10" x 15" (11.00 - 11.40) f/c clamp	S/B 226-00111015-000 or =	\$174.27	\$	348.54
27	CLMP113	2	10" x 15" (11.04 - 12.24) f/c clamp	S/B 227-00111015-050 or =	\$267.96	÷	535.92
28	CLMP117	10	12" x 7.5" (13.15 - 13.55) f/c clamp	S/B 226-00132007-000 or =	\$100.41	\$	1,004.10
29	CLMP120	4	12" x 10" (13.10 - 13.56) f/c clamp	S/B 226-0013201.0-000 or =	\$133.55	\$	534.20
30	CLMP122	4	12" x 10" (14.00 - 14.40) f/c clamp	S/B 226-00140010-500 or =	\$138.29	٠,	553.16
31	CLMP124	2	12" x 10" std. full circle clamp	S/B 226-00127510-000 or =	\$127.88	\$	255.76

CLMP127 3 12" x 12" x 12" x 10, full circle clamp 5/8 226-00127512-000 or = 5159.38 \$ CLMP141 3 14" x 10" (13.65 - 14.45) f/c clamp 5/8 227-00136510-000 or = 5135.22 \$ WELD012 11 4" sip-on/weld-on flange cl. 125 \$ \$35.52 \$ WELD021 18 8" sip-on/weld-on flange cl. 125 \$35.52 \$ \$35.52 \$ WELD021 18 8" sip-on/weld-on flange cl. 125 \$35.52 \$38.75 \$ \$35.52 \$35.52 <th>32</th> <th>CLMP125</th> <th>2</th> <th>12" x 12" (13.15 - 13.55) f/c clamp</th> <th>S/B 226-00132012-000 or =</th> <th>\$161.61</th> <th>٠</th> <th>373.77</th> <th>e.</th> <th></th>	32	CLMP125	2	12" x 12" (13.15 - 13.55) f/c clamp	S/B 226-00132012-000 or =	\$161.61	٠	373.77	e.	
CLMP141 3 14" x 10" (13.65 - 14.45) f/c clamp \$f/8 2277-00136510-000 or = \$134.49 \$ WELDD071 11 4" silp-on/weld-on flange cl. 125 \$155.22 \$ \$ WELDD071 11 4" silp-on/weld-on flange cl. 125 \$6.88 \$ \$5.55.22 \$ WELDD071 10" silp-on/weld-on flange cl. 125 \$6.88 \$5.88.75 \$5.88.75 \$ WELDD071 10" silp-on/weld-on flange cl. 125 \$6.88 \$5.99.17 \$5.88.75 \$5.88.75 \$5.88.75 \$5.88.75 \$5.88.75 \$5.80.77	3	CLMP127	3	12" x 12.5" std. full circle clamp	5/8 226-00127512-000 or =	\$159.38	\$	7	9	
WELDO17 11 4" silp-on/weld-on flange cl. 125 \$15.5.2 \$5 WELDO19 18 6" silp-on/weld-on flange cl. 125 \$25.5.22 \$5 WELDO10 10 silp-on/weld-on flange cl. 125 \$56.88 \$5 WELDO20 10 10" silp-on/weld-on flange cl. 125 \$56.88 \$5 WELDO30 36 12" silp-on/weld-on flange cl. 125 \$599.17 \$5 WELDO30 30 12" silp-on/weld-on flange cl. 125 \$599.17 \$5 WELDO30 5 4" silp-on/weld-on flange cl. 125 \$599.17 \$5 WELDO32 6" silp-on/weld-on flange cl. 126 \$11.21 \$11.21 \$11.21 WELDO32 5 6" silp-on/weld-on flange cl. 130 \$12.21 \$11.21 \$11.21 WELDO32 5 6" silp-on/weld-on flange cl. 130 \$12.21 \$12.21 \$12.21 WELDO32 5 6" silp-on/weld-on flange cl. 130 \$12.21 \$12.21 \$12.21 FING103 1 4" biind flange \$1.20 \$12.21 \$12.21 \$12.21 \$12.21 </td <td>4</td> <td>CLMP141</td> <td>3</td> <td>14" x 10" (13.65 - 14.45) f/c clamp</td> <td>S/B 227-00136510-000 or =</td> <td>\$134.49</td> <td>\$</td> <td>403.47</td> <td></td> <td></td>	4	CLMP141	3	14" x 10" (13.65 - 14.45) f/c clamp	S/B 227-00136510-000 or =	\$134.49	\$	403.47		
WELD019 18 6" silp-on/weld-on flange cl. 125 \$5.55.2 \$5 WELD024 18 8" silp-on/weld-on flange cl. 125 \$88.75 \$5 WELD003 5 12" silp-on/weld-on flange cl. 125 \$56.88.75 \$5 WELD007 10 16" silp-on/weld-on flange cl. 125 \$121.88 \$51.18 WELD007 10 16" silp-on/weld-on flange cl. 125 \$121.88 \$51.18 WELD0202 9 6" silp-on/weld-on flange cl. 200 \$233.42 \$5 WELD023 5 4" silp-on/weld-on flange cl. 200 \$233.42 \$5 WELD023 6" silp-on/weld-on flange cl. 200 \$233.42 \$5 WELD023 5 4" biind flange \$232.66 \$233.42 \$5 FTWG103 1 4" biind flange \$232.66 \$23.47 \$5 FTWG104 1 6" Clauntum coupling Smith-Blar 461 or = \$21.0.91 \$5 FTWG192 4 4" Clauntum coupling Smith-Blar 461 or = \$21.2.6 \$2 FTWG193 4 6	35	WELD017	1.1	4" slip-on/weld-on flange cl. 125		\$15.52	\$	170.72		
WELDD024 18 8" slip-on/weld-on flange cl. 125 \$58.88 \$5 WELDD03 6 10" slip-on/weld-on flange cl. 125 \$68.88 \$5 WELDD03 36 12" slip-on/weld-on flange cl. 125 \$171.88 \$5 WELDD03 10 slip-on/weld-on flange cl. 300 \$13.51 \$5 WELDD02 2 4" slip-on/weld-on flange cl. 300 \$23.42 \$5 WELDD02 5 8" slip-on/weld-on flange cl. 300 \$23.42 \$5 WELDD02 5 8" slip-on/weld-on flange cl. 300 \$23.42 \$5 WELDD02 5 8" slip-on/weld-on flange cl. 300 \$23.42 \$5 FTWG109 1 4" blind flange \$332.66 \$5 FTWG109 2 4" Quantum coupling Smith-Blair 461 or = \$74.61 \$5 FTWG192 4 4" Quantum coupling Smith-Blair 461 or = \$74.61 \$5 FTWG192 4 4" Quantum coupling Smith-Blair 461 or = \$74.61 \$7 FTWG192 4 4" Quantum coupling	36	WELD019	18	6" slip-on/weld-on flange cl. 125		\$25.52	\$	459.36		
WELDDO31 6 10" slip-on/weld-on flange cl. 125 \$66.88 \$ WELDDO33 36 12" slip-on/weld-on flange cl. 125 \$99.17 \$ WELDDO3 10 16" slip-on/weld-on flange cl. 125 \$137.18 \$ WELDDO3 5 4" slip-on/weld-on flange cl. 300 \$23.42 \$ WELDDO3 9 6" slip-on/weld-on flange cl. 300 \$23.42 \$ WELDDO3 1 4" blind flange \$23.47 \$ FTMG103 1 4" blind flange \$21.43 \$ FTMG103 1 4" blind flange \$32.66 \$ FTMG103 2 4" blind flange \$32.66 \$ FTMG104 10 6" uland mocopling Smith-Blair 461 or = \$12.091 \$ FTMG190 2 4" Quantum coupling Smith-Blair 461 or = \$10.50 \$ FTMG190 4 8" Quantum coupling Smith-Blair 461 or = \$12.20 \$ FTMG190 5 4" Quantum coupling Smith-Blair 461 or = \$12.40	37	WELD024	18	8" slip-on/weld-on flange cl. 125		\$38.75	٠	697.50		
WELDDOG 36 12" slip-on/weld-on flange ct. 125 \$99.17 \$3 WELDDOS 10" slip-on/weld-on flange ct. 125 \$17.188 \$ 13.51 \$ 15 WELDDOS 5 4" slip-on/weld-on flange ct. 300 \$13.51 \$ 13.51 \$ 15 WELDDOS 5 6" slip-on/weld-on flange ct. 300 \$23.43 \$ 5 \$39.97 \$ 5 WELDDOS 5 6" slip-on/weld-on flange ct. 300 \$23.43 \$ 5 \$ 23.43 \$ 5 FTWG103 1 4" blind flange \$ 21.43 \$ 5 \$ 52.143 \$ 5 FTWG103 1 4" blind flange \$ 32.05 \$ 532.66 \$ 5 FTWG104 1 6" blind flange \$ 532.66 \$ 5 \$ 54.77 \$ 5 FTWG105 2 4" Chantum coupling \$ 5mith-Blair 461 or = \$ 532.66 \$ 5 \$ 54.77 \$ 5 FTWG194 4 6" Quantum coupling \$ 5mith-Blair 461 or = \$ 5105.20 \$ 5105.20 \$ 512.76 \$ 52.29 \$ 52.29 \$ 52.29 \$ 52.29 \$ 52.29	38	WELD001	9	10" slip-on/weld-on flange cl. 125		\$66.88	\$	401.28		
WELDDOZ 10 16" silp-on/weld-on flange cl. 135 \$171.88 \$ 171.88 \$ 171.88 \$ 171.88 \$ 171.88 \$ 171.88 \$ 171.88 \$ 171.88 \$ 171.88 \$ 171.88 \$ 171.89 \$ 1	39	WELD003	36	12" slip-on/weld-on flange cl. 125		\$99.17	\$	3,570.12		
WELDO16 S 4" silp-on/weld-on flange ct. 300 \$13.5.1 \$ WELDO22 9 6" silp-on/weld-on flange ct. 300 \$23.42 \$ WELDO22 5 8" silp-on/weld-on flange ct. 300 \$33.97 \$ WELDO23 5 8" silp-on/weld-on flange ct. 300 \$33.97 \$ FTNG103 1 8" blind flange \$21.43 \$ FTNG104 10 6" blind flange \$32.66 \$ FTNG105 2 12" blind flange \$32.60 \$ FTNG104 4 4" chantum coupling Smith-Blair 461 or = \$110.20 \$54.77 \$ FTNG193 4 8" blind flange Smith-Blair 461 or = \$120.20 \$ \$22.74.61 \$ FTNG193 4 8" blind flange Smith-Blair 461 or = \$120.20 \$ \$ \$22.29 \$ FTNG193 4 8" blind flange Smith-Blair 461 or = \$120.20 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	10	WELD007	10	16" slip-on/weld-on flange cl. 125		\$171.88	ς٠	1,718.80		
WELDOZZ 9 6" slip-on/weld-on flange et. 300 \$23.42 \$ WELDOZZ 5 8" slip-on/weld-on flange et. 300 \$39.97 \$ WELDOZZ 5 8" slip-on/weld-on flange et. 300 \$21.43 \$ FTNG103 1 6" blind flange \$21.43 \$ FTNG104 10 6" blind flange \$23.77 \$ FTNG105 2 8" blind flange \$24.77 \$ FTNG106 2 12" blind flange \$110.91 \$24.77 \$ FTNG109 2 12" blind flange \$110.91 \$24.77 \$ FTNG109 2 12" blind flange \$110.91 \$24.77 \$ FTNG109 2 4 4" Quantum coupling \$mith-Blair 461 or = \$10.5.0 \$10.5.0 \$ FTNG104 4 8" Quantum coupling \$mith-Blair 461 or = \$10.5.0 \$12.2.0 \$10.5.0 \$10.5.0 \$10.5.0 \$10.5.0 \$10.5.0 \$10.5.0 \$10.5.0 \$10.5.0 \$10.5.0 \$10.5.0 \$10.5.0 \$10	41	WELD016	5	4" slip-on/weld-on flange cl. 300		\$13.51	\$	67.55		
WELDOZ3 S 8" slip-on/weld-on flange of. 300 \$39.97 \$ FTNG103 1 4" blind flange \$21.43 \$ FTNG104 10 6" blind flange \$32.66 \$ FTNG105 2 8" blind flange \$10.91 \$54.77 \$ FTNG109 2 12" blind flange \$10.91 \$5.44.61 \$ FTNG109 2 12" blind flange \$10.91 \$10.91 \$ FTNG109 2 4 4" Ouantum coupling \$mith-Blair 461 or = \$105.20 \$10.52.76 \$ FTNG194 4 8" Quantum coupling \$mith-Blair 461 or = \$10.20 \$10.52.76 \$ FTNG194 4 8" Quantum coupling \$mith-Blair 461 or = \$10.20 \$10.20.76 \$ FTNG195 4 8" Quantum coupling \$mith-Blair 461 or = \$10.20 \$10.20.76 \$ FTNG196 4 8" Quantum coupling \$mith-Blair 461 or = \$10.20.76 \$10.20.76 \$ FTNG196 4 8" Quantum coupling \$mith-Blair 461 or = \$10.20.76	42	WELD022	6	6" slip-on/weld-on flange cl. 300		\$23.42	\$	210.78		
FING 103 1 4" blind flange \$21.43 \$ FING 104 10 6" blind flange \$32.66 \$ FING 105 2 8" blind flange \$10.91 \$ FING 105 2 12" blind flange \$110.91 \$ FING 109 2 12" blind flange \$110.91 \$ FING 109 2 12" blind flange \$110.91 \$ FING 109 2 4" Quantum coupling Smith-Blair 461 or = \$105.20 \$ \$105.20 \$ FING 109 4 8" Quantum coupling Smith-Blair 461 or = \$105.20 \$ \$105.20 \$ FING 109 4 8" Quantum coupling Smith-Blair 461 or = \$105.20 \$ \$105.20 \$ FING 109 4 8" Quantum coupling Smith-Blair 461 or = \$105.20 \$ \$12.20.70 \$ FING 100 1800 3/4" (100' rolls) of soft K copper \$22.29 \$2.29 \$ SRVC003 20 11" (100' rolls) of soft K copper \$2.99 \$ \$2.99	43	WELD023	5	8" slip-on/weld-on flange cl. 300		\$39.97	\$	199.85		
FING104 10 6" blind flange \$32.66 \$ FING106 2 8" blind flange \$54.77 \$ FING109 2 12" blind flange \$110.91 \$ FING192 4 4" Quantum coupling Smith-Blair 461 or = \$74.61 \$ FING193 4 6" Quantum coupling Smith-Blair 461 or = \$105.20 \$ FING194 4 8" Quantum coupling Smith-Blair 461 or = \$122.76 \$ FING194 4 8" Quantum coupling Smith-Blair 461 or = \$122.76 \$ FING195 6 12" Quantum coupling Smith-Blair 461 or = \$122.05 \$ FING196 6 12" Quantum coupling Smith-Blair 461 or = \$122.05 \$ FRVC001 1800 3/4" (60' rolls) of soft K copper \$2.229 \$ SRVC002 200 3/4" (100' rolls) of soft K copper \$2.29 \$ SRVC004 100 1" (100' rolls) of soft K copper \$2.90 \$ SRVC005 200 2" (20' stick) of soft K copper \$2.20 <td< td=""><td>44</td><td>FTNG103</td><td>F</td><td>4" blind flange</td><td></td><td>\$21.43</td><td>\$</td><td>21.43</td><td></td><td></td></td<>	44	FTNG103	F	4" blind flange		\$21.43	\$	21.43		
FING106 2 8" blind flange Smith-Blair 461 or = \$54.77 \$ FING109 2 12" blind flange Smith-Blair 461 or = \$74.61 \$ FING192 4 4" Quantum coupling Smith-Blair 461 or = \$74.61 \$ FING193 4 6" Quantum coupling Smith-Blair 461 or = \$105.20 \$ FING194 4 8" Quantum coupling Smith-Blair 461 or = \$122.76 \$ FING194 4 8" Quantum coupling Smith-Blair 461 or = \$122.76 \$ FING196 6 12" Quantum coupling Smith-Blair 461 or = \$122.76 \$ FING196 6 12" Quantum coupling Smith-Blair 461 or = \$122.76 \$ FING100 3/4" (100' rolls) of soft K copper Smith-Blair 461 or = \$122.76 \$ SRVC002 200 3/4" (100' rolls) of soft K copper \$2.29 \$ \$2.29 \$ SRVC004 100 1" (100' rolls) of soft K copper \$2.99 \$ \$2.99 \$ <	45	FTNG104	10	6" blind flange		\$32.66	\$	326.60		
FTNG109 2 12" blind flange Smith-Blair 461 or = \$110.91 \$ FTNG192 4 4" Quantum coupling Smith-Blair 461 or = \$74.61 \$ FTNG193 4 6" Quantum coupling Smith-Blair 461 or = \$105.20 \$ FTNG194 4 8" Quantum coupling Smith-Blair 461 or = \$122.76 \$ FTNG196 6 12" Quantum coupling Smith-Blair 461 or = \$122.76 \$ FTNG196 6 12" Quantum coupling Smith-Blair 461 or = \$122.76 \$ FTNG196 6 12" Quantum coupling Smith-Blair 461 or = \$122.76 \$ FTNG196 6 3/4" (60' rolls) of soft K copper \$21.22.9 \$ \$ SRVC001 100 1-1 (100' rolls) of soft K copper \$2.299 \$ \$ SRVC003 101 1-1 (100' rolls) of soft K copper \$2.299 \$ \$ SRVC004 100 1-1 (100' rolls) of soft K copper \$2.299 \$ \$ SRVC005 20	46	FTNG106	2	8" blind flange		\$54.77	\$	109.54		
FTNG192 4 4" Quantum coupling Smith-Blair 461 or = \$74.61 \$ FTNG193 4 6" Quantum coupling Smith-Blair 461 or = \$105.20 \$ FTNG194 4 8" Quantum coupling Smith-Blair 461 or = \$122.76 \$ FTNG196 6 12" Quantum coupling Smith-Blair 461 or = \$122.76 \$ FTNG196 6 12" Quantum coupling Smith-Blair 461 or = \$122.76 \$ FTNG196 6 12" Quantum coupling Smith-Blair 461 or = \$122.76 \$ SRVC001 1800 3/4" (100' rolls) of soft K copper \$2.229 \$ \$ SRVC002 200 1" (100' rolls) of soft K copper \$2.29 \$ \$ SRVC003 20 1" (100' rolls) of soft K copper \$2.29 \$ \$ SRVC004 20 2" (20' stick) of soft K copper \$2.29 \$ \$ SRVC005 20 2" (20' stick) of soft K copper \$2.29 \$ \$ SRVC006 20 2" (2	47	FTNG109	2	12" blind flange		\$110.91	\$	221.82		
FTNG193 4 6" Quantum coupling Smith-Blair 461 or = \$105.20 \$ FTNG194 4 8" Quantum coupling Smith-Blair 461 or = \$12.76 \$ FTNG196 6 12" Quantum coupling Smith-Blair 461 or = \$12.76 \$ FTNG196 6 12" Quantum coupling Smith-Blair 461 or = \$12.29 \$ SRVC001 1800 3/4" (60' rolls) of soft K copper \$2.29 \$ \$ SRVC003 720 1" (60' rolls) of soft K copper \$22.99 \$ \$ SRVC004 100 1" (100' rolls) of soft K copper \$22.99 \$ \$ SRVC005 20 1-1/2" (20' stick) of soft K copper \$52.99 \$ \$ SRVC006 20 2" (20' stick) of soft K copper \$52.99 \$ \$ SRVC006 20 2" (20' stick) of soft K copper \$52.99 \$ \$ SRVC006 20 4" D.I. pipe cl. 350 \$ \$ \$ PIPE042 20 4" D.I. pipe cl. 350	48	FTNG192	4	4" Quantum coupling		\$74.61	ۍ	298.44		
FTNG194 4 8" Quantum coupling Smith-Blair 461 or = \$122.76 \$ FTNG196 6 12" Quantum coupling Smith-Blair 461 or = \$182.54 \$ SRVC001 1800 3/4" (60' rolls) of soft K copper. \$2.29 \$ SRVC002 200 3/4" (100' rolls) of soft K copper. \$2.99 \$ SRVC004 100 1" (100' rolls) of soft K copper. \$2.90 \$ SRVC005 20 1-1/2" (20' stick) of soft K copper. \$5.90 \$ SRVC006 20 2" (20' stick) of soft K copper. \$5.90 \$ SRVC006 20 2" (20' stick) of soft K copper. \$5.90 \$ PIPE042 20 6" CMLC pipe 10 ga. \$5.90 \$ PIPE042 20 6" D.I. pipe cl. 350 \$13.39 \$ PIPE042 340 4" D.I. pipe cl. 350 \$13.39 \$ PIPE043 32 10" D.I. pipe cl. 350 \$13.39 \$13.39 \$ PIPE043 52 12" D.I. pipe cl. 350 \$23.2.4	49	FTNG193	4	6" Quantum coupling	Smith-Blair 461 or =	\$105.20	٠	420.80		
FTNG196 6 12" Quantum coupling Smith-Blair 461 or = \$182.54 \$ SRVC001 1800 3/4" (60' rolls) of soft K copper. \$2.29 \$ SRVC002 200 3/4" (100' rolls) of soft K copper. \$2.39 \$ SRVC003 720 1" (60' rolls) of soft K copper. \$2.99 \$ SRVC004 100 1" (100' rolls) of soft K copper. \$2.99 \$ SRVC005 200 1-1/2" (20' stick) of soft K copper. \$5.99 \$ SRVC006 20 2" (20' stick) of soft K copper. \$5.99 \$ PIPE042 20 4" D.I. pipe cl. 350 \$18.15 \$ PIPE029 44" D.I. pipe cl. 350 \$18.15 \$18.15 \$ PIPE030 666 8" D.I. pipe cl. 350 \$13.39 \$17.25 \$ PIPE031 324 10" D.I. pipe cl. 350 \$12.12.5 \$112" D.I. pipe cl. 350 \$23.3.24 \$1 PIPE032 522 12" D.I. pipe cl. 350 \$1.2" D.I. pipe cl. 350 \$23.3.24 \$1	50	FTNG194	4	8" Quantum coupling	Smith-Blair 461 or =	\$122.76	\$	491.04		
SRVC001 1800 3/4" (60' rolls) of soft K copper \$2.29 \$ 2.29	51	FTNG196	9	12" Quantum coupling	Smith-Blair 461 or =	\$182.54	ب	1,095.24		
SRVC002 200 3/4" (100' rolls) of soft K copper. \$2.29 \$ SRVC003 720 1" (60' rolls) of soft K copper. \$2.99 \$ SRVC004 100 1" (100' roll) of soft K copper. \$2.99 \$ SRVC005 200 1-1/2" (20' stick) of soft K copper. \$5.97 \$ SRVC006 20 2" (20' stick) of soft K copper. \$5.38 \$ PIPE042 20 6" CMLC pipe 10 ga. \$16.91 \$ Non-lnv. 340 4" D.I. pipe cl. 350 \$18.15 \$ PIPE029 1134 6" D.I. pipe cl. 350 \$13.39 \$ \$13.39 \$ PIPE030 666 8" D.I. pipe cl. 350 \$11.20 \$10" D.I. pipe cl. 350 \$11.20 \$12.20 \$23.24 \$11.20 PIPE031 522 12" D.I. pipe cl. 350 \$23.24 \$11 \$23.24 \$11	52	SRVC001	1800	3/4" (60' rolls) of soft K copper		\$2.29	\$	4,122.00		
SRVC003 720 1" (60' rolls) of soft K copper. \$2.99 \$ SRVC004 100 1" (100' roll) of soft K copper \$2.99 \$ SRVC005 200 1-1/2" (20' stick) of soft K copper \$5.97 \$ SRVC006 20 2" (20' stick) of soft K copper \$9.28 \$ PIPE042 200 6" CMLC pipe 10 ga. \$16.91 \$ Non-Inv. 340 4" D.I. pipe cl. 350 \$18.15 \$ PIPE030 666 8" D.I. pipe cl. 350 \$13.39 \$ PIPE031 324 10" D.I. pipe cl. 350 \$17.25 \$ PIPE032 52 12" D.I. pipe cl. 350 \$12.339 \$ PIPE034 52 \$10" D.I. pipe cl. 350 \$1.0" D.I. pipe cl. 350 \$23.24 \$	53	SRVC002	200	3/4" (100' rolls) of soft K copper		\$2.29	\$	458.00		
SRVC004 100 1" (100' roll) of soft K copper \$2.99 \$ SRVC005 20 1-1/2" (20' stick) of soft K copper \$9.28 \$ SRVC006 20 2" (20' stick) of soft K copper \$9.28 \$ PIPE042 20 6" CMLC pipe 10 ga. \$16.91 \$ Non-Inv. 340 4" D.I. pipe cl. 350 \$18.15 \$ PIPE029 1134 6" D.I. pipe cl. 350 \$9.93 \$ PIPE030 666 8" D.I. pipe cl. 350 \$13.39 \$ PIPE031 324 10" D.I. pipe cl. 350 \$17.25 \$ PIPE032 522 12" D.I. pipe cl. 350 \$1 \$23.24 \$ PIPE034 234 16" D.I. pipe cl. 350 \$36.15 \$	54	SRVC003	720	1" (60' rolls) of soft K copper.		\$2.99	ς.	2,152.80	•	
SRVC005 20 1-1/2" (20' stick) of soft K copper \$5.97 \$ SRVC006 20 2" (20' stick) of soft K copper \$9.28 \$ PIPE042 200 6" CMLC pipe 10 ga. \$16.91 \$ Non-Inv. 340 4" D.I. pipe cl. 350 \$18.15 \$ PIPE029 1134 6" D.I. pipe cl. 350 \$513.39 \$ PIPE030 666 8" D.I. pipe cl. 350 \$13.39 \$13.39 \$ PIPE031 324 10" D.I. pipe cl. 350 \$12.23.24 \$ \$ PIPE032 522 12" D.I. pipe cl. 350 \$ \$13.39 \$ \$ PIPE034 53 4 \$16" D.I. pipe cl. 350 \$ \$ \$ \$ \$	55	SRVC004	100	1" (100' roll) of soft K copper		\$2.99	ς,	299.00	a a	
SRVC006 20 2" (20' stick) of soft K copper \$9.28 \$ PIPE042 200 6" CMLC pipe 10 ga. \$16.91 \$ Non-Inv. 340 4" D.I. pipe cl. 350 \$518.15 \$ PIPE029 1134 6" D.I. pipe cl. 350 \$59.93 \$ PIPE030 666 8" D.I. pipe cl. 350 \$17.25 \$ PIPE031 324 10" D.I. pipe cl. 350 \$17.25 \$ PIPE032 522 12" D.I. pipe cl. 350 \$17.25 \$ PIPE034 234 16" D.I. pipe cl. 350 \$17.25 \$	56	SRVC005	200	1-1/2" (20' stick) of soft K copper		\$5.97	\$	1,194.00		
PIPE 042 200 6" CMLC pipe 10 ga. \$16.91 \$ Non-Inv. 340 4" D.I. pipe cl. 350 \$18.15 \$ PIPE 029 1134 6" D.I. pipe cl. 350 \$13.39 \$ 1 PIPE 030 666 8" D.I. pipe cl. 350 \$13.39 \$ \$13.39 \$ PIPE 031 324 10" D.I. pipe cl. 350 \$12.25 \$ \$12.25 \$ PIPE 032 522 12" D.I. pipe cl. 350 \$13.39 \$23.24 \$1 PIPE 034 234 16" D.I. pipe cl. 350 \$1 \$36.15 \$	57	SRVC006	20	2" (20' stick) of soft K copper		\$9.28	ۍ	185.60	8	
Non-Inv. 340 4" D.I. pipe cl. 350 \$18.15 \$ PIPE029 1134 6" D.I. pipe cl. 350 \$13.39 \$1 PIPE030 666 8" D.I. pipe cl. 350 \$17.25 \$ PIPE031 324 10" D.I. pipe cl. 350 \$17.25 \$ PIPE032 52 12" D.I. pipe cl. 350 \$23.24 \$1 PIPE034 234 16" D.I. pipe cl. 350 \$36.15 \$	58	PIPE042	200	6" CMLC pipe 10 ga.		\$16.91	\$	3,382.00	2	
PIPEO29 1134 6" D.I. pipe cl. 350 \$9.93 \$13.39	59	Non-Inv.	340	4" D.I. pipe cl. 350		\$18.15	\$	6,171.00		
PIPE030 666 8" D.I. pipe cl. 350 \$17.25 \$ PIPE031 324 10" D.I. pipe cl. 350 \$17.25 \$ PIPE032 522 12" D.I. pipe cl. 350 \$36.15 \$ PIPE034 234 16" D.I. pipe cl. 350 \$	09	PIPE029	1134	6" D.I. pipe cl. 350		\$9.93	÷	11,260.62		
PIPE031 324 10" D.I. pipe cl. 350 \$17.25 \$ PIPE032 522 12" D.I. pipe cl. 350 \$23.24 \$ 1 PIPE034 234 16" D.I. pipe cl. 350 \$36.15 \$	61	PIPE030	999	8" D.I. pipe cl. 350		\$13.39	\$.	8,917.74		
PIPE032 522 12" D.I. pipe cl. 350 \$23.24 \$ 1 PIPE034 234 16" D.I. pipe cl. 350 \$36.15 \$	62		324			\$17.25	\$	5,589.00		
PIPE034 234 16" D.I. pipe cl. 350 \$36.15 \$	63		522	12" D.I. pipe cl. 350		\$23.24	\$	12,131.28		
	64	-	234	16" D.I. pipe cl. 350		\$36.15	\$	8,459.10		

65		5	6" MJ Restraint Kit (Megalug)	Ford 1400 or equivalent	\$33.69	\$ 168.45
99		. 5	8" MJ Restraint Kit (Megalug)	Ford 1400 or equivalent	\$45.72	\$ 228.60
67		5	10" MJ Restraint Kit (Megalug)	Ford 1400 or equivalent	\$65.32	\$ 326.60
89		5	12" MJ Restraint Kit (Megalug)	Ford 1400 or equivalent	\$87.56	\$ 437.80
69	FTNG096	9	6" MJ x Flange Adapter (7" width)		\$33.00	\$ 198.00
70	FTNG097	5	8" MJ x Flange Adapter (7" width)		\$50.01	\$ 250.05
71	FTNG098	4	10" MJ x Flange Adapter (7" width)		\$87.09	\$ 348.36
72	FTNG099	7	12" MJ x Flange Adapter (7" width)		\$111.59	\$ 781.13
73	FTNG175	4	8" 912 Flanged Coupling Adapter	S/B 912-91094008-000	\$197.74	\$ 790.96
74		4	10" 912 Flanged Coupling Adapter	S/B 912-91118810-000	\$357.98	\$ 1,431.92
75	FTNG200	4	12" 912 Flanged Coupling Adpater	S/B 912-91142012-000	\$398.11	\$ 1,592.44

\$ 102,753.25

Bid Proposal for VALVES

ALZEADY PULCHASED

PALMDALE WATER DISTRICT

2029 EAST AVENUE Q PALMDALE, CA 93550

Job

VALVES

Bid Date: 01/29/2018 05:00 p.m.

Bid #: 500755

Sales Representative

Chad Holt

(M) 661-709-8907

(T) 661-945-2881

(F) 661-945-5076

Chad.Holt@coreandmain.com

Core & Main

42839 North Sierra Hwy Lancaster, CA 93534 (T) 661-945-2881

OTES



Formerly HD Supply Waterworks

Bid Proposal for VALVES

PALMDALE WATER DISTRICT Bid Date: 01/29/2018 05:00 p.m. Core & Main Bid #: 500755 Core & Main 42839 North Sierra Hwy Lancaster, CA 93534 Phone: 661-945-2881 Fax: 661-945-5076

Seq#	Qty	Description		Units	Price	Ext Price
10		*****				
20		CORE AND MAIN LP				
30		42839 N SIERRA HWY				
40		LANCASTER CA 93534			•	
50		PHONE:661-945-2881	*			
60		FAX: :661-945-5076				•
70		DOES NOT GUARANTEE THIS QUOTE				
80		TO BE A COMPLETE AND ACCURATE				
90		ACCOUNTING OF ALL MATERIALS				
100		NEEDED TO COMPLETE THIS JOB.				
110		CORE AND MAIN LP STANDARD				
120		TERMS APPLY.				
130		ALL PRICES SUBJECT TO CHANGE				
140		WITHOUT NOTICE.				
150		QUOTATION GOOD FOR 30 DAYS				
160		CORE AND MAIN LP IS NOT				
170		LIABLE FOR DELIVERY DELAYS,				
180		CANCELLATIONS OR PRICE				
190		INCREASES RESULTING FROM ANY				
200		CAUSE BEYOND OUR CONTROL.				
210		THESE INCLUDE BUT ARE NOT				
220		LIMITED TO: MANUFACTURERS				
230		SHORTAGES, AVAILABILITY OR				
240		TIMELINESS OF TRANSPORTATION,				
250		MATERIALS, FUELS, OR SUPPLIES.				
260		THIS QUOTE IS NOT A CONTRACT				
270		TO SUPPLY MATERIAL OR				
280		GUARANTEE OF PRODUCT				
290		AVAILABILITY.				
300		\$50.00 CASH SALE MINIMUM				
310		ALL CASH SALES ARE FINAL				
320				EΛ	449.04	1,347.12
330	3	4 A2362-6 FLG RW DI GV OL ON		EA EA	600.26	2,401.04
340	4	6 A2362-6 FLG RW DI GV OL ON		EA	1,589.51	4,768.53
350	3	6" AVK FLG GATE VALVE FF CL250			938.03	6,566.21
360	7	8 A2362-6 FLG RW DI GV OL ON		EA EA	1,490.62	2,981.24
370	2	10 A2362-6 FLG RW DI GV OL ON	150	EA	1,799.70	5,399.10
380	3	12 A2362-6 FLG RW DI GV OL ON		EA	475.27	1,425.81
390	3	4 B3211-6 FLG BFV OL N&E (OPER NUT & EPOXY)		EA	864.52	1,729.04
400	2	10 B3211-6 FLG BFV OL N&E (OPER NUT & EPOXY)		EA	1,694.63	3,389.26
410	2	14 B3211-6 FLG BFV OL EPOXY OPER NUT		EA	2,016.35	2,016.35
420	1	16 B3211-6 FLG BFV OL OP NUT EPOXY IN & OUT		EA	3,047.32	6,094.64
430	2	20 B3211-6 FLG BFV OL N&E (OPER NUT & EPOXY)		L/1	3,047.32	0,054.04



Formerly HD Supply Waterworks

Bid Proposal for VALVES

Bid #: 500755

Seq#	Qty	Description	Units	Price	Ext Price
440	2	24 B3211-6 FLG BFV OL N&E (OPER NUT & EPOXY)	EA	4,230.11 Sub Total Tax Total	8,460.22 46,578.56 4,424.96 51,003.52
			DOUBLE ADRES	Juis ho 1/29/18 Now 1/2	1/29/18 Munex 9 18 - OUT FARTHQUAKE REFRESHED PALD - BACKFILL PLINES.

INDUSTRIAL RUBBER & SUPPLY, LLC

275 W Orange Show Lane San Bernadino, CA92408 Ph# (909) 383-2316 2/8/2018

Palmdale Water District 2029 E. Avenue Q Palmdale, CA 93550

Description	Qty.	Cost	Total
ATTN: Purchasing			
6" HOSES AND CONNECTORS			
EA. RC60-450-100-Y-ARN	40	\$1,100.00	\$44,000.00
100' X 6" [RP-FLOW YELLOW			
HEAVY DUTY RUBBER COVERED HOSE			
W/CPLD 6' MXF NST (40 - 100' HOSES)			
EA. N35-60F60F	4	\$294.60	\$1,178.40
6" DOUBLE FEMALE SWIVEL			,
ROCKER LUG HARD COAT ALUMINUM (SWIVELS FOR CONNECTIONS)			
4" HOSES AND CONNECTORS			
EA. DP440-600-0-100-ARN	13	\$648.00	\$8,424.00
100' X 4" DJ FIRE HOSE			, , , , , , , , , , , , , , , , , , , ,
ORANGE DOMESTIC HOSE			
CPLD 4" MXF FNST (13 - 100' HOSES)			
EA. N35-40F40F	2	\$243.80	\$487.60
DOUBLE FEMALE SWIVEL		7=.5.00	7.57.100
ROCKER LUG HARD COAT ALUMINUM (SWIVELS FOR CONNECTIONS)			×
		Subtotal	\$54,090.00
	Sal	es Tax (9.5%)	\$5,138.55
		TOTAL	\$59,228.55

PALMDALE WATER DISTRICT BOARD MEMORANDUM

DATE: February 14, 2018 **February 20, 2018**

TO: FACILITIES COMMITTEE Committee Meeting

FROM: Mr. Tim Moore, Facilities Manager

VIA: Mr. Dennis D. LaMoreaux, General Manager

RE: AGENDA ITEM NO. 4.3 - CONSIDERATION AND POSSIBLE ACTION ON

DECLARING DISTRICT PROPERTY AS SURPLUS AND AUTHORIZING STAFF TO COMPLETE THE DISPOSAL PROCESS. (GAIN OF SALE OF

EQUIPMENT- FACILITIES MANAGER MOORE)

Recommendation:

Staff recommends the Committee declare District property as surplus and authorize staff to complete the disposal process.

Alternative Options:

The alternative option is to keep the equipment and vehicles designated by staff as surplus.

Impact of Taking No Action:

No District property will be declared as surplus.

Background:

The following vehicles / equipment are no longer needed for District use and are recommended to be declared as surplus property.

1.	V-33	2000	Chevrolet C-30 Utility truck w/rack - crane	131075 miles
2.	V-40	2002	Buick LaSabre 4-door sedan	86950 miles
3.	V-79	2002	Trailer mounted John Bean weed sprayer	4 hrs.
4.	V-92	2005	Chev 3/4 T Utility truck w/valve turning machine	83945 miles
5.	V-93	2005	Chev 3/4 T Utility truck w/ ladder rack	126245 miles
6.	V-98	2007	Chev ½ T 4-door pick up	144950 miles
7.	V-106	2007	Chev Colorado P/U w/ utility shell	80962 miles
8.	V-107	2007	Chev Colorado P/U w/ utility shell	92225 miles

9. Utility shell w/ ladder rack

FACILITIES COMMITTEE PALMDALE WATER DISTRICT

VIA: Mr. Dennis D. LaMoreaux, General Manager February 14, 2018

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiative No. 3 – Systems Efficiency. This item directly relates to the District's Mission Statement.

Budget:

The successful sale of the Vehicles and Equipment will generate revenue for the general fund (Surplus Budget No. 1-00-3110-000). The final value is to be determined.

Supporting Documents:

• Photos of Vehicles and Equipment

PALMDALE WATER DISTRICT BOARD MEMORANDUM

DATE: February 14, 2018 **February 20, 2018**

TO: FACILITIES COMMITTEE Committee Meeting

FROM: Mr. Tim Moore, Facilities Manager

VIA: Mr. Dennis D. LaMoreaux, General Manager

RE: AGENDA ITEM NO. 4.4 – CONSIDERATION AND POSSIBLE ACTION ON THE

LEASE OF FIVE VEHICLES. (\$40,000.00 - BUDGETED - FACILITIES

MANAGER MOORE)

Recommendation:

Staff recommends the Committee authorize the lease of five District vehicles in the not-to-exceed amount of \$40,000.00 per year and that this item be presented to the full Board for consideration.

Alternative Options:

The alternative option is to not authorize this lease.

Impact of Taking No Action:

No new vehicles will be obtained.

Background:

The District has been leasing vehicles through Enterprise Leasing Fleet Management. These proposed vehicles will be added to the District's lease.

Strategic Plan Initiative/Mission Statement:

This item is under Strategic Initiative No. 3 – Systems Efficiency.

This item directly relates to the District's Mission Statement.

Budget:

This item is under Budget Item No.1-04-7000-200 Leases Fleet

Supporting Documents:

- Enterprise Lease Quote No. 3759631 Quantity 2-2018 Ford F-250 Utility Bed Vehicles
- Enterprise Lease Quote No. 3791415 Quantity 1-2018 Ford Edge Front Wheel drive
- Enterprise Lease Quote No. 3719184 Quantity 2-2018 Ford F-150 Long bed Pick-up



Quote No: 3759631

Prepared For: Palmdale Water District Williams, Michael A

Capitalized Price of Vehicle1

Date 01/16/2018 AE/AM ACI/LLM

All language and acknowledgments contained in the signed quote

Comp/Coll Deductible 0 / 0

#Tires 0

State CA

OverMileage Charge \$ 0.0350 Per Mile

Loaner Vehicle Not Included

Unit #

\$ 31,342.00

\$ 31.627.00

\$ 632.54

Make Ford Model F-250 Year 2018

Series XL 4x2 SD Regular Cab 8 ft. box 142 in. WB SRW

Vehicle Order Type Ordered Term 60 State CA Customer# 557339

\$ 3	31,342.00		Capitalized Price of Vehicle	apply to all vehic	cles that are ordered under this signed quote.
	\$ 0.00	*	Sales Tax 0.0000% State CA		
	\$ 564.25	*	Initial License Fee		
	\$ 0.00	*	Registration Fee	Order Informatio	n -
	\$ 285.00		Other: (See Page 2)	Driver Name	TBD
	\$ 0.00		Capitalized Price Reduction	Exterior Color	(0 P) Oxford White
	\$ 0.00		Tax on Capitalized Price Reduction	Interior Color	(0 I) Medium Earth Gray w/HD Vinyl 40/20/40 S
	\$ 0.00		Gain Applied From Prior Unit	Lic. Plate Type	Unknown
	\$ 0.00	*	Tax on Gain On Prior	GVWR	0
	\$ 0.00	*	Security Deposit		
	\$ 0.00	*	Tax on Incentive(Taxable Incentive Total: \$0.00)		

\$ 113.68 Monthly Lease Charge (Based on Interest Rate - Subject to a Floor)2 \$ 746/22

Total Capitalized Amount (Delivered Price)

Depreciation Reserve @ 2.0000%

al Monthly Rental Excluding Additional Services

Additional Fleet Management Master Policy Enrollment Fees

\$ 0.00 Commercial Automobile Liability Enrollment

Liability Limit \$0.00

\$ 0.00 Physical Damage Management

> Full Maintenance Program³ Contract Miles 50,000

Incl: # Brake Sets (1 set = 1 Axle) 0

Additional Services SubTotal \$70.89 Sales Tax 9.5000%

\$857.09 **Total Monthly Rental Including Additional Services** \$ -6,325.40 Reduced Book Value at 60 Months \$ 400.00 Service Charge Due at Lease Termination

Quote based on estimated annual mileage of 10,000

\$ 39.98

\$ 39.98

(Current market and vehicle conditions may also affect value of vehicle)

(Quote is Subject to Customer's Credit Approval)

Notes

Enterprise FM Trust will be the owner of the vehicle covered by this Quote. Enterprise FM Trust (not Enterprise Fleet Management) will be the Lessor of such vehicle under the Master Open - End (Equity) Lease Agreement and shall have all rights and obligations of the Lessor under the Master Open - End (Equity) Lease Agreement with respect to such vehicle.

ALL TAX AND LICENSE FEES TO BE BILLED TO LESSEE AS THEY OCCUR.

Lessee hereby authorizes this vehicle order, agrees to lease the vehicle on the terms set forth herein and in the Master Equity Lease Agreement and agrees that Lessor shall have the right to collect damages in the event Lessee fails or refuses to accept delivery of the ordered vehicle. Lessee certifies that it intends that more than 50% of the use of the vehicle is to be in a trade or business of the Lessee.

LESSEE Palmdale Water District

BY TITLE DATE

^{*} INDICATES ITEMS TO BE BILLED ON DELIVERY.

¹ Capitalized Price of Vehicle May be Adjusted to Reflect Final Manufacturer's Invoice. Lessee Hereby Assigns to Lessor any Manufacturer Rebates And/Or Manufacturer Incentives Intended for the Lessee, Which Rebates And/Or Incentives Have Been Used By Lessor to Reduce the Capitalized Price of the Vehicle.

² Monthly Lease Charge Will Be Adjusted to Reflect the Interest Rate on the Delivery Date (Subject to a Floor).

³ The inclusion herein of references to maintenance fees/services are solely for the administrative convenience of Lessee. Notwithstanding the inclusion of such references in this [Invoice/Schedule/Quote], all such maintenance services are to be performed by Enterprise Fleet Management, Inc., pursuant to that certain separate [Maintenance Agreement] entered into by and between Lessee and Enterprise Fleet Management, Inc.; provided that such maintenance fees are being billed by Enterprise FM Trust, and are payable at the direction of Enterprise FM Trust, solely as an authorized agent for collection on behalf of Enterprise Fleet Management, Inc.



Quote No: 3759631

Aftermarket Equipment Total

Description	(B)illed or (C)apped	Price
Utility Body with Ladder Rack - Harbor truck estimate	С	\$ 6,300.00
	×	
Total Aftermarket Equipment Billed	,	\$ 0.00
Total Aftermarket Equipment Capitalized		\$ 6,300.00
Aftermarket Equipment Total		\$ 6,300.00

Other Totals

Description	(B)illed or (C)apped	Price
Pricing Plan Delivery Charge	C	\$ 85.00
Courtesy Delivery Fee	С	\$ 200.00
Total Other Charges Billed		\$ 0.00
Total Other Charges Capitalized		\$ 285.00
Other Charges Total		\$ 285.00



Quote No: 3759631

VEHICLE INFORMATION:

2018 Ford F-250 XL 4x2 SD Regular Cab 8 ft. box 142 in. WB SRW - US

Series ID: F2A

Pricing Summary:

 INVOICE
 MSRP

 Base Vehicle
 \$ 31,081.00
 \$ 32,890.00

 Total Options
 \$ 266.00
 \$ 290.00

 Destination Charge
 \$ 1,295.00
 \$ 1,295.00

 Total Price
 \$ 32,642.00
 \$ 34,475.00

SELECTED COLOR:

Exterior:

Z1 - (0 P) Oxford White

Interior:

AS - (0 I) Medium Earth Gray w/HD Vinyl 40/20/40 Split Bench Seat

SELECTED OPTIONS:

CODE	DESCRIPTION	INVOICE	MSRP
142WB	142" Wheelbase	STD	STD
425	50-State Emissions System	STD	STD
44S	Transmission: TorqShift-G 6-Spd Auto w/SelectShift	Included	Included
54K	Manual Telescoping/Folding Trailer Tow Mirrors	Included	Included
587	Radio: AM/FM Stereo	Included	Included
600A	Order Code 600A	NC	NC
64A	Wheels: 17" Argent Painted Steel	Included	Included
66D	Pickup Box Delete	\$ -575.00	\$ -625.00
66DRBD	Rear Bumper Delete	Included	Included
66DSPR	Spare Wheel, Tire, Carrier & Jack Delete	Included	Included
90L	Power Equipment Group	\$ 841.00	\$ 915.00
90LACD	Accessory Delay	Included	Included
90LPAA	Perimeter Alarm	Included	Included
90LPLK	Power Locks	Included	Included
90LPTL	Power Tailgate Lock	Included	Included
90LPWN	Power Front Seat Windows	Included	Included
90LRKE	Remote Keyless Entry	Included	Included
996	Engine: 6.2L 2-Valve SOHC EFI NA V8 Flex-Fuel	Included	Included
Α	HD Vinyl 40/20/40 Split Bench Seat	Included	Included
AS_04	(0 I) Medium Earth Gray w/HD Vinyl 40/20/40 Split Bench Seat	NC	NC
PAINT	Monotone Paint Application	STD	STD
STDGV	GVWR: 9,950 lb Payload Package	Included	Included
TD8	Tires: LT245/75Rx17E BSW A/S (4)	Included	Included
X37	3.73 Axle Ratio	Included	Included
Z1_01	(0 P) Oxford White	NC	NC

CONFIGURED FEATURES:

Body Exterior Features:

Number Of Doors 2

Driver And Passenger Mirror: power remote heated manual folding side-view door mirrors with turn signal indicator

Convex Driver Mirror: convex driver and passenger mirror

Mirror Type: manual extendable trailer mirrors

Door Handles: black

Front And Rear Bumpers: black front and rear bumpers with black rub strip

Front Tow Hooks: 2 front tow hooks

Front License Plate Bracket: front license plate bracket

Body Material: aluminum body material

: class V trailering with hitch

Grille: black grille

Convenience Features:

Air Conditioning manual air conditioning

Air Filter: air filter

Power Windows: power windows with driver and passenger 1-touch down

Remote Keyless Entry: keyfob (all doors) remote keyless entry

Illuminated Entry: illuminated entry

Integrated Key Remote: integrated key/remote

Steering Wheel: steering wheel with manual tilting, manual telescoping

Day-Night Rearview Mirror: day-night rearview mirror

Front Cupholder: front cupholder

Glove Box: illuminated locking glove box Driver Door Bin: driver and passenger door bins Dashboard Storage: covered dashboard storage

IP Storage: bin instrument-panel storage

Retained Accessory Power: retained accessory power Power Accessory Outlet: 2 12V DC power outlets

Entertainment Features:

radio AM/FM stereo with seek-scan

Speakers: 4 speakers

1st Row LCD: 1 1st row LCD monitor

Antenna: fixed antenna

Lighting, Visibility and Instrumentation Features:

Headlamp Type delay-off aero-composite halogen headlamps

Cab Clearance Lights: cargo bed light
Underhood Light: underhood light
Front Wipers: variable intermittent wipers
Tinted Windows: light-tinted windows
Dome Light: dome light with fade
Front Reading Lights: front reading lights

Variable IP Lighting: variable instrument panel lighting

Display Type: analog display Tachometer: tachometer

Exterior Temp: outside-temperature display

Low Tire Pressure Warning: tire specific low-tire-pressure warning

Trip Computer: trip computer Trip Odometer: trip odometer

Oil Pressure Gauge: oil pressure gauge Water Temp Gauge: water temp. gauge

Transmission Oil Temp Gauge: transmission oil temp. gauge

Engine Hour Meter: engine hour meter

Clock: in-radio display clock
Systems Monitor: systems monitor
Rear Vision Camera: rear vision camera
Oil Pressure Warning: oil-pressure warning
Water Temp Warning: water-temp. warning

Battery Warning: battery warning Lights On Warning: lights-on warning

Key in Ignition Warning: key-in-ignition warning

Low Fuel Warning: low-fuel warning Door Ajar Warning: door-ajar warning Brake Fluid Warning: brake-fluid warning

Safety And Security:

ABS four-wheel ABS brakes

Number of ABS Channels: 4 ABS channels

Brake Assistance: brake assist Brake Type: four-wheel disc brakes

Vented Disc Brakes: front and rear ventilated disc brakes

Daytime Running Lights: daytime running lights

Driver Front Impact Airbag: driver and passenger front-impact airbags
Driver Side Airbag: seat-mounted driver and passenger side-impact airbags
Overhead Airbag: Safety Canopy System curtain 1st row overhead airbag

Height Adjustable Seatbelts: height adjustable front seatbelts

Side Impact Bars: side-impact bars

Perimeter Under Vehicle Lights: remote activated perimeter/approach lights

Tailgate/Rear Door Lock Type: tailgate/rear door lock included with power door locks

Ignition Disable: SecuriLock immobilizer Security System: security system

Panic Alarm: panic alarm

Electronic Stability: electronic stability stability control with anti-roll

Traction Control: ABS and driveline traction control

Front and Rear Headrests: manual adjustable front head restraints

Seats And Trim:

Seating Capacity max. seating capacity of 3

Front Bucket Seats: front split-bench 40-20-40 seats

Number of Driver Seat Adjustments: 4-way driver and passenger seat adjustments

Reclining Driver Seat: manual reclining driver and passenger seats Driver Lumbar: manual driver and passenger lumbar support Driver Fore/Aft: manual driver and passenger fore/aft adjustment Front Centre Armrest Storage: front centre armrest with storage

Leather Upholstery: vinyl front seat upholstery

Headliner Material: full cloth headliner

Floor Covering: full vinyl/rubber floor covering

Shift Knob Trim: urethane shift knob Interior Accents: chrome interior accents

Standard Engine:

Engine 385-hp, 6.2-liter V-8 (regular gas)

Standard Transmission:

Transmission 6-speed automatic w/ OD and auto-manual



Quote No: 3791415

Prepared For: Palmdale Water District

Williams, Michael A

Date 01/26/2018 AE/AM ACI/LLM

All language and acknowledgments contained in the signed quote

Unit #

Year 2018 Make Ford Model Edge

Series SE 4dr Front-wheel Drive

Vehicle Order Type Ordered Term 60 State CA Customer# 557339

\$ 26,493	.00	Capitalized Price of Vehicle ¹		es that are ordered under this signed quote.
\$ 0	.00 *	Sales Tax 0.0000% State CA		
\$ 437	.51 *	Initial License Fee		
\$ 0	.00 *	Registration Fee	Order Information	
\$ 285	.00	Other: (See Page 2)	Driver Name	
\$ 0	.00	Capitalized Price Reduction	Exterior Color (0 P) Oxford White
\$ 0	.00	Tax on Capitalized Price Reduction	Interior Color (0 I) Ebony w/Cloth Bucket Seats
\$ 0	.00	Gain Applied From Prior Unit	Lic. Plate Type U	Jnknown
\$ 0	.00 *	Tax on Gain On Prior	GVWR 0	
\$ 0	.00 *	Security Deposit		
\$ 0	.00 *	Tax on Incentive(Taxable Incentive Total : \$0.00)		
\$ 26,778	.00	Total Capitalized Amount (Delivered Price)		
\$ 361	.50	Depreciation Reserve @ 1.3500%		
\$ 114	.42	Monthly Lease Charge (Based on Interest Rate - Subject	to a Floor) ²	
\$	475.92	Total Monthly Rental Excluding Additional Services	: ·	QUANTITY=(1)
		Additional Fleet Management		

Master Policy Enrollment Fees

\$ 0.00 Commercial Automobile Liability Enrollment

Liability Limit \$0.00

\$ 0.00 Physical Damage Management Comp/Coll Deductible 0/0

\$37.14 Full Maintenance Program³ Contract Miles 50,000 OverMileage Charge \$ 0.0350 Per Mile

Incl: # Brake Sets (1 set = 1 Axle) 0

Loaner Vehicle Not Included # Tires 0

\$ 37.14 Additional Services SubTotal

\$ 45.21 State CA Sales Tax 9.5000%

\$ 558.27 **Total Monthly Rental Including Additional Services** \$5,088.00 Reduced Book Value at 60 Months

> \$ 400.00 Service Charge Due at Lease Termination

Quote based on estimated annual mileage of 10,000

(Current market and vehicle conditions may also affect value of vehicle)

(Quote is Subject to Customer's Credit Approval)

Notes

Enterprise FM Trust will be the owner of the vehicle covered by this Quote. Enterprise FM Trust (not Enterprise Fleet Management) will be the Lessor of such vehicle under the Master Open - End (Equity) Lease Agreement and shall have all rights and obligations of the Lessor under the Master Open - End (Equity) Lease Agreement with respect to such vehicle.

ALL TAX AND LICENSE FEES TO BE BILLED TO LESSEE AS THEY OCCUR.

Lessee hereby authorizes this vehicle order, agrees to lease the vehicle on the terms set forth herein and in the Master Equity Lease Agreement and agrees that Lessor shall have the right to collect damages in the event Lessee fails or refuses to accept delivery of the ordered vehicle. Lessee certifies that it intends that more than 50% of the use of the vehicle is to be in a trade or business of the Lessee.

LESSEE Palmdale Water District

^{*} INDICATES ITEMS TO BE BILLED ON DELIVERY.

¹ Capitalized Price of Vehicle May be Adjusted to Reflect Final Manufacturer's Invoice. Lessee Hereby Assigns to Lessor any Manufacturer Rebates And/Or Manufacturer Incentives Intended for the Lessee, Which Rebates And/Or Incentives Have Been Used By Lessor to Reduce the Capitalized Price of the Vehicle

² Monthly Lease Charge Will Be Adjusted to Reflect the Interest Rate on the Delivery Date (Subject to a Floor).

³ The inclusion herein of references to maintenance fees/services are solely for the administrative convenience of Lessee. Notwithstanding the inclusion of such references in this [Invoice/Schedule/Quote], all such maintenance services are to be performed by Enterprise Fleet Management, Inc., and all such maintenance fees are payable by Lessee solely for the account of Enterprise Fleet Management, Inc., pursuant to that certain separate [Maintenance Agreement] entered into by and between Lessee and Enterprise Fleet Management, Inc.; provided that such maintenance fees are being billed by Enterprise FM Trust, and are payable at the direction of Enterprise FM Trust, solely as an authorized agent for collection on behalf of Enterprise Fleet Management, Inc.



Quote No: 3791415

Other Totals

Description	(B)illed or (C)apped	Price
Pricing Plan Delivery Charge	c	\$ 85.00
Courtesy Delivery Fee	. с	\$ 200.00
Total Other Charges Billed		\$ 0.00
Total Other Charges Capitalized		\$ 285.00
Other Charges Total		\$ 285.00



Quote No: 3791415

VEHICLE INFORMATION:

2018 Ford Edge SE 4dr Front-wheel Drive - US

Series ID: K3G

Pricing Summary:

 INVOICE
 MSRP

 Base Vehicle
 \$ 28,198.00
 \$ 29,220.00

 Total Options
 \$ 0.00
 \$ 0.00

 Destination Charge
 \$ 995.00
 \$ 995.00

 Total Price
 \$ 29,193.00
 \$ 30,215.00

SELECTED COLOR:

Exterior:

YZ - (0 P) Oxford White

Interior:

CE - (0 I) Ebony w/Cloth Bucket Seats

SELECTED OPTIONS:

CODE	DESCRIPTION	INVOICE	MSRP	
100A	Equipment Group 100A	NC	NC	
112WB	112.2" Wheelbase	STD	STD	
153	Front License Plate Bracket	NC	NC	
425	50-State Emissions System	STD	STD	
446	Transmission: 6-Speed Automatic w/SelectShift	Included	Included	
999	Engine: Twin-Scroll 2.0L EcoBoost	Included	Included	
С	Cloth Bucket Seats	Included	Included	
CE_02	(0 I) Ebony w/Cloth Bucket Seats	NC	NC	
PAINT	Monotone Paint Application	STD	STD	
STDAX	3.36 Axle Ratio	Included	Included	
STDGV	GVWR: 5,320 lbs	Included	Included	
STDRD	Radio: AM/FM Stereo w/Single CD Player	Included	Included	
STDTR	Tires: 245/60R18 AS BSW	Included	Included	
STDWL	Wheels: 18" Sparkle Silver Painted Aluminum	Included	Included	
SYNC	SYNC Communications & Entertainment System	Included	Included	
YZ_01	(0 P) Oxford White	NC	NC	

CONFIGURED FEATURES:

Body Exterior Features:

Number Of Doors 4

Rear Cargo Door Type: liftgate

Driver And Passenger Mirror: power remote manual folding side-view door mirrors

Convex Driver Mirror: convex driver and passenger mirror

Spoiler: rear lip spoiler

Door Handles: body-coloured

Front And Rear Bumpers: body-coloured front and rear bumpers with black rub strip

Front License Plate Bracket: front license plate bracket Body Material: fully galvanized steel body material Body Side Cladding: black bodyside cladding Grille: metal-look w/chrome surround grille

Convenience Features:

Air Conditioning manual air conditioning

Air Filter: air filter

Console Ducts: console ducts

Cruise Control: cruise control with steering wheel controls

Power Windows: power windows with driver and passenger 1-touch down

1/4 Vent Rear Windows: power rearmost windows

Remote Keyless Entry: keyfob (all doors) remote keyless entry

Illuminated Entry: illuminated entry

Integrated Key Remote: integrated key/remote

Auto Locking: auto-locking doors Passive Entry: proximity key

Window FOB Controls: remote window controls

Steering Wheel: steering wheel with manual tilting, manual telescoping

Day-Night Rearview Mirror: day-night rearview mirror

Driver and Passenger Vanity Mirror: illuminated driver and passenger-side visor mirrors

Emergency SOS: 911 Assist emergency communication system

Front Cupholder: front and rear cupholders
Floor Console: full floor console with covered box
Overhead Console: mini overhead console with storage

Glove Box: illuminated locking glove box
Driver Door Bin: driver and passenger door bins

Rear Door Bins: rear door bins

Seatback Storage Pockets: 2 seatback storage pockets Dashboard Storage: covered dashboard storage

IP Storage: bin instrument-panel storage

Driver Footrest: driver's footrest

Retained Accessory Power: retained accessory power Power Accessory Outlet: 4 12V DC power outlets

Entertainment Features:

radio AM/FM stereo with seek-scan, single in-dash CD player

MP3 Player: MP3 decoder

Voice Activated Radio: voice activated radio Speed Sensitive Volume: speed-sensitive volume

Steering Wheel Radio Controls: steering-wheel mounted audio controls

Speakers: 6 speakers

1st Row LCD: 2 1st row LCD monitor

Wireless Connectivity: wireless phone connectivity

Antenna: integrated roof antenna

Lighting, Visibility and Instrumentation Features:

Headlamp Type delay-off projector beam halogen headlamps Front Wipers: variable intermittent speed-sensitive wipers wipers

Rear Window wiper: fixed interval rear window wiper Rear Window Defroster: rear window defroster

Tinted Windows: deep-tinted windows
Dome Light: dome light with fade

Front Reading Lights: front and rear reading lights

Ignition Switch: ignition switch light

Variable IP Lighting: variable instrument panel lighting

Display Type: analog display Tachometer: tachometer Compass: compass

Exterior Temp: outside-temperature display

Low Tire Pressure Warning: tire specific low-tire-pressure warning

Trip Computer: trip computer
Trip Odometer: trip odometer

Water Temp Gauge: water temp. gauge

Clock: in-dash clock

Systems Monitor: systems monitor Rear Vision Camera: rear vision camera Oil Pressure Warning: oil-pressure warning

Battery Warning: battery warning

Low Oil Level Warning: low-oil-level warning

Lights On Warning: lights-on warning

Key in Ignition Warning: key-in-ignition warning

Low Fuel Warning: low-fuel warning

Low Washer Fluid Warning: low-washer-fluid warning

Door Ajar Warning: door-ajar warning Trunk Ajar Warning: trunk-ajar warning Brake Fluid Warning: brake-fluid warning

Safety And Security:

ABS four-wheel ABS brakes

Number of ABS Channels: 4 ABS channels

Brake Assistance: brake assist Brake Type: four-wheel disc brakes

Vented Disc Brakes: front and rear ventilated disc brakes

Daytime Running Lights: daytime running lights

Spare Tire Type: compact spare tire

Spare Tire Mount: spare tire mounted inside under cargo

Driver Front Impact Airbag: driver and passenger front-impact airbags
Driver Side Airbag: seat-mounted driver and passenger side-impact airbags
Overhead Airbag: Safety Canopy System curtain 1st and 2nd row overhead airbag

Knee Airbag: knee airbag

Occupancy Sensor: front passenger airbag occupancy sensor Height Adjustable Seatbelts: height adjustable front seatbelts

Seatbelt Pretensioners: front seatbelt pre-tensioners 3Point Rear Centre Seatbelt: 3 point rear centre seatbelt

Side Impact Bars: side-impact bars

Tailgate/Rear Door Lock Type: tailgate/rear door lock included with power door locks

Rear Child Safety Locks: rear child safety locks

Ignition Disable: SecuriLock immobilizer

Panic Alarm: panic alarm

Electronic Stability: electronic stability stability control with anti-roll

Traction Control: ABS and driveline traction control

Front and Rear Headrests: manual adjustable front head restraints with tilt

Rear Headrest Control: 3 rear head restraints

Seats And Trim:

Seating Capacity max. seating capacity of 5 Front Bucket Seats: front bucket seats

Number of Driver Seat Adjustments: 6-way driver and passenger seat adjustments

Reclining Driver Seat: manual reclining driver and passenger seats Driver Lumbar: manual driver and passenger lumbar support

Driver Height Adjustment: manual height-adjustable driver and passenger seats

Driver Fore/Aft: manual driver and passenger fore/aft adjustment Front Centre Armrest Storage: front centre armrest with storage Rear Seat Type: rear manual reclining 60-40 split-bench seat Rear Folding Position: rear seat fold-forward seatback

Rear Seat Armrest: rear seat centre armrest

Leather Upholstery: cloth front and rear seat upholstery

Door Trim Insert: vinyl door panel trim

Headliner Material: full cloth headliner Floor Covering: full carpet floor covering

Dashboard Console Insert, Door Panel Insert Combination: metal-look instrument panel insert, door panel insert, console insert

Shift Knob Trim: leather/metal-look shift knob Floor Mats: carpet front and rear floor mats

Interior Accents: chrome and metal-look interior accents

Cargo Space Trim: carpet cargo space Trunk Lid: plastic trunk lid/rear cargo door Cargo Tie Downs: cargo tie-downs

Cargo Light: cargo light

Concealed Cargo Storage: concealed cargo storage

Cargo Net: cargo net

Standard Engine:

Engine 245-hp, 2.0-liter I-4 (premium)

Standard Transmission:

Transmission 6-speed automatic w/ OD and auto-manual





Geotab Order Form

(1)	Order Quantity:1
	**Geotab GO7 Device is \$49 plus shipping. This amount is billed by Enterprise.
(2)	Optional accessories:
	a. Universal T-Harness - \$28: Quantity
	b. Extension cable and bracket - \$15: Quantity
	c. Driver ID Kit - \$126: Quantity
	d. Other:Quantity
(3)	Requested order date:5/26/17
(4)	Please select a monthly plan:
	Basic Fleet Package: \$17 per month per device
	Pro Fleet Package: \$24 per month per device
	Pro Plus Fleet Package: \$29 per month per device
	**Monthly cost is billed by Sprint. Monthly charges begin when the device is activated prior to shipment. Sprint bills one month in advance. Sprint's rates and charges for Products and Services do not include taxes. Fleet Operator (Lessee) will pay all taxes, including, but not limite to, sales, use, gross receipts, excise, VAT, property, transaction, or other local, state, or national taxes or charges imposed on, or based upon, the provision, sale, or use of Products or Services. Additional information on the taxes, fees, charges, and surcharges collected by Sprint is posted on the Rates and Conditions Website.
Thank	ou for your business!
Autho	ized signer:
Name	
Signat	re:
Comp	ny Name:
Date:	



Prepared For: Palmdale Water District

\$ 92.80

Open-End (Equity) Lease Rate Quote

Quote No: 3719184

Date 01/16/2018

Williams, Michael A AE/AM ACI/LLM Unit# Year 2018 Make Ford Model F-150 Series XL 4x2 Regular Cab Styleside 8 ft. box 141 in. WB Term 60 State CA Customer# 557339 All language and acknowledgments contained in the signed quote \$ 19,386.00 Capitalized Price of Vehicle1 apply to all vehicles that are ordered under this signed quote.

\$ 0.00	*	Sales Tax 0.0000% State CA		
\$ 442.85	*	Initial License Fee		
\$ 0.00	*	Registration Fee	Order Information	on
\$ 285.00		Other: (See Page 2)	Driver Name	
\$ 0.00		Capitalized Price Reduction	Exterior Color	(0 P) Oxford White
\$ 0.00		Tax on Capitalized Price Reduction	Interior Color	(0 I) Medium Earth Gray w/Vinyl 40/20/40 Fron
\$ 0.00		Gain Applied From Prior Unit	Lic. Plate Type	Unknown
\$ 0.00	*	Tax on Gain On Prior	GVWR	0
\$ 0.00	*	Security Deposit		
\$ 0.00	*	Tax on Incentive(Taxable Incentive Total : \$0.00)		
\$ 19,671.00		Total Capitalized Amount (Delivered Price)		
\$ 265.56		Depreciation Reserve @ 1.3500%		

\$ 358.36 **Total Monthly Rental Excluding Additional Services**

Additional Fleet Management Master Policy Enrollment Fees

\$ 0.00 Commercial Automobile Liability Enrollment

Liability Limit \$0.00

\$ 0.00 Physical Damage Management Comp/Coll Deductible 0 / 0

Monthly Lease Charge (Based on Interest Rate - Subject to a Floor)2

\$ 51.17 OverMileage Charge \$ 0.0350 Per Mile -Full Maintenance Program³ Contract Miles 75,000

Tires 0

Incl: # Brake Sets (1 set = 1 Axle) 0 \$ 51.17 Additional Services SubTotal

\$ 34.04 State CA Sales Tax 9.5000%

\$ 443.57 **Total Monthly Rental Including Additional Services** \$3,737.40 Reduced Book Value at 60 Months

\$ 400.00 Service Charge Due at Lease Termination

Quote based on estimated annual mileage of 15,000

(Current market and vehicle conditions may also affect value of vehicle)

(Quote is Subject to Customer's Credit Approval)

Enterprise FM Trust will be the owner of the vehicle covered by this Quote. Enterprise FM Trust (not Enterprise Fleet Management) will be the Lessor of such vehicle under the Master Open - End (Equity) Lease Agreement and shall have all rights and obligations of the Lessor under the Master Open - End (Equity) Lease Agreement with respect to such vehicle.

ALL TAX AND LICENSE FEES TO BE BILLED TO LESSEE AS THEY OCCUR.

Lessee hereby authorizes this vehicle order, agrees to lease the vehicle on the terms set forth herein and in the Master Equity Lease Agreement and agrees that Lessor shall have the right to collect damages in the event Lessee fails or refuses to accept delivery of the ordered vehicle. Lessee certifies that it intends that more than 50% of the use of the vehicle is to be in a trade or business of the Lessee.

LESSEE Palmdale Water District

BY TITLE DATE

Loaner Vehicle Not Included

^{*} INDICATES ITEMS TO BE BILLED ON DELIVERY.

¹ Capitalized Price of Vehicle May be Adjusted to Reflect Final Manufacturer's Invoice. Lessee Hereby Assigns to Lessor any Manufacturer Rebates And/Or Manufacturer Incentives Intended for the Lessee, Which Rebates And/Or Incentives Have Been Used By Lessor to Reduce the Capitalized Price of the Vehicle.

² Monthly Lease Charge Will Be Adjusted to Reflect the Interest Rate on the Delivery Date (Subject to a Floor).

³ The inclusion herein of references to maintenance fees/services are solely for the administrative convenience of Lessee. Notwithstanding the inclusion of such references in this [Invoice/Schedule/Quote], all such maintenance services are to be performed by Enterprise Fleet Management, Inc., and all such maintenance fees are payable by Lessee solely for the account of Enterprise Fleet Management, Inc., pursuant to that certain separate [Maintenance Agreement] entered into by and between Lessee and Enterprise Fleet Management, Inc.; provided that such maintenance fees are being billed by Enterprise FM Trust, and are payable at the direction of Enterprise FM Trust, solely as an authorized agent for collection on behalf of Enterprise Fleet Management, Inc.



Quote No: 3719184

Aftermarket Equipment Total

Description	(B)illed or (C)apped	Price
Rubberized Bedliner, Back Rack (item #BR-15004), LED Mini Light Bar (AW Direct Item		
#WB11PA) mounted to top center of Back Rack, 2 Brute Aluminum double tier topside	В	\$ 3,080.00
tool boxes (item #TBS200-72BD).		
TAX on AME	В	\$ 292.60
Total Aftermarket Equipment Billed		\$ 3,372.60
Total Aftermarket Equipment Capitalized		\$ 0.00
Aftermarket Equipment Total		\$ 3,372.60

Other Totals

Description	(B)illed or (C)apped	Price
Pricing Plan Delivery Charge	С	\$ 85.00
Courtesy Delivery Fee	С	\$ 200.00
Total Other Charges Billed		\$ 0.00
Total Other Charges Capitalized		\$ 285.00
Other Charges Total		\$ 285.00



Quote No: 3719184

VEHICLE INFORMATION:

2018 Ford F-150 XL 4x2 Regular Cab Styleside 8 ft. box 141 in. WB - US

Series ID: F1C

Pricing Summary:

	INVOICE	MSRP
Base Vehicle	\$ 26,514.00	\$ 27,910.00
Total Options	\$ 2,151.00	\$ 2,335.00
Destination Charge	\$ 1,395.00	\$ 1,395.00
Total Price	\$ 30,060.00	\$ 31,640.00

SELECTED COLOR:

Exterior:

YZ - (0 P) Oxford White

Interior:

AG - (0 I) Medium Earth Gray w/Vinyl 40/20/40 Front Seat

SELECTED OPTIONS:

CODE	DESCRIPTION	INVOICE	MSRP
100A	Equipment Group 100A Base	NC	NC
141WB	141" Wheelbase	STD	STD
153	Front License Plate Bracket	NC	NC
446	Transmission: Electronic 6-Speed Automatic	Included	Included
50S	Cruise Control	\$ 207.00	\$ 225.00
52P	SYNC	\$ 387.00	\$ 420.00
53B	Class IV Trailer Hitch Receiver	\$ 88.00	\$ 95.00
61X91K	MyKey	Included	Included
64C	Wheels: 17" Silver Steel	Included	Included
76R	Reverse Sensing System	\$ 253.00	\$ 275.00
85A	XL Power Equipment Group	\$ 893.00	\$ 970.00
85AGTE	Power Tailgate Lock	Included	Included
85AILL	Illuminated Entry	Included	Included
85AMIR	Power Glass Sideview Mirrors w/Black Skull Caps	Included	Included
85APAL	Perimeter Alarm	Included	Included
85APLK	Power Door Locks	Included	Included
85APWN	Power Front Windows	Included	Included
96P	Drop-In Bedliner (Pre-Installed)	\$ 323.00	\$ 350.00
99B	Engine: 3.3L V6 PDFI	Included	Included
Α	Vinyl 40/20/40 Front Seat	NC	NC
AG_02	(0 I) Medium Earth Gray w/Vinyl 40/20/40 Front Seat	NC	NC
PAINT	Monotone Paint Application	STD	STD
STDGV	GVWR: 6,170 lbs Payload Package	Included	Included
STDRD	Radio: AM/FM Stereo w/4 Speakers	Included	Included
STDTR	Tires: P245/70R17 BSW A/S	Included	Included
X19	3.55 Axle Ratio	Included	Included
YZ_01	(0 P) Oxford White	NC	NC

CONFIGURED FEATURES:

Body Exterior Features:

Number Of Doors 2

Rear Cargo Door Type: tailgate

Driver And Passenger Mirror: power remote manual folding side-view door mirrors

Convex Driver Mirror: convex driver and passenger mirror

Door Handles: black

Front And Rear Bumpers: black front and rear bumpers with black rub strip

Rear Step Bumper: rear step bumper

Front License Plate Bracket: front license plate bracket

Bed Liner: bed liner Box Style: regular

Body Material: aluminum body material: class IV trailering with harness, hitch

Grille: black grille

Convenience Features:

Air Conditioning manual air conditioning

Cruise Control: cruise control with steering wheel controls

Power Windows: power windows with driver and passenger 1-touch down

Remote Keyless Entry: keyfob (all doors) remote keyless entry

Illuminated Entry: illuminated entry

Integrated Key Remote: integrated key/remote

Auto Locking: auto-locking doors

Steering Wheel: steering wheel with manual tilting, manual telescoping

Day-Night Rearview Mirror: day-night rearview mirror

Front Cupholder: front cupholder

Glove Box: glove box

Driver Door Bin: driver and passenger door bins

Dashboard Storage: dashboard storage IP Storage: bin instrument-panel storage

Retained Accessory Power: retained accessory power Power Accessory Outlet: 2 12V DC power outlets

Entertainment Features:

radio AM/FM stereo with seek-scan

Voice Activated Radio: voice activated radio

Steering Wheel Radio Controls: steering-wheel mounted audio controls

Speakers: 4 speakers

1st Row LCD: 2 1st row LCD monitor

Wireless Connectivity: wireless phone connectivity

Antenna: fixed antenna

Lighting, Visibility and Instrumentation Features:

Headlamp Type delay-off aero-composite halogen headlamps

Cab Clearance Lights: cargo bed light Front Wipers: variable intermittent wipers Tinted Windows: light-tinted windows Dome Light: dome light with fade

Variable IP Lighting: variable instrument panel lighting

Display Type: analog display Tachometer: tachometer Voltometer: voltmeter Compass: compass

Exterior Temp: outside-temperature display

Low Tire Pressure Warning: tire specific low-tire-pressure warning

Park Distance Control: rear parking sensors

Trip Odometer: trip odometer

Oil Pressure Gauge: oil pressure gauge Water Temp Gauge: water temp. gauge

Transmission Oil Temp Gauge: transmission oil temp. gauge

Clock: in-radio display clock

Rear Vision Camera: rear vision camera
Oil Pressure Warning: oil-pressure warning

Water Temp Warning: water-temp. warning

Battery Warning: battery warning Lights On Warning: lights-on warning

Key in Ignition Warning: key-in-ignition warning

Low Fuel Warning: low-fuel warning Door Ajar Warning: door-ajar warning Brake Fluid Warning: brake-fluid warning

Safety And Security:

ABS four-wheel ABS brakes

Number of ABS Channels: 4 ABS channels

Brake Assistance: brake assist Brake Type: four-wheel disc brakes

Vented Disc Brakes: front and rear ventilated disc brakes

Daytime Running Lights: daytime running lights

Spare Tire Type: full-size spare tire

Spare Tire Mount: underbody mounted spare tire w/crankdown
Driver Front Impact Airbag: driver and passenger front-impact airbags
Driver Side Airbag: seat-mounted driver and passenger side-impact airbags
Overhead Airbag: Safety Canopy System curtain 1st row overhead airbag

Occupancy Sensor: front passenger airbag occupancy sensor Height Adjustable Seatbelts: height adjustable front seatbelts

Seatbelt Pretensioners: front seatbelt pre-tensioners

Side Impact Bars: side-impact bars

Perimeter Under Vehicle Lights: remote activated perimeter/approach lights

Tailgate/Rear Door Lock Type: tailgate/rear door lock included with power door locks

Ignition Disable: SecuriLock immobilizer Security System: security system

Panic Alarm: panic alarm

Electronic Stability: electronic stability stability control with anti-roll

Traction Control: ABS and driveline traction control

Front and Rear Headrests: manual adjustable front head restraints

Seats And Trim:

Seating Capacity max. seating capacity of 3

Front Bucket Seats: front split-bench 40-20-40 seats

Number of Driver Seat Adjustments: 4-way driver and passenger seat adjustments

Reclining Driver Seat: manual reclining driver and passenger seats Driver Fore/Aft: manual driver and passenger fore/aft adjustment

Front Centre Armrest Storage: front centre armrest Leather Upholstery: vinyl front seat upholstery

Headliner Material: full cloth headliner

Floor Covering: full vinyl/rubber floor covering

Cabback Insulator: cabback insulator Shift Knob Trim: urethane shift knob Interior Accents: chrome interior accents

Standard Engine:

Engine 290-hp, 3.3-liter V-6 (regular gas)

Standard Transmission:

Transmission 6-speed automatic w/ OD and auto-manual



Palmdale Water District Leslie O. Carter WTP Evaluation

FACILITY EVALUATION RESULTS AND RECOMMENDATIONS

FINAL | December 2017



Section 5

RECOMMENDED CAPITAL IMPROVEMENTS

The following projects and equipment purchases will either facilitate operational changes that improve plant performance or extend the lifetime of existing facilities. Class 5 cost estimates for each of these projects are provided in Appendices B through F.

- 1. Installation of new flocculant aid polymer feed equipment.
- Replacement of the corroded plate settler support beams in Sedimentation Basin 3 with new stainless steel beams. (Beams in other basins may be repaired or replaced at the discretion of the District.)
- Application of a protective coating to the concrete walls of the flocculation/sedimentation basins.
- 4. Installation of a wafer-style check valve to replace the existing 42" butterfly valve between the suction of the IPS and the GAC contactor effluent.
- 5. Purchase and installation of a sludge concentration monitoring tool.

The following projects should be considered for the 5-10 year time frame.

1. Hypochlorite generator replacement or rehabilitation.

5.1 Flocculant Aid Polymer Feed System

The flocculant aid polymer feed system originally installed during Phase I of the Plant Improvements Project was dismantled as frequent clogging of the feed pipes made it impractical to operate. It is recommended that a new feed system be installed in the same room of the flocculation/sedimentation building. A schematic of the proposed system is shown in Figure 5. Unlike the original installation, the proposed system includes a day tank for the blended polymer solution and individual feed pumps for each application point. With proper blending of the polymer and dedicated pumps and feed lines to each basin, the system should not experience clogging, as occurred with the previous system.

With the addition of a sixth feed pump, it would be simple to include the ability to feed polymer to the sedimentation basin effluent channel to serve as a filter aid. The feed pipe could be routed along the wall of either of the flocculation/sedimentation buildings and would discharge to the settled water channel.



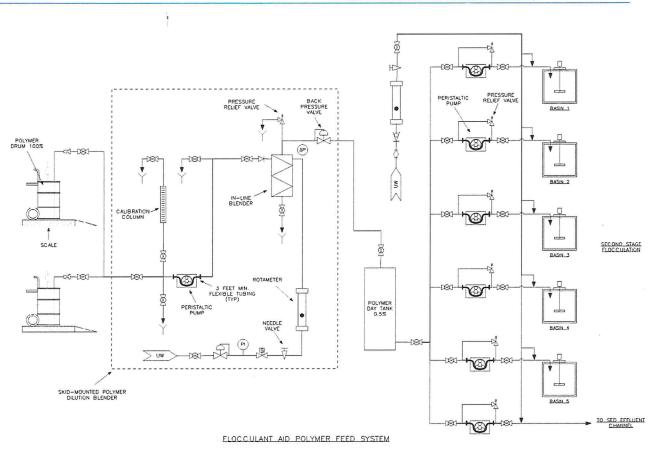


Figure 5 Proposed Flocculant Aid Polymer Feed System Schematic

Carolla

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Preliminary design criteria for sizing components of the flocculant aid polymer feed system are given in Table 2.

Table 2 Flocculant Aid Polymer Feed System Preliminary Design Criteria

ltem	Units	Criterion
Minimum Dose	mg/L	0.05
Maximum Dose	mg/L	0.2
Neat Polymer Flow Rate	gph	0.5
Dilution Blender Total Flow Rate	gph	100
Day Tank Volume	gal	100
Feed Pump Maximum Flow Rate	gph	12

Estimated installation cost of the new feed system is \$140,000. The estimate is detailed in Appendix B.

5.2 Plate Settler Support Beams

It is recommended the corroded carbon steel plate settler support beams in Sedimentation Basin 3 be replaced with new stainless steel beams. Meurer Research, Inc., the company that provided the original plate settler systems, can supply the stainless steel beams. Installed replacement cost for one basin is estimated at \$105,000. The estimate is detailed in Appendix C.

The same beams could be installed in the remaining basins to ensure long-term integrity of the plate settler system at a total cost of \$520,000. However, operators reported the beams in the other four basins exhibit only mild corrosion and the damage may not warrant replacement. In those cases, a lower-cost alternative could be to sand-blast and re-apply a protective high-solids epoxy coating in the areas where corrosion is observed. In addition to Basin 3, Carollo inspected the beams in Basin 2 and determined that professionally recoating the existing beams is a viable alternative as long as the work is performed by a professional coating contractor and the coatings are regularly inspected and maintained in the future.

5.3 Flocculation/Sedimentation Basin Coating

It is recommended the District consider applying a protective coating on the concrete walls of the flocculation/sedimentation basins to extend their useful lifetime. Assuming a thorough evaluation reveals no significant deterioration of concrete below the surface, the first step would be removal of the weakened paste from the surface. This can be accomplished with a water jet or abrasive blast.

Once the weakened material has been removed, a thick impermeable film of either 100% solids epoxy or polyurethane can be applied to protect the walls against further deterioration, regardless of the corrosive nature of the coagulated water.

The cost of the surface preparation and coating is estimated at \$280,000 for one basin or \$1,400,000 for all five basins. The estimate is provided in Appendix D. The estimate assumes the entire wetted area of the basin walls will require removal of deteriorated concrete and subsequent coating and assumes the work is performed in conjunction with replacement of the plate settler support beams described above. If this work is performed separate from the plate



settler support beam replacement, additional costs may be incurred to work around the plate settlers, particularly where there is limited access between the plates and the walls.

5.4 Check Valve Installation

Location of the existing 42" butterfly valve to be replaced beneath the road that runs between Lagoon 1 and Lagoon 3 is shown in Figure 6. The invert elevation of the valve is approximately 25 feet below the existing asphalt pavement, so significant excavation will be necessary to access the valve and replace it. A wafer-style swing check valve is recommended as it will fit in the small space between the two tees that lead to the GAC contactors. Cost of the valve replacement is estimated at \$160,000 and includes a precast vault for access as documented in Appendix E.

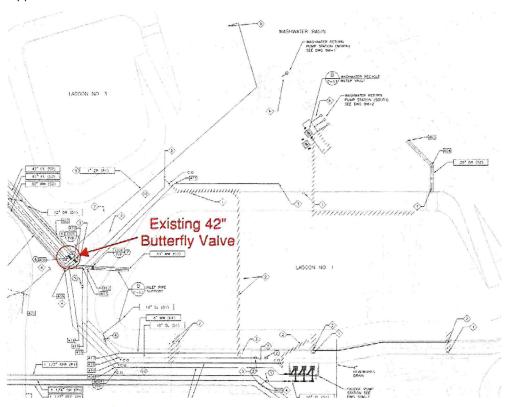


Figure 6 42" Butterfly Valve Location

5.4.1 Microwave Solids Analyzer

A clam-shell type bench-scale microwave solids analyzer is recommended as the most versatile tool for measuring solids concentration of sludge from various points throughout the plant. This could be installed in the existing laboratory facilities.

CEM Corporation produces a microwave solids analyzer model called SMART 6 WWTP that is designed for the water and wastewater industry. The solids concentrations that can be analyzed range from 500 parts per million (ppm) up to 60 percent, which covers any practical application at the Leslie O. Carter WTP. CEM's cost for the instrument, installation, and training is \$11,480.



5.4.2 Hypochlorite Generator Replacement

The existing ClorTec hypochlorite generator system was last refurbished during the Phase II Plant Improvement Project in 2008 and has been in operation for nearly 10 years. The manufacturer has stated this equipment, including the tanks, controls, and rectifier, has a typical useful lifetime of 15 to 20 years. That lifetime can vary depending on duty cycle, maintenance, and water quality. Furthermore, the electrodes are typically replaced once on average during that lifetime. A thorough inspection of this equipment was not completed during this evaluation. It is recommended the District consider replacement of the system in the next five to ten years, and condition of the electrodes be evaluated in the next year to determine whether replacement will be necessary before the rest of the equipment. The District should contact the equipment manufacturer to perform or direct activities related to the evaluation of the electrodes.

5.5 Summary of Recommendations

A summary of the primary recommendations is provided in Table 3.

Table 3 Recommended Operational Changes and Capital Improvements

	Improvement				
Recommendation	Sludge Management	Filter Run Time / Filter to Waste Duration	Reliability of Equipment and Structures	Plant Hydraulics	Estimated Project Cost
Recommended Operational Changes	ATT TO THE MENT				发现的现在分
1. Dose coagulants to neutralize zeta potential	•				
2. Utilize flocculant aid polymer	•				
3. Switch to anionic or nonionic filter aid polymer					
4. Increased flocculation speed		•			
5. Draw down water level prior to filter surface wash					
6. Utilize a resting filter configuration		•			
7. Monitor blow down solids concentration					
Recommended Capital Improvements	A CONTRACT AND MARKA	A P. No. Common Colonia Coloni	Service Control of the Control of th		(a. 14)
1. New flocculant aid polymer feed system					\$140,000
2. Basin 3 plate settler support beam replacement			•		\$105,000
3. Protective coating of basin walls			•		\$1,400,000
 Check valve between IPS suction and contactor effluent 		•		•	\$160,000
5. Sludge monitoring instrumentation					\$12,000
6. Replace or refurbish hypochlorite generation system			•		(no cost info available)

