

Year	Total Usage (Thousand Gallons)	Number of Connections	Usage per Conn (gpd/conn)	Number of ERUs	Usage per ERU (gpd/ERU)
2018	303,105	862	963	848	979
2019	251,780	763	904	806	856
2020	285,109	799	978	855	914
2021	279,736	855	896	923	830
2022	309,026	1,113	761	1195	709
5-Year Avg:	285,751	878	900	925	846
This Master Plan will use a historic daily usage of 846 gpd/ERU					

Peak Instantaneous Demand Calculations (State)		
Indoor Peak Instantaneous Demand		
Q=	$10.8 \times N^{.64}$	N= No. of ERU
2024	Q=	1137 gpm
	Q=	1133 gpd/ERU
Outdoor Peak Instantaneous Demand		
Irrigation Zone 5 =		9.04 gpm/Irrigated Acre
Irrigated Acres /ERU		0.1 Irrigated Acres/ERU
Q=	Irr Acres/ERU X Irr Zone Factor X No. ERU	
Example:		
2023	Q=	1307 gpm

Peak Instantaneous Demand Calculations (Alt)		
Indoor Peaking Factor		
P.F. = Q(PID)/Q(ADD) =	2.83	
Q= Indoor ADD * P.F.		
Q=	1376 gpd/ERU	
Q=	1381 gpm	
Outdoor Peaking Factor		
P.F.= Zone 5 PID (9.04)/Zone 5 PDD (4.52) =	2 for PDD to PID	
- Because of this we can assume that the P.F. for ADD to PID is 4		
Q= Outdoor ADD* P.F.		
Q=	1441 gpd/ERU	
Q=	1447 gpm	

Current & Projected Required Source Capacity							
Year	# of ERU	Percent Reduction In Usage Per ERU	Peak Day Usage (gpd/ERU)	Source Capacity Required (gpm)	Existing Source Available (gpm)	Treatment Plan Capacity (gpm)	Source Capacity Surplus/Deficit (gpm)
2024	1446	0.0%	1,692	1,699	1284	2000	(415)
2025	1590	0.5%	1,684	1,859	1284	2000	(575)
2026	1749	1.0%	1,675	2,035	1284	2000	(751)
2027	1924	1.5%	1,667	2,227	1284	2000	(943)
2028	2117	2.0%	1,658	2,438	1284	2000	(1,154)
2029	2371	2.5%	1,650	2,716	1284	2000	(1,432)
2030	2655	3.0%	1,641	3,026	1284	2000	(1,742)
2031	2974	3.5%	1,633	3,372	1284	2000	(2,088)
2032	3330	4.0%	1,625	3,757	1284	2000	(2,473)
2033	3730	4.5%	1,616	4,186	1284	2000	(2,902)
2034	4103	5.0%	1,608	4,581	1284	2000	(3,297)
2035	4513	5.5%	1,599	5,012	1284	2000	(3,728)
2036	4965	6.0%	1,591	5,484	1284	2000	(4,200)
2037	5461	6.5%	1,582	6,001	1284	2000	(4,717)
2038	6007	7.0%	1,574	6,565	1284	2000	(5,281)
2039	6488	7.5%	1,565	7,053	1284	2000	(5,769)
2040	7007	8.0%	1,557	7,576	1284	2000	(6,292)
2041	7568	8.5%	1,548	8,137	1284	2000	(6,853)
2042	8173	9.0%	1,540	8,740	1284	2000	(7,456)
2043	8827	9.5%	1,531	9,387	1284	2000	(8,103)

$$\text{Required Source Capacity} = \#ERU \times \frac{\text{gpd}}{\#ERU} \times \frac{1 \text{ Day}}{24 \text{ hr}} \times \frac{1 \text{ hr}}{60 \text{ min}}$$

Storage Capacity Analysis												
Year	Number of ERU	Percent Reduction In Usage Per ERU	Avg. Usage (gpd/ERU)	Storage Required (gal)	Fire Flow Stg Rqd (gal)	Existing Stg Capacity (gal)	Total Stg Rqd (gal)	Storage Capacity Surplus/Deficit (gal)	Project Name	Added Storage (gal)	Potential Capacity	Potential Surplus
2023	1314	0.0%	846	1,111,979	180,000	2,460,000	1,291,979	1,188,021			2,460,000	1,188,021
2024	1446	0.0%	846	1,223,177	180,000	2,460,000	1,403,177	1,056,823			2,460,000	1,056,823
2025	1590	0.5%	842	1,338,767	180,000	2,460,000	1,518,767	941,233	Sandhill Tank 1	2,000,000	4,460,000	2,941,233
2026	1749	1.0%	838	1,465,243	180,000	2,460,000	1,645,243	814,757			4,460,000	2,814,757
2027	1924	1.5%	833	1,603,628	180,000	2,460,000	1,783,628	676,372			4,460,000	2,676,372
2028	2117	2.0%	829	1,755,036	180,000	2,460,000	1,935,036	524,964			4,460,000	2,524,964
2029	2371	2.5%	825	1,955,612	180,000	2,460,000	2,135,612	324,388			4,460,000	2,324,388
2030	2655	3.0%	821	2,179,053	180,000	2,460,000	2,359,053	100,947	Trailhead Tank	500,000	4,960,000	2,600,947
2031	2974	3.5%	817	2,427,959	180,000	2,460,000	2,607,959	-147,959			4,960,000	2,352,041
2032	3330	4.0%	812	2,705,224	180,000	2,460,000	2,885,224	-425,224			4,960,000	2,074,776
2033	3730	4.5%	808	3,014,071	180,000	2,460,000	3,194,071	-734,071			4,960,000	1,765,929
2034	4103	5.0%	804	3,298,119	180,000	2,460,000	3,478,119	-1,018,119			4,960,000	1,481,881
2035	4513	5.5%	800	3,608,837	180,000	2,460,000	3,788,837	-1,328,837	South Concrete Tank	1,000,000	5,960,000	2,171,163
2036	4965	6.0%	795	3,948,717	180,000	2,460,000	4,128,717	-1,668,717			5,960,000	1,831,283
2037	5461	6.5%	791	4,320,484	180,000	2,460,000	4,500,484	-2,040,484			5,960,000	1,459,516
2038	6007	7.0%	787	4,727,118	180,000	2,460,000	4,907,118	-2,447,118			7,960,000	3,052,882
2039	6488	7.5%	783	5,077,840	180,000	2,460,000	5,257,840	-2,797,840	Sandhill Tank 2	2,000,000	7,960,000	2,702,160
2040	7007	8.0%	778	5,454,423	180,000	2,460,000	5,634,423	-3,174,423			7,960,000	2,325,577
2041	7568	8.5%	774	5,858,762	180,000	2,460,000	6,038,762	-3,578,762			7,960,000	1,921,238
2042	8173	9.0%	770	6,292,887	180,000	2,460,000	6,472,887	-4,012,887			7,960,000	1,487,113
2043	8827	9.5%	766	6,758,975	180,000	2,460,000	6,938,975	-4,478,975			7,960,000	1,021,025

$$\text{Required Storage Capacity} = \#ERU \times \frac{\text{gpd}}{\#ERU} + \text{Fire Flow (1,500 gpm)} \frac{60 \text{ min}}{1 \text{ hr}} \times 2 \text{ hr}$$



Water Distribution Analysis

Year	No. ERU	ADD (gpm)	PDD (gpm)	PID Indoor (gpm)	PID Outdoor (gpm)	PID Total (gpm)
2023	1,314	772	1,544	1,070	1,188	2,258
2024	1,446	849	1,699	1,137	1,307	2,444
2025	1,590	930	1,859	1,209	1,438	2,646
2026	1,749	1,018	2,035	1,285	1,581	2,866
2027	1,924	1,114	2,227	1,366	1,739	3,105
2028	2,117	1,219	2,438	1,452	1,913	3,365
2029	2,371	1,358	2,716	1,561	2,143	3,704
2030	2,655	1,513	3,026	1,678	2,400	4,078
2031	2,974	1,686	3,372	1,804	2,688	4,493
2032	3,330	1,879	3,757	1,940	3,011	4,951
2033	3,730	2,093	4,186	2,086	3,372	5,458
2034	4,103	2,290	4,581	2,217	3,709	5,926
2035	4,513	2,506	5,012	2,357	4,080	6,437
2036	4,965	2,742	5,484	2,505	4,488	6,993
2037	5,461	3,000	6,001	2,662	4,937	7,599
2038	6,007	3,283	6,565	2,830	5,431	8,261
2039	6,488	3,526	7,053	2,973	5,865	8,838
2040	7,007	3,788	7,576	3,123	6,334	9,457
2041	7,568	4,069	8,137	3,281	6,841	10,122
2042	8,173	4,370	8,740	3,446	7,388	10,835
2043	8,827	4,694	9,387	3,620	7,979	11,600



APPENDIX C

Engineers Opinion of Probable Cost

Engineer's Opinion of Probable Cost					
Treatment Plant Wells Hildale City					18-Oct-23 BCW/tcd
NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 37,800.00	\$ 37,800.00
2	Pre-Construction DVD and Project Sign	1	LS	\$ 1,500.00	\$ 1,500.00
3	GeoPhysical Logging	1	LS	\$ 15,000.00	\$ 15,000.00
4	Disinfection and Capping	1	LS	\$ 4,000.00	\$ 4,000.00
5	Well Driller's Report	1	LS	\$ 2,500.00	\$ 2,500.00
6	Site Restoration	1	LS	\$ 10,000.00	\$ 10,000.00
7	Misc. Electrical Improvements	1	LS	\$ 15,000.00	\$ 15,000.00
DEEP WELL					
8	Conductor Casing	100	LF	\$ 400.00	\$ 40,000.00
9	20" Diameter Well Drilling	700	LF	\$ 123.00	\$ 86,100.00
10	12" Diameter Well Drilling - Pilot Hole	700	LF	\$ 160.00	\$ 112,000.00
11	12" Well Casing	600	LF	\$ 170.00	\$ 102,000.00
12	2" Galvanized Tremie Pipe	100	LF	\$ 40.00	\$ 4,000.00
13	Furnish and Install Pea Gravel	400	LF	\$ 115.00	\$ 46,000.00
14	Bentonite Packer	1	LS	\$ 6,000.00	\$ 6,000.00
15	Conductor Casing Removal	1	LS	\$ 8,000.00	\$ 8,000.00
16	Flow Meter	1	EA	\$ 10,000.00	\$ 10,000.00
17	Initial Well Development	40	HR	\$ 700.00	\$ 28,000.00
18	Install Pump for Development and Testing	1	LS	\$ 40,000.00	\$ 40,000.00
19	Well Development and Pumping	80	HR	\$ 700.00	\$ 56,000.00
20	Misc. Well and Pump Testing	1	LS	\$ 10,000.00	\$ 10,000.00
21	Well Head, Disinfection and Capping	1	LS	\$ 8,500.00	\$ 8,500.00
22	Well Pad and Pipping	1	LS	\$ 15,000.00	\$ 15,000.00
SHALLOW WELL					
23	Conductor Casing	1	LS	\$ 40,000.00	\$ 40,000.00
24	16" Diameter Well Drilling	120	LF	\$ 270.00	\$ 32,400.00
25	8" Well Casing	80	LF	\$ 100.00	\$ 8,000.00
26	8" Stainless Steel Screen	40	LF	\$ 300.00	\$ 12,000.00
27	2" Galvanized Tremie Pipe	20	LF	\$ 40.00	\$ 800.00
28	Instrument Pipe	120	LF	\$ 50.00	\$ 6,000.00
29	Furnish and Install Fine Silica Sand	120	LF	\$ 125.00	\$ 15,000.00
30	Bentonite Packer	1	LS	\$ 6,000.00	\$ 6,000.00
31	Conductor Casing Removal	1	LS	\$ 6,000.00	\$ 6,000.00
32	Sanitary Grout Seal	1	LS	\$ 150.00	\$ 150.00
33	Flow Meter	1	LS	\$ 10,000.00	\$ 10,000.00
34	Initial Well Development	40	HR	\$ 700.00	\$ 28,000.00
35	Install Pump for Development and Testing	1	LS	\$ 40,000.00	\$ 40,000.00
36	Well Development and Pumping	80	HR	\$ 700.00	\$ 56,000.00
37	Misc. Well and Pump Testing	1	LS	\$ 10,000.00	\$ 10,000.00
38	Well Head, Disinfection and Capping	1	LS	\$ 8,500.00	\$ 8,500.00
39	Well Pad and Pipping	1	LS	\$ 15,000.00	\$ 15,000.00
SUBTOTAL					\$ 951,250.00
				CONTINGENCY 20%	\$ 190,300.00
CONSTRUCTION TOTAL					\$ 1,141,600.00
INCIDENTALS					
1	Engineering Design	4.3%	LS	\$ 55,000.00	\$ 55,000.00
2	Bidding & Negotiating	0.6%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services	3.7%	HR	\$ 47,600.00	\$ 47,600.00
4	Topographic & Property Survey	0.4%	EST	\$ 5,000.00	\$ 5,000.00
5	Permitting	0.8%	EST	\$ 10,000.00	\$ 10,000.00
6	Funding and Administrative Services	0.9%	EST	\$ 12,000.00	\$ 12,000.00
7	Miscellaneous Professional Services	0.8%	EST	\$ 10,000.00	\$ 10,000.00
SUBTOTAL					\$ 147,100.00
TOTAL PROJECT COST					\$ 1,288,700.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost

 Trailhead Well 1
 Hildale City

 18-Oct-23
 BCW/tcd

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 83,600.00	\$ 83,600.00
2	Pre-Construction DVD & Project Sign	1	LS	\$ 1,500.00	\$ 1,500.00
3	Traffic Control	1	LS	\$ 5,000.00	\$ 5,000.00
4	Subsurface Investigation	4	HR	\$ 250.00	\$ 1,000.00
5	Materials Sampling & Testing	1	LS	\$ 7,500.00	\$ 7,500.00
6	Dust Control & Watering	1	LS	\$ 10,000.00	\$ 10,000.00
7	Construction Staking	1	LS	\$ 10,000.00	\$ 10,000.00
8	Erosion Control Compliance	1	LS	\$ 7,500.00	\$ 7,500.00
9	Geophysical Survey	1	LS	\$ 20,000.00	\$ 20,000.00
10	Access and Drill Pad Construction	1	LS	\$ 145,000.00	\$ 145,000.00
11	Conductor Casing and Seal	100	LF	\$ 650.00	\$ 65,000.00
12	Drill 12" Pilot Borehole	600	LF	\$ 160.00	\$ 96,000.00
13	Drill 20" Reamed Borehole	600	LF	\$ 123.00	\$ 73,800.00
14	Geophysical Logging	1	LS	\$ 9,000.00	\$ 9,000.00
15	Well Installation - 12" Steel Casing	500	LF	\$ 170.00	\$ 85,000.00
16	Well Installation - 12" SS Screen 70 Slot	200	LF	\$ 350.00	\$ 70,000.00
17	Installation of Gravel Pack - 8-12	550	LF	\$ 115.00	\$ 63,250.00
18	Installation of Annular Grout Seal	150	LF	\$ 115.00	\$ 17,250.00
19	Initial Well Development	40	HR	\$ 750.00	\$ 30,000.00
20	Install Pump for Development and Testing	1	LS	\$ 42,000.00	\$ 42,000.00
21	Well Development by pumping	80	HR	\$ 425.00	\$ 34,000.00
22	Misc. Well and Pump Testing	1	LS	\$ 10,000.00	\$ 10,000.00
23	Well Disinfecting	1	LS	\$ 5,000.00	\$ 5,000.00
24	Well Head	1	LS	\$ 2,500.00	\$ 2,500.00
25	Well Capping	1	LS	\$ 750.00	\$ 750.00
26	Roadway Restoration	48,000	SF	\$ 6.00	\$ 288,000.00
27	10" PVC (C900) Line, Fitting, Tracer Wire, Bedding, & Backfill	8,000	LF	\$ 72.00	\$ 576,000.00
28	10" Gate Valve Assembly	4	EA	\$ 5,000.00	\$ 20,000.00
29	Misc. Connections, Fittings and Tie-ins	1	LS	\$ 20,000.00	\$ 20,000.00
SUBTOTAL					\$ 1,798,650.00
CONTINGENCY				20%	\$ 359,700.00
CONSTRUCTION TOTAL					\$ 2,158,400.00
INCIDENTALS					
1	Engineering Design	4.5%	LS	\$ 110,000.00	\$ 110,000.00
2	Bidding & Negotiating	0.3%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services	3.7%	HR	\$ 89,900.00	\$ 89,900.00
4	Topographic & Property Survey	0.7%	EST	\$ 17,500.00	\$ 17,500.00
5	Water Right Change Application	0.8%	EST	\$ 20,000.00	\$ 20,000.00
6	Funding and Administrative Services	0.5%	EST	\$ 12,000.00	\$ 12,000.00
7	Permitting	0.4%	EST	\$ 10,000.00	\$ 10,000.00
8	Miscellaneous Professional Services	0.8%	EST	\$ 20,000.00	\$ 20,000.00
SUBTOTAL					\$ 286,900.00
TOTAL PROJECT COST					\$ 2,445,300.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost

Trailhead Well 2	18-Oct-23
Hildale City	BCW/tcd

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 32,000.00	\$ 32,000.00
2	Erosion Control Compliance	1	LS	\$ 5,000.00	\$ 5,000.00
3	Geophysical Survey	1	LS	\$ 20,000.00	\$ 20,000.00
4	Access and Drill Pad Construction	1	LS	\$ 50,000.00	\$ 50,000.00
5	Conductor Casing and Seal	100	LF	\$ 650.00	\$ 65,000.00
6	Drill 12" Pilot Borehole	600	LF	\$ 175.00	\$ 105,000.00
7	Drill 20" Reamed Borehole	600	LF	\$ 123.00	\$ 73,800.00
8	Geophysical Logging	1	LS	\$ 9,000.00	\$ 9,000.00
9	Well Installation - 12" Steel Casing	170	LF	\$ 170.00	\$ 28,900.00
10	Well Installation - 12" SS Screen 70 Slot	200	LF	\$ 350.00	\$ 70,000.00
11	Installation of Gravel Pack - 8-12	550	LF	\$ 115.00	\$ 63,250.00
12	Installation of Annular Grout Seal	150	LF	\$ 115.00	\$ 17,250.00
13	Initial Well Development	40	HR	\$ 750.00	\$ 30,000.00
14	Install Pump for Development and Testing	1	LS	\$ 42,000.00	\$ 42,000.00
15	Well Development by pumping	80	HR	\$ 425.00	\$ 34,000.00
16	Misc. Well and Pump Testing	1	LS	\$ 10,000.00	\$ 10,000.00
17	Well Disinfecting	1	LS	\$ 5,000.00	\$ 5,000.00
18	Well Head	1	LS	\$ 2,500.00	\$ 2,500.00
19	Well Capping	1	LS	\$ 750.00	\$ 750.00
20	8" PVC (C900) Line, Fitting, Tracer Wire, Bedding, & Backfill	150	LF	\$ 65.00	\$ 9,750.00
21	8" Gate Valve Assembly	1	EA	\$ 2,900.00	\$ 2,900.00
22	Water Right Procurement	1	LS	\$ 650,000.00	\$ 650,000.00
SUBTOTAL					\$ 1,326,100.00
CONTINGENCY				20%	\$ 265,200.00
CONSTRUCTION TOTAL					\$ 1,591,300.00
INCIDENTALS					
1	Engineering Design	2.6%	LS	\$ 45,000.00	\$ 45,000.00
2	Bidding & Negotiating	0.4%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services	2.0%	HR	\$ 33,800.00	\$ 33,800.00
4	Topographic & Property Survey	0.2%	EST	\$ 3,500.00	\$ 3,500.00
5	Permitting	0.6%	EST	\$ 10,000.00	\$ 10,000.00
6	Funding and Administrative Services	0.7%	EST	\$ 12,000.00	\$ 12,000.00
39	Miscellaneous Professional Services	0.6%	EST	\$ 10,000.00	\$ 10,000.00
SUBTOTAL					\$ 121,800.00
TOTAL PROJECT COST					\$ 1,713,100.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost

Hildale Groundwater Project PH I
 Hildale City

 18-Oct-23
 BCW/tcd

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 132,900.00	\$ 132,900.00
2	Pre-Construction DVD & Project Sign	1	LS	\$ 1,500.00	\$ 1,500.00
3	Traffic Control	1	LS	\$ 5,000.00	\$ 5,000.00
4	Subsurface Investigation	4	HR	\$ 250.00	\$ 1,000.00
5	Materials Sampling & Testing	1	LS	\$ 7,500.00	\$ 7,500.00
6	Dust Control & Watering	1	LS	\$ 10,000.00	\$ 10,000.00
7	Construction Staking	1	LS	\$ 10,000.00	\$ 10,000.00
8	Erosion Control Compliance	1	LS	\$ 7,500.00	\$ 7,500.00
9	Geophysical Survey	1	LS	\$ 23,000.00	\$ 23,000.00
10	Access and Drill Pad Construction	1	LS	\$ 130,000.00	\$ 130,000.00
11	Conductor Casing and Seal	100	LF	\$ 650.00	\$ 65,000.00
12	Drill 12" Pilot Borehole	650	LF	\$ 175.00	\$ 113,750.00
13	Drill 20" Reamed Borehole	650	LF	\$ 123.00	\$ 79,950.00
14	Geophysical Logging	1	LS	\$ 9,000.00	\$ 9,000.00
15	Caliper	1	LS	\$ 6,500.00	\$ 6,500.00
16	Well Installation - 12" Steel Casing	550	LF	\$ 100.00	\$ 55,000.00
17	Well Installation - 12" SS Screen 70 Slot	200	LF	\$ 350.00	\$ 70,000.00
18	Installation of Gravel Pack - 8-12	600	LF	\$ 115.00	\$ 69,000.00
19	Installation of Annular Grout Seal	150	LF	\$ 115.00	\$ 17,250.00
20	Initial Well Development	40	HR	\$ 750.00	\$ 30,000.00
21	Install Pump for Development and Testing	1	LS	\$ 42,000.00	\$ 42,000.00
22	Well Development by pumping	80	HR	\$ 425.00	\$ 34,000.00
23	Misc. Well and Pump Testing	1	LS	\$ 10,000.00	\$ 10,000.00
24	Well Disinfecting	1	LS	\$ 5,000.00	\$ 5,000.00
25	Well Head	1	LS	\$ 2,500.00	\$ 2,500.00
26	Well Capping	1	LS	\$ 750.00	\$ 750.00
27	Roadway Restoration	30,000	SF	\$ 7.75	\$ 232,500.00
28	8" PVC (C900) Line, Fitting, Tracer Wire, Bedding, & Backfill	5,000	LF	\$ 65.00	\$ 325,000.00
29	8" Gate Valve Assembly	8	EA	\$ 2,900.00	\$ 23,200.00
30	Misc. Connections, Fittings and Tie-ins	1	LS	\$ 15,000.00	\$ 15,000.00
31	Water Right Procurement	1	LS	\$ 1,300,000.00	\$ 1,300,000.00
SUBTOTAL					\$ 2,833,800.00
CONTINGENCY				20%	\$ 566,800.00
CONSTRUCTION TOTAL					\$ 3,400,600.00
INCIDENTALS					
1	Engineering Design	2.6%	LS	\$ 100,000.00	\$ 100,000.00
2	Bidding & Negotiating	0.2%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services	3.0%	HR	\$ 113,400.00	\$ 113,400.00
4	Topographic & Property Survey	0.5%	EST	\$ 20,000.00	\$ 20,000.00
5	Funding and Administrative Services	0.3%	EST	\$ 12,000.00	\$ 12,000.00
5	Permitting	0.3%	EST	\$ 10,000.00	\$ 10,000.00
6	Environmental (Including Biological and Archeological) Report	0.9%	EST	\$ 35,000.00	\$ 35,000.00
8	BLM ROW Negotiation (SF299 Application & POD)	0.3%	EST	\$ 10,000.00	\$ 10,000.00
9	Miscellaneous Engineering Services	0.5%	EST	\$ 20,000.00	\$ 20,000.00
SUBTOTAL					\$ 392,900.00
TOTAL PROJECT COST					\$ 3,793,500.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost

Hildale Groundwater Project PH II
 Hildale City

 18-Oct-23
 BCW/tcd

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 152,000.00	\$ 152,000.00
2	Pre-Construction DVD & Project Sign	1	LS	\$ 1,500.00	\$ 1,500.00
3	Traffic Control	1	LS	\$ 5,000.00	\$ 5,000.00
4	Subsurface Investigation	4	HR	\$ 250.00	\$ 1,000.00
5	Materials Sampling & Testing	1	LS	\$ 7,500.00	\$ 7,500.00
6	Dust Control & Watering	1	LS	\$ 10,000.00	\$ 10,000.00
7	Construction Staking	1	LS	\$ 10,000.00	\$ 10,000.00
8	Erosion Control Compliance	1	LS	\$ 7,500.00	\$ 7,500.00
9	Geophysical Survey	1	LS	\$ 23,000.00	\$ 23,000.00
10	Access and Drill Pad Construction	1	LS	\$ 130,000.00	\$ 130,000.00
11	Conductor Casing and Seal	100	LF	\$ 650.00	\$ 65,000.00
12	Drill 12" Pilot Borehole	650	LF	\$ 175.00	\$ 113,750.00
13	Drill 20" Reamed Borehole	650	LF	\$ 123.00	\$ 79,950.00
14	Geophysical Logging	1	LS	\$ 9,000.00	\$ 9,000.00
15	Caliper	1	LS	\$ 6,500.00	\$ 6,500.00
16	Well Installation - 12" Steel Casing	550	LF	\$ 100.00	\$ 55,000.00
17	Well Installation - 12" SS Screen 70 Slot	200	LF	\$ 350.00	\$ 70,000.00
18	Installation of Gravel Pack - 8-12	600	LF	\$ 115.00	\$ 69,000.00
19	Installation of Annular Grout Seal	150	LF	\$ 115.00	\$ 17,250.00
20	Initial Well Development	40	HR	\$ 750.00	\$ 30,000.00
21	Install Pump for Development and Testing	1	LS	\$ 42,000.00	\$ 42,000.00
22	Well Development by pumping	80	HR	\$ 425.00	\$ 34,000.00
23	Misc. Well and Pump Testing	1	LS	\$ 10,000.00	\$ 10,000.00
24	Well Disinfecting	1	LS	\$ 5,000.00	\$ 5,000.00
25	Well Head	1	LS	\$ 2,500.00	\$ 2,500.00
26	Well Capping	1	LS	\$ 750.00	\$ 750.00
27	Roadway Restoration	50,400	SF	\$ 7.75	\$ 390,600.00
28	8" PVC (C900) Line, Fitting, Tracer Wire, Bedding, & Backfill	8,400	LF	\$ 65.00	\$ 546,000.00
29	8" Gate Valve Assembly	9	EA	\$ 2,900.00	\$ 26,100.00
30	Misc. Connections, Fittings and Tie-ins	1	LS	\$ 15,000.00	\$ 15,000.00
31	Water Right Procurement	1	LS	\$ 1,300,000.00	\$ 1,300,000.00
				SUBTOTAL	\$ 3,234,900.00
				CONTINGENCY	20% \$ 647,000.00
				CONSTRUCTION TOTAL	\$ 3,881,900.00
INCIDENTALS					
1	Engineering Design	2.8%	LS	\$ 120,000.00	\$ 120,000.00
2	Bidding & Negotiating	0.2%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services	2.3%	HR	\$ 96,700.00	\$ 96,700.00
4	Topographic & Property Survey	0.5%	EST	\$ 22,000.00	\$ 22,000.00
5	Funding and Administrative Services	0.3%	EST	\$ 12,000.00	\$ 12,000.00
6	Permitting	0.2%	EST	\$ 10,000.00	\$ 10,000.00
7	Environmental (Including Biological and Archeological) Report	0.9%	EST	\$ 40,000.00	\$ 40,000.00
8	BLM ROW Negotiation (SF299 Application & POD)	0.2%	EST	\$ 10,000.00	\$ 10,000.00
9	Miscellaneous Engineering Services	0.5%	EST	\$ 20,000.00	\$ 20,000.00
				SUBTOTAL	\$ 338,200.00
				TOTAL PROJECT COST	\$ 4,220,100.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost

 Hildale Groundwater Project PH III
 Hildale City

 18-Oct-23
 BCW/tcd

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 110,000.00	\$ 110,000.00
2	Pre-Construction DVD & Project Sign	1	LS	\$ 1,500.00	\$ 1,500.00
3	Traffic Control	1	LS	\$ 5,000.00	\$ 5,000.00
4	Subsurface Investigation	4	HR	\$ 250.00	\$ 1,000.00
5	Materials Sampling & Testing	1	LS	\$ 7,500.00	\$ 7,500.00
6	Dust Control & Watering	1	LS	\$ 10,000.00	\$ 10,000.00
7	Construction Staking	1	LS	\$ 10,000.00	\$ 10,000.00
8	Erosion Control Compliance	1	LS	\$ 7,500.00	\$ 7,500.00
9	Geophysical Survey	1	LS	\$ 23,000.00	\$ 23,000.00
10	Access and Drill Pad Construction	1	LS	\$ 130,000.00	\$ 130,000.00
11	Conductor Casing and Seal	100	LF	\$ 650.00	\$ 65,000.00
12	Drill 12" Pilot Borehole	600	LF	\$ 175.00	\$ 105,000.00
13	Drill 20" Reamed Borehole	600	LF	\$ 123.00	\$ 73,800.00
14	Geophysical Logging	1	LS	\$ 9,000.00	\$ 9,000.00
15	Caliper	1	LS	\$ 6,500.00	\$ 6,500.00
16	Well Installation - 12" Steel Casing	500	LF	\$ 170.00	\$ 85,000.00
17	Well Installation - 12" SS Screen 70 Slot	200	LF	\$ 350.00	\$ 70,000.00
18	Installation of Gravel Pack - 8-12	550	LF	\$ 115.00	\$ 63,250.00
19	Installation of Annular Grout Seal	150	LF	\$ 115.00	\$ 17,250.00
20	Initial Well Development	40	HR	\$ 750.00	\$ 30,000.00
21	Install Pump for Development and Testing	1	LS	\$ 42,000.00	\$ 42,000.00
22	Well Development by pumping	80	HR	\$ 425.00	\$ 34,000.00
23	Misc. Well and Pump Testing	1	LS	\$ 10,000.00	\$ 10,000.00
24	Well Disinfecting	1	LS	\$ 5,000.00	\$ 5,000.00
25	Well Head	1	LS	\$ 2,500.00	\$ 2,500.00
26	Well Capping	1	LS	\$ 750.00	\$ 750.00
27	Roadway Restoration	39,000	SF	\$ 8.00	\$ 312,000.00
28	8" PVC (C900) Line, Fitting, Tracer Wire, Bedding, & Backfill	6,500	LF	\$ 65.00	\$ 422,500.00
29	8" Gate Valve Assembly	8	EA	\$ 2,900.00	\$ 23,200.00
30	Misc. Connections, Fittings and Tie-ins	1	LS	\$ 20,000.00	\$ 20,000.00
31	Water Right Procurement	1	LS	\$ 650,000.00	\$ 650,000.00
				SUBTOTAL	\$ 2,352,250.00
				CONTINGENCY	20% \$ 470,500.00
				CONSTRUCTION TOTAL	\$ 2,822,800.00
INCIDENTALS					
1	Engineering Design	3.2%	LS	\$ 100,000.00	\$ 100,000.00
2	Bidding & Negotiating	0.2%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services	2.2%	HR	\$ 68,100.00	\$ 68,100.00
4	Topographic & Property Survey	0.6%	EST	\$ 20,000.00	\$ 20,000.00
5	Funding and Administrative Services	0.4%	EST	\$ 12,000.00	\$ 12,000.00
6	Permitting	0.3%	EST	\$ 10,000.00	\$ 10,000.00
7	Environmental (Including Biological and Archeological) Report	1.1%	EST	\$ 35,000.00	\$ 35,000.00
8	BLM ROW Negotiation (SF299 Application & POD)	0.3%	EST	\$ 10,000.00	\$ 10,000.00
9	Miscellaneous Engineering Services	0.6%	EST	\$ 20,000.00	\$ 20,000.00
				SUBTOTAL	\$ 282,600.00
				TOTAL PROJECT COST	\$ 3,105,400.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.



Engineer's Opinion of Probable Cost

AZ Well Fields
Hildale 11-Oct-23
MCG/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION (ONE WELL)					
1	Mobilization	5%	LS	\$ 16,100.00	\$ 16,100.00
2	Traffic Control	1	LS	\$ 2,000.00	\$ 2,000.00
3	SWPPP Compliance	1	LS	\$ 2,000.00	\$ 2,000.00
4	Dust Control & Watering	1	LS	\$ 2,000.00	\$ 2,000.00
5	Subsurface Investigation	10	HR	\$ 40.00	\$ 400.00
6	Construction Staking	1	LS	\$ 500.00	\$ 500.00
7	Clearing, Grubbing, Excavation, & Demolition	1	LS	\$ 2,000.00	\$ 2,000.00
8	8" Diameter Test Well Drilling	150	LF	\$ 87.00	\$ 13,050.00
9	Develop and Pump Test Well	1	LS	\$ 17,400.00	\$ 17,400.00
10	Water Sampling (Full Drinking Water Standard)	1	EA	\$ 26,000.00	\$ 26,000.00
11	Furnish and Install Conductor Casing (Production Well)	1	LS	\$ 7,800.00	\$ 7,800.00
12	20" Diameter Production Well Drilling	150	LF	\$ 160.00	\$ 24,000.00
13	12" Diameter Casing	100	LF	\$ 52.00	\$ 5,200.00
14	12" Diameter Stainless Steel Screen	50	LF	\$ 350.00	\$ 17,500.00
15	3" Galvanized Gravel Pack Tremie Pipe	60	LF	\$ 16.00	\$ 960.00
16	2" Conduit for Level Indicator	150	LF	\$ 7.00	\$ 1,050.00
17	Concrete Grout and Seal	3	CY	\$ 1,200.00	\$ 3,600.00
18	Furnish and Install Pea Gravel (Disinfected)	3	CY	\$ 350.00	\$ 1,050.00
19	Bentonite Plug	1	LS	\$ 4,400.00	\$ 4,400.00
20	Furnish and Install Fine Silica Sand	3	CY	\$ 2,100.00	\$ 6,300.00
21	Develop Production Well	150	HR	\$ 435.00	\$ 65,250.00
22	Production Well Test Pump Equipment	1	LS	\$ 17,400.00	\$ 17,400.00
23	Test Pump Production Well	48	HR	\$ 260.00	\$ 12,480.00
24	Recovery Testing	12	HR	\$ 175.00	\$ 2,100.00
25	Disinfection and Capping	1	LS	\$ 550.00	\$ 550.00
26	Well House Building	1	LS	\$ 75,000.00	\$ 75,000.00
27	Piping to Connect to Raw Water System	1	LS	\$ 12,000.00	\$ 12,000.00
				SUBTOTAL	\$ 338,100.00
				CONTINGENCY	20%
				CONSTRUCTION TOTAL	\$ 405,700.00
INCIDENTALS					
1	Engineering Design	7.6%	LS	\$ 36,000.00	\$ 36,000.00
2	Bidding & Negotiating	1.6%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services/Miscellaneous Services	5.7%	HR	\$ 27,000.00	\$ 27,000.00
				SUBTOTAL	\$ 70,500.00
				TOTAL PROJECT COST FOR ONE WELL	\$ 476,200.00
0-5 YEAR WELL FIELD					
	Number of New Wells	8	EA	\$ 476,200.00	\$ 3,809,600.00
				TOTAL PROJECT COST AZ 0-5 YEAR WELL FIELD	\$ 3,809,600.00
6-10 YEAR WELL FIELD					
	Number of New Wells	9	EA	\$ 476,200.00	\$ 4,285,800.00
				TOTAL PROJECT COST AZ 6-10 YEAR WELL FIELD	\$ 4,285,800.00
11-20 YEAR WELL FIELD					
	Number of New Wells	23	EA	\$ 476,200.00	\$ 10,952,600.00
				TOTAL PROJECT COST AZ 11-20 YEAR WELL FIELD	\$ 10,952,600.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost

 UT Well Fields
 Hildale

 11-Oct-23
 MCG/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION (ONE WELL)					
1	Mobilization	5%	LS	\$ 16,099.50	\$ 16,099.50
2	Traffic Control	1	LS	\$ 2,000.00	\$ 2,000.00
3	SWPPP Compliance	1	LS	\$ 2,000.00	\$ 2,000.00
4	Dust Control & Watering	1	LS	\$ 2,000.00	\$ 2,000.00
5	Subsurface Investigation	10	HR	\$ 40.00	\$ 400.00
6	Construction Staking	1	LS	\$ 500.00	\$ 500.00
7	Clearing, Grubbing, Excavation, & Demolition	1	LS	\$ 2,000.00	\$ 2,000.00
8	8" Diameter Test Well Drilling	150	LF	\$ 87.00	\$ 13,050.00
9	Develop and Pump Test Well	1	LS	\$ 17,400.00	\$ 17,400.00
10	Water Sampling (Full Drinking Water Standard)	1	EA	\$ 26,000.00	\$ 26,000.00
11	Furnish and Install Conductor Casing (Production Well)	1	LS	\$ 7,800.00	\$ 7,800.00
12	20" Diameter Production Well Drilling	150	LF	\$ 160.00	\$ 24,000.00
13	12" Diameter Casing	100	LF	\$ 52.00	\$ 5,200.00
14	12" Diameter Stainless Steel Screen	50	LF	\$ 350.00	\$ 17,500.00
15	3" Galvanized Gravel Pack Tremie Pipe	60	LF	\$ 16.00	\$ 960.00
16	2" Conduit for Level Indicator	150	LF	\$ 7.00	\$ 1,050.00
17	Concrete Grout and Seal	3	CY	\$ 1,200.00	\$ 3,600.00
18	Furnish and Install Pea Gravel (Disinfected)	3	CY	\$ 350.00	\$ 1,050.00
19	Bentonite Plug	1	LS	\$ 4,400.00	\$ 4,400.00
20	Furnish and Install Fine Silica Sand	3	CY	\$ 2,100.00	\$ 6,300.00
21	Develop Production Well	150	HR	\$ 435.00	\$ 65,250.00
22	Production Well Test Pump Equipment	1	LS	\$ 17,400.00	\$ 17,400.00
23	Test Pump Production Well	48	HR	\$ 260.00	\$ 12,480.00
24	Recovery Testing	12	HR	\$ 175.00	\$ 2,100.00
25	Disinfection and Capping	1	LS	\$ 550.00	\$ 550.00
26	Well House Building	1	LS	\$ 75,000.00	\$ 75,000.00
27	Piping to Connect to Raw Water System	1	LS	\$ 12,000.00	\$ 12,000.00
SUBTOTAL					\$ 338,089.50
CONTINGENCY				20%	\$ 67,617.90
CONSTRUCTION TOTAL					\$ 405,707.00
INCIDENTALS					
1	Engineering Design	7.6%	LS	\$ 36,019.43	\$ 36,019.43
2	Bidding & Negotiating	1.6%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services/Miscellaneous Services	5.7%	HR	\$ 27,000.00	\$ 27,000.00
SUBTOTAL					\$ 70,519.43
TOTAL PROJECT COST FOR ONE WELL					\$ 476,200.00
0-5 YEAR WELL FIELD					
	Number of New Wells	8	EA	\$ 476,200.00	\$ 3,809,600.00
	Purchase Water Rights	290	AC-FT	\$ 5,300.00	\$ 1,538,707.98
TOTAL PROJECT COST AZ 0-5 YEAR WELL FIELD					\$ 5,348,300.00
6-10 YEAR WELL FIELD					
	Number of New Wells	9	EA	\$ 476,200.00	\$ 4,285,800.00
	Purchase Water Rights	387	AC-FT	\$ 5,300.00	\$ 2,051,610.64
TOTAL PROJECT COST AZ 6-10 YEAR WELL FIELD					\$ 6,337,400.00
11-20 YEAR WELL FIELD					
	Number of New Wells	23	EA	\$ 476,200.00	\$ 10,952,600.00
	Purchase Water Rights	968	AC-FT	\$ 5,300.00	\$ 5,129,026.59
TOTAL PROJECT COST AZ 11-20 YEAR WELL FIELD					\$ 16,081,600.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost					
Sandhill Tank 1 Hildale City					18-Oct-23 BCW/tcd
NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 211,800.00	\$ 211,800.00
2	Traffic Control	1	LS	\$ 5,000.00	\$ 5,000.00
3	Pre-Construction DVD & Project Sign	1	LS	\$ 1,500.00	\$ 1,500.00
4	Dust Control & Watering	1	LS	\$ 10,000.00	\$ 10,000.00
5	Subsurface Investigation	20	HR	\$ 350.00	\$ 7,000.00
6	Restore Surface Improvements	1	LS	\$ 10,000.00	\$ 10,000.00
7	Construction Staking	1	LS	\$ 12,000.00	\$ 12,000.00
8	Materials Sampling & Testing	1	LS	\$ 35,000.00	\$ 35,000.00
9	Excavation & Demolition	1	LS	\$ 25,000.00	\$ 25,000.00
10	Earthwork & Grading	1	LS	\$ 400,000.00	\$ 400,000.00
11	2MG Concrete Storage Tank	1	LS	\$ 2,800,000.00	\$ 2,800,000.00
12	Tank Site Appurtenances	1	LS	\$ 75,000.00	\$ 75,000.00
13	Metering Station	1	LS	\$ 40,000.00	\$ 40,000.00
14	16" PVC (C900), Fittings, Installation, Pipe Bedding, Trench Backfill	1,360	LF	\$ 120.00	\$ 163,200.00
15	16" Gate Valve Assembly	4	EA	\$ 6,750.00	\$ 27,000.00
16	12" PVC (C900), Fittings, Installation, Pipe Bedding, Trench Backfill	2,264	LF	\$ 95.00	\$ 215,080.00
17	12" Gate Valve Assembly	10	EA	\$ 6,500.00	\$ 65,000.00
18	Misc. Connections, Fittings and Tie-ins	1	LS	\$ 30,000.00	\$ 30,000.00
19	Surface Restoration	1	LS	\$ 15,000.00	\$ 15,000.00
20	Elm Street PRV and Vault	1	EA	\$ 100,000.00	\$ 100,000.00
21	Valving and Piping to Create New Pressure Zone	1	LS	\$ 45,000.00	\$ 45,000.00
22	Misc Electrical and SCADA Improvements	1	LS	\$ 20.00	\$ 20.00
23	Tank Access Road	28,992	SF	\$ 2.75	\$ 79,728.00
24	Fence and Gate	1	LS	\$ 75,000.00	\$ 75,000.00
SUBTOTAL					\$ 4,447,328.00
				CONTINGENCY	\$ 889,500.00
				CONSTRUCTION TOTAL	\$ 5,336,800.00
INCIDENTALS					
1	Engineering Design	3.4%	LS	\$ 200,000.00	\$ 200,000.00
2	Bidding & Negotiating	0.1%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services	4.5%	HR	\$ 266,800.00	\$ 266,800.00
4	Topographic & Property Survey	0.3%	EST	\$ 15,000.00	\$ 15,000.00
5	Geotechnical Report	0.2%	EST	\$ 10,000.00	\$ 10,000.00
6	Funding and Administrative Services	0.2%	EST	\$ 12,000.00	\$ 12,000.00
7	Permitting	0.2%	EST	\$ 10,000.00	\$ 10,000.00
8	Environmental (Including Biological and Archeological) Report	0.5%	EST	\$ 30,000.00	\$ 30,000.00
9	SCADA Design	0.3%	EST	\$ 15,000.00	\$ 15,000.00
10	BLM ROW Negotiation (SF299 Application & POD)	0.2%	EST	\$ 10,000.00	\$ 10,000.00
11	Miscellaneous Engineering Services	0.4%	EST	\$ 25,000.00	\$ 25,000.00
SUBTOTAL					\$ 601,300.00
TOTAL PROJECT COST					\$ 5,938,100.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost

 Trailhead Tank
 Hildale City

 12-Oct-23
 MCG/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 100,700.00	\$ 100,700.00
2	Traffic Control	1	LS	\$ 5,000.00	\$ 5,000.00
3	Pre-Construction DVD & Project Sign	1	LS	\$ 1,500.00	\$ 1,500.00
4	Dust Control & Watering	1	LS	\$ 10,000.00	\$ 10,000.00
5	Subsurface Investigation	30	HR	\$ 350.00	\$ 10,500.00
6	Restore Surface Improvements	1	LS	\$ 7,800.00	\$ 7,800.00
7	Construction Staking	1	LS	\$ 5,000.00	\$ 5,000.00
8	Materials Sampling & Testing	1	LS	\$ 35,000.00	\$ 35,000.00
9	Earthwork	1	LS	\$ 200,000.00	\$ 200,000.00
10	500K Concrete Storage Tank	1	LS	\$ 810,000.00	\$ 810,000.00
11	Tank Site Appurtenances	1	LS	\$ 100,000.00	\$ 100,000.00
12	Fence and Gate	1	LS	\$ 20,000.00	\$ 20,000.00
13	Metering Station	1	LS	\$ 34,000.00	\$ 34,000.00
14	Tank Access Rd	5,500	SF	\$ 2.00	\$ 11,000.00
15	10" PVC (C900), Fittings, Installation, Pipe Bedding, Trench Backfill	8,000	LF	\$ 75.00	\$ 600,000.00
16	10" Gate Valve Assembly	5	EA	\$ 5,000.00	\$ 25,000.00
17	Misc. Connections, Fittings, and Tie-Ins	1	LS	\$ 20,000.00	\$ 20,000.00
18	Misc Electrical and SCADA Improvements	1	LS	\$ 20,000.00	\$ 20,000.00
19	PRV and Vault	1	EA	\$ 100,000.00	\$ 100,000.00
SUBTOTAL					\$ 2,115,500.00
				CONTINGENCY	20% \$ 423,100.00
CONSTRUCTION TOTAL					\$ 2,538,600.00
INCIDENTALS					
1	Engineering Design	3.3%	LS	\$ 95,000.00	\$ 95,000.00
2	Bidding & Negotiating	0.3%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services	4.4%	HR	\$ 126,900.00	\$ 126,900.00
4	Topographic & Property Survey	0.3%	EST	\$ 8,000.00	\$ 8,000.00
5	Geotechnical Report	0.3%	EST	\$ 10,000.00	\$ 10,000.00
6	Funding and Administrative Services	0.4%	EST	\$ 12,000.00	\$ 12,000.00
7	Permitting	0.3%	EST	\$ 10,000.00	\$ 10,000.00
10	Environmental (Including Biological and Archeological) Report	0.9%	EST	\$ 25,000.00	\$ 25,000.00
11	BLM ROW Negotiation (SF299 Application & POD)	0.3%	EST	\$ 10,000.00	\$ 10,000.00
39	Miscellaneous Professional Services	0.7%	EST	\$ 20,000.00	\$ 20,000.00
SUBTOTAL					\$ 336,900.00
TOTAL PROJECT COST					\$ 2,875,500.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.



Colorado City

11 North 300 West, Washington Utah 84780
 Tel 435.652.8450 | FAX 435.652.8416

Engineer's Opinion of Probable Cost

South Concrete Tank
 Hildale City

12-Oct-23
 MCG/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 154,900.00	\$ 154,900.00
2	Traffic Control	1	LS	\$ 2,000.00	\$ 2,000.00
3	Pre-Construction DVD & Project Sign	1	LS	\$ 1,500.00	\$ 1,500.00
4	Dust Control & Watering	1	LS	\$ 10,000.00	\$ 10,000.00
5	Subsurface Investigation	30	HR	\$ 350.00	\$ 10,500.00
6	Restore Surface Improvements	1	LS	\$ 10,000.00	\$ 10,000.00
7	Construction Staking	1	LS	\$ 12,000.00	\$ 12,000.00
8	Materials Sampling & Testing	1	LS	\$ 35,000.00	\$ 35,000.00
9	Excavation & Demolition	1	LS	\$ 25,000.00	\$ 25,000.00
10	Earthwork & Grading	1	LS	\$ 400,000.00	\$ 400,000.00
11	1MG Concrete Storage Tank	1	LS	\$ 1,500,000.00	\$ 1,500,000.00
12	Tank Site Appurtenances	1	LS	\$ 250,000.00	\$ 250,000.00
13	Metering Station	1	LS	\$ 40,000.00	\$ 40,000.00
14	12" PVC (C900), Fittings, Installation, Pipe Bedding, Trench Backfill	4,000	LF	\$ 110.00	\$ 440,000.00
15	12" Gate Valve Assembly	10	EA	\$ 6,750.00	\$ 67,500.00
16	Misc. Connections, Fittings and Tie-ins	1	LS	\$ 30,000.00	\$ 30,000.00
17	Surface Restoration	1	LS	\$ 15,000.00	\$ 15,000.00
18	PRV and Vault	1	EA	\$ 100,000.00	\$ 100,000.00
19	Valving and Piping to Create New Pressure Zone	1	LS	\$ 45,000.00	\$ 45,000.00
20	Misc Electrical and SCADA Improvements	1	LS	\$ 20,000.00	\$ 20,000.00
21	Tank Access Road	32,000	SF	\$ 2.00	\$ 64,000.00
22	Fence and Gate	1	LS	\$ 20,000.00	\$ 20,000.00
SUBTOTAL					\$ 3,252,400.00
CONTINGENCY				20%	\$ 650,500.00
CONSTRUCTION TOTAL					\$ 3,902,900.00
INCIDENTALS					
1	Engineering Design	4.5%	LS	\$ 200,000.00	\$ 200,000.00
2	Bidding & Negotiating	0.2%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services	4.4%	HR	\$ 195,100.00	\$ 195,100.00
4	Topographic & Property Survey	0.3%	EST	\$ 15,000.00	\$ 15,000.00
5	Geotechnical Report	0.2%	EST	\$ 10,000.00	\$ 10,000.00
6	Funding and Administrative Services	0.3%	EST	\$ 12,000.00	\$ 12,000.00
7	Permitting	0.2%	EST	\$ 10,000.00	\$ 10,000.00
8	Environmental (Including Biological and Archeological) Report	0.7%	EST	\$ 30,000.00	\$ 30,000.00
9	SCADA Design	0.3%	EST	\$ 15,000.00	\$ 15,000.00
10	BLM ROW Negotiation (SF299 Application & POD)	0.2%	EST	\$ 10,000.00	\$ 10,000.00
11	Miscellaneous Engineering Services	0.6%	EST	\$ 25,000.00	\$ 25,000.00
SUBTOTAL					\$ 529,600.00
TOTAL PROJECT COST					\$ 4,432,500.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost

Sandhill Tank 2
Hildale City

18-Oct-23
MCG/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 232,100.00	\$ 232,100.00
2	Traffic Control	1	LS	\$ 2,000.00	\$ 2,000.00
3	Pre-Construction DVD & Project Sign	1	LS	\$ 1,500.00	\$ 1,500.00
4	Dust Control & Watering	1	LS	\$ 10,000.00	\$ 10,000.00
5	Subsurface Investigation	30	HR	\$ 350.00	\$ 10,500.00
6	Restore Surface Improvements	1	LS	\$ 10,000.00	\$ 10,000.00
7	Construction Staking	1	LS	\$ 12,000.00	\$ 12,000.00
8	Materials Sampling & Testing	1	LS	\$ 35,000.00	\$ 35,000.00
9	Excavation & Demolition	1	LS	\$ 25,000.00	\$ 25,000.00
10	Earthwork & Grading	1	LS	\$ 400,000.00	\$ 400,000.00
11	2MG Concrete Storage Tank	1	LS	\$ 2,800,000.00	\$ 2,800,000.00
12	Tank Site Appurtenances	1	LS	\$ 250,000.00	\$ 250,000.00
13	Metering Station	1	LS	\$ 40,000.00	\$ 40,000.00
14	24" PVC (C900), Fittings, Installation, Pipe Bedding, Trench Backfill	2,700	LF	\$ 150.00	\$ 405,000.00
15	24" Gate Valve Assembly	6	EA	\$ 9,500.00	\$ 57,000.00
16	16" PVC (C900), Fittings, Installation, Pipe Bedding, Trench Backfill	2,350	LF	\$ 120.00	\$ 282,000.00
17	16" Gate Valve Assembly	5	EA	\$ 6,750.00	\$ 33,750.00
18	Misc. Connections, Fittings and Tie-ins	1	LS	\$ 30,000.00	\$ 30,000.00
19	Surface Restoration	1	LS	\$ 15,000.00	\$ 15,000.00
20	PRV and Vault	1	EA	\$ 100,000.00	\$ 100,000.00
21	Valving and Piping to Create New Pressure Zone	1	LS	\$ 45,000.00	\$ 45,000.00
22	Misc Electrical and SCADA Improvements	1	LS	\$ 20,000.00	\$ 20,000.00
23	Tank Access Road	18,800	SF	\$ 2.00	\$ 37,600.00
24	Fence and Gate	1	LS	\$ 20,000.00	\$ 20,000.00
SUBTOTAL					\$ 4,873,450.00
CONTINGENCY					20% \$ 974,700.00
CONSTRUCTION TOTAL					\$ 5,848,200.00
INCIDENTALS					
1	Engineering Design	3.1%	LS	\$ 200,000.00	\$ 200,000.00
2	Bidding & Negotiating	0.1%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services	4.5%	HR	\$ 292,400.00	\$ 292,400.00
4	Topographic & Property Survey	0.2%	EST	\$ 15,000.00	\$ 15,000.00
5	Geotechnical Report	0.2%	EST	\$ 10,000.00	\$ 10,000.00
6	Funding and Administrative Services	0.2%	EST	\$ 12,000.00	\$ 12,000.00
7	Permitting	0.2%	EST	\$ 10,000.00	\$ 10,000.00
8	Environmental (Including Biological and Archeological) Report	0.5%	EST	\$ 30,000.00	\$ 30,000.00
9	SCADA Design	0.2%	EST	\$ 15,000.00	\$ 15,000.00
10	BLM ROW Negotiation (SF299 Application & POD)	0.2%	EST	\$ 10,000.00	\$ 10,000.00
11	Miscellaneous Engineering Services	0.4%	EST	\$ 25,000.00	\$ 25,000.00
SUBTOTAL					\$ 626,900.00
TOTAL PROJECT COST					\$ 6,475,100.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost

Raw Water Transmission Line 18-Oct-23
 Hildale City BCW/tcd

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 37,800.00	\$ 37,800.00
2	Traffic Control	1	LS	\$ 10,000.00	\$ 10,000.00
3	Dust Control & Watering	1	LS	\$ 10,000.00	\$ 10,000.00
4	Subsurface Investigation	10	HR	\$ 250.00	\$ 2,500.00
5	Restore Surface Improvements	1	LS	\$ 15,000.00	\$ 15,000.00
6	Construction Staking	1	LS	\$ 10,000.00	\$ 10,000.00
7	Erosion Control Compliance	1	LS	\$ 5,000.00	\$ 5,000.00
8	Materials Sampling & Testing	1	LS	\$ 12,500.00	\$ 12,500.00
9	Excavation & Demolition	1	LS	\$ 20,000.00	\$ 20,000.00
10	12" PVC (C900) Line, Fitting, Tracer Wire, Bedding, & Backfill	2,500	LF	\$ 110.00	\$ 275,000.00
11	12" Gate Valve Assembly	8	EA	\$ 6,500.00	\$ 52,000.00
12	Pavement Restoration	26,400	SF	\$ 7.75	\$ 204,600.00
13	Access/Cleanout Structure	4	EA	\$ 5,000.00	\$ 20,000.00
14	Misc. Fittings, Connections, and Tie-Ins	1	LS	\$ 20,000.00	\$ 20,000.00
15	Electrical Conduit	2,500	LF	\$ 40.00	\$ 100,000.00
SUBTOTAL					\$ 794,400.00
				CONTINGENCY 20%	\$ 158,900.00
CONSTRUCTION TOTAL					\$ 953,300.00
INCIDENTALS					
1	Engineering Design	4.6%	LS	\$ 50,000.00	\$ 50,000.00
2	Bidding & Negotiating	0.7%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services	3.6%	HR	\$ 39,700.00	\$ 39,700.00
4	Topographic & Property Survey	1.4%	EST	\$ 15,000.00	\$ 15,000.00
5	Permitting	0.5%	EST	\$ 5,000.00	\$ 5,000.00
6	Funding and Administrative Services	1.1%	EST	\$ 12,000.00	\$ 12,000.00
7	Miscellaneous Engineering Services	0.9%	EST	\$ 10,000.00	\$ 10,000.00
SUBTOTAL					\$ 139,200.00
TOTAL PROJECT COST					\$ 1,092,500.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost

Small Treatment Plant (1,000 gpm)
Hildale City

12-Oct-23
MCG/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 169,300.00	\$ 169,300.00
2	Pilot Study	1	LS	\$ 75,000.00	\$ 75,000.00
3	Construction Staking	1	LS	\$ 15,000.00	\$ 15,000.00
4	Dust Control & Watering	1	LS	\$ 20,000.00	\$ 20,000.00
5	Package Pressure Filtration System	1	LS	\$ 900,000.00	\$ 900,000.00
6	Site Earthwork	1	LS	\$ 100,000.00	\$ 100,000.00
7	Water Treatment Plant Building & Appurtenances	1	LS	\$ 800,000.00	\$ 800,000.00
8	Chlorinator System	1	LS	\$ 100,000.00	\$ 100,000.00
9	Chlorine Contact Chamber	1	LS	\$ 200,000.00	\$ 200,000.00
10	Effluent Pump Station	1	LS	\$ 250,000.00	\$ 250,000.00
11	Electrical Systems	1	LS	\$ 350,000.00	\$ 350,000.00
12	Mechanical System	1	LS	\$ 200,000.00	\$ 200,000.00
13	Miscellaneous Piping to and from Site	1	LS	\$ 150,000.00	\$ 150,000.00
14	Miscellaneous Valves	1	LS	\$ 75,000.00	\$ 75,000.00
15	Miscellaneous Site Improvements (parking, fence, gate, etc.)	1	LS	\$ 100,000.00	\$ 100,000.00
16	SCADA Improvements	1	LS	\$ 50,000.00	\$ 50,000.00
				SUBTOTAL	\$ 3,554,300.00
				CONTINGENCY	20%
				CONSTRUCTION TOTAL	\$ 4,265,200.00
INCIDENTALS					
1	Engineering Design	5.2%	LS	\$ 255,900.00	\$ 255,900.00
2	Bidding & Negotiating	0.2%	HR	\$ 10,000.00	\$ 10,000.00
3	Engineering Construction Services	4.4%	HR	\$ 213,300.00	\$ 213,300.00
4	Topographic & Property Survey	0.3%	EST	\$ 15,000.00	\$ 15,000.00
5	Geotechnical Report	0.2%	EST	\$ 10,000.00	\$ 10,000.00
6	Funding and Administrative Services	0.4%	EST	\$ 20,000.00	\$ 20,000.00
7	Permitting	0.3%	EST	\$ 12,500.00	\$ 12,500.00
8	SCADA Design	0.5%	EST	\$ 25,000.00	\$ 25,000.00
9	Miscellaneous Professional Services	1.0%	EST	\$ 50,000.00	\$ 50,000.00
				SUBTOTAL	\$ 611,700.00
				TOTAL PROJECT COST	\$ 4,876,900.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost

Additional Treatment Capacity PH1 (2,500 gpm)
 Hildale City

12-Oct-23
 MCG/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 278,000.00	\$ 278,000.00
2	Pilot Study	1	LS	\$ 75,000.00	\$ 75,000.00
3	Construction Staking	1	LS	\$ 15,000.00	\$ 15,000.00
4	Dust Control & Watering	1	LS	\$ 20,000.00	\$ 20,000.00
5	Package Pressure Filtration System	1	LS	\$ 2,000,000.00	\$ 2,000,000.00
6	Site Earthwork	1	LS	\$ 175,000.00	\$ 175,000.00
7	Water Treatment Plant Building & Appurtenances	1	LS	\$ 1,400,000.00	\$ 1,400,000.00
8	Chlorinator System	1	LS	\$ 100,000.00	\$ 100,000.00
9	Chlorine Contact Chamber	1	LS	\$ 300,000.00	\$ 300,000.00
10	Effluent Pump Station	1	LS	\$ 325,000.00	\$ 325,000.00
11	Electrical Systems	1	LS	\$ 400,000.00	\$ 400,000.00
12	Mechanical System	1	LS	\$ 275,000.00	\$ 275,000.00
13	Miscellaneous Piping to and from Site	1	LS	\$ 200,000.00	\$ 200,000.00
14	Miscellaneous Valves	1	LS	\$ 100,000.00	\$ 100,000.00
15	Miscellaneous Site Improvements (parking, fence, gate, etc.)	1	LS	\$ 125,000.00	\$ 125,000.00
16	SCADA Improvements	1	LS	\$ 50,000.00	\$ 50,000.00
SUBTOTAL					\$ 5,838,000.00
CONTINGENCY				20%	\$ 1,167,600.00
CONSTRUCTION TOTAL					\$ 7,005,600.00
INCIDENTALS					
1	Engineering Design	5.5%	LS	\$ 438,800.00	\$ 438,800.00
2	Bidding & Negotiating	0.1%	HR	\$ 10,000.00	\$ 10,000.00
3	Engineering Construction Services	4.4%	HR	\$ 350,300.00	\$ 350,300.00
4	Topographic & Property Survey	0.2%	EST	\$ 15,000.00	\$ 15,000.00
5	Geotechnical Report	0.1%	EST	\$ 10,000.00	\$ 10,000.00
6	Funding and Administrative Services	0.3%	EST	\$ 20,000.00	\$ 20,000.00
7	Permitting	0.2%	EST	\$ 12,500.00	\$ 12,500.00
8	SCADA Design	0.3%	EST	\$ 25,000.00	\$ 25,000.00
9	Miscellaneous Engineering Services	0.6%	EST	\$ 50,000.00	\$ 50,000.00
SUBTOTAL					\$ 931,600.00
TOTAL PROJECT COST					\$ 7,937,200.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost

Additional Treatment Capacity PH2 (4,000 gpm)
Hildale City

12-Oct-23
MCG/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 363,300.00	\$ 363,300.00
2	Pilot Study	1	LS	\$ 75,000.00	\$ 75,000.00
3	Construction Staking	1	LS	\$ 15,000.00	\$ 15,000.00
4	Dust Control & Watering	1	LS	\$ 20,000.00	\$ 20,000.00
5	Package Pressure Filtration System	1	LS	\$ 3,000,000.00	\$ 3,000,000.00
6	Site Earthwork	1	LS	\$ 200,000.00	\$ 200,000.00
7	Water Treatment Plant Building & Appurtenances	1	LS	\$ 1,750,000.00	\$ 1,750,000.00
8	Chlorinator System	1	LS	\$ 100,000.00	\$ 100,000.00
9	Chlorine Contact Chamber	1	LS	\$ 375,000.00	\$ 375,000.00
10	Effluent Pump Station	1	LS	\$ 425,000.00	\$ 425,000.00
11	Electrical Systems	1	LS	\$ 450,000.00	\$ 450,000.00
12	Mechanical System	1	LS	\$ 315,000.00	\$ 315,000.00
13	Miscellaneous Piping to and from Site	1	LS	\$ 225,000.00	\$ 225,000.00
14	Miscellaneous Valves	1	LS	\$ 115,000.00	\$ 115,000.00
15	Miscellaneous Site Improvements (parking, fence, gate, etc.)	1	LS	\$ 150,000.00	\$ 150,000.00
16	SCADA Improvements	1	LS	\$ 50,000.00	\$ 50,000.00
SUBTOTAL					\$ 7,628,300.00
				CONTINGENCY	20%
CONSTRUCTION TOTAL					\$ 9,154,000.00
INCIDENTALS					
1	Engineering Design	5.4%	LS	\$ 558,000.00	\$ 558,000.00
2	Bidding & Negotiating	0.1%	HR	\$ 10,000.00	\$ 10,000.00
3	Engineering Construction Services	4.4%	HR	\$ 457,700.00	\$ 457,700.00
4	Topographic & Property Survey	0.1%	EST	\$ 15,000.00	\$ 15,000.00
5	Geotechnical Report	0.1%	EST	\$ 10,000.00	\$ 10,000.00
6	Funding and Administrative Services	0.2%	EST	\$ 20,000.00	\$ 20,000.00
7	Permitting	0.1%	EST	\$ 12,500.00	\$ 12,500.00
8	SCADA Design	0.2%	EST	\$ 25,000.00	\$ 25,000.00
9	Miscellaneous Engineering Services	0.5%	EST	\$ 50,000.00	\$ 50,000.00
SUBTOTAL					\$ 1,158,200.00
TOTAL PROJECT COST					\$ 10,312,200.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost

Fire Hydrant Improvements	18-Oct-23
Hildale City	BCW/tcd

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
-----	-------------	----------	------	------------	--------

GENERAL CONSTRUCTION

1	Mobilization	5%	LS	\$ 61,700.00	\$ 61,700.00
2	Pre-Construction DVD and Project Sign	1	LS	\$ 2,500.00	\$ 2,500.00
3	Traffic Control	1	LS	\$ 10,000.00	\$ 10,000.00
4	Subsurface Investigation	24	HR	\$ 250.00	\$ 6,000.00
5	Materials Sampling & Testing	1	LS	\$ 16,000.00	\$ 16,000.00
6	Dust Control & Watering	1	LS	\$ 9,000.00	\$ 9,000.00
7	Construction Staking	1	LS	\$ 13,000.00	\$ 13,000.00
8	Erosion Control Compliance	1	LS	\$ 6,000.00	\$ 6,000.00
9	6" PVC (C900) Line, Fitting, Tracer Wire, Bedding, & Backfill	2,100	LF	\$ 50.00	\$ 105,000.00
10	6" Gate Valve Assembly	80	EA	\$ 2,000.00	\$ 160,000.00
11	8" PVC (C900) Line, Fitting, Tracer Wire, Bedding, & Backfill	2,930	LF	\$ 65.00	\$ 190,450.00
12	8" Gate Valve Assembly	8	EA	\$ 2,900.00	\$ 23,200.00
13	Fire Hydrant Assembly	78	EA	\$ 7,000.00	\$ 546,000.00
14	Restore Gravel Road	21,200	SF	\$ 3.25	\$ 68,900.00
15	Pavement Restoration	9,100	SF	\$ 7.50	\$ 68,250.00
16	Restore Surface Improvements	1	LS	\$ 10,000.00	\$ 10,000.00
SUBTOTAL					\$ 1,296,000.00
				CONTINGENCY	20% \$ 259,200.00
CONSTRUCTION TOTAL					\$ 1,555,200.00

INCIDENTALS

1	Engineering Design	4.6%	LS	\$ 79,000.00	\$ 79,000.00
2	Bidding & Negotiating	0.4%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services	3.7%	HR	\$ 64,800.00	\$ 64,800.00
4	Topographic & Property Survey	0.6%	EST	\$ 10,000.00	\$ 10,000.00
5	Funding and Administrative Services	0.7%	EST	\$ 12,000.00	\$ 12,000.00
6	Miscellaneous Engineering Services	0.3%	EST	\$ 5,000.00	\$ 5,000.00
SUBTOTAL					\$ 178,300.00
TOTAL PROJECT COST					\$ 1,733,500.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer

Engineer's Opinion of Probable Cost

 Upper Pressure Zone Improvements
 Hildale City

 17-Oct-23
 MCG/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 29,100.00	\$ 29,100.00
2	Pre-Construction DVD	1	LS	\$ 1,500.00	\$ 1,500.00
3	Traffic Control	1	LS	\$ 7,500.00	\$ 7,500.00
4	Subsurface Investigation	16	HR	\$ 250.00	\$ 4,000.00
5	Materials Sampling & Testing	1	LS	\$ 10,000.00	\$ 10,000.00
6	Dust Control & Watering	1	LS	\$ 7,500.00	\$ 7,500.00
7	Construction Staking	1	LS	\$ 7,500.00	\$ 7,500.00
8	Erosion Control Compliance	1	LS	\$ 6,000.00	\$ 6,000.00
9	8" PVC (C900) Line, Fitting, Tracer Wire, Bedding, & Backfill	5,000	LF	\$ 65.00	\$ 325,000.00
10	8" Gate Valve Assembly	14	EA	\$ 5,000.00	\$ 70,000.00
11	Disconnect and Reconnect Water Services	6	EA	\$ 2,000.00	\$ 12,000.00
12	Restore Gravel Road	30,000	SF	\$ 3.25	\$ 97,500.00
13	Restore Surface Improvements	1	LS	\$ 10,000.00	\$ 10,000.00
14	Misc. Connections, Fittings, and Tie-Ins	1	LS	\$ 10,000.00	\$ 10,000.00
15	6" Fire Hydrant Assembly	2	EA	\$ 7,000.00	\$ 14,000.00
SUBTOTAL					\$ 611,600.00
				CONTINGENCY	20%
CONSTRUCTION TOTAL					\$ 733,900.00
INCIDENTALS					
1	Engineering Design	5.3%	LS	\$ 45,000.00	\$ 45,000.00
2	Bidding & Negotiating	0.9%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services	3.6%	HR	\$ 30,600.00	\$ 30,600.00
4	Topographic & Property Survey	0.9%	EST	\$ 7,500.00	\$ 7,500.00
5	Funding and Administrative Services	1.4%	EST	\$ 12,000.00	\$ 12,000.00
6	Permitting	0.6%	EST	\$ 5,000.00	\$ 5,000.00
7	Miscellaneous Professional Services	0.6%	EST	\$ 5,000.00	\$ 5,000.00
SUBTOTAL					\$ 112,600.00
TOTAL PROJECT COST					\$ 846,500.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost

Canyon St. Line
Hildale City

17-Oct-23
MCG/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 12,400.00	\$ 12,400.00
2	Pre-Construction DVD	1	LS	\$ 1,500.00	\$ 1,500.00
3	Traffic Control	1	LS	\$ 10,000.00	\$ 10,000.00
4	Subsurface Investigation	8	HR	\$ 250.00	\$ 2,000.00
5	Materials Sampling & Testing	1	LS	\$ 10,000.00	\$ 10,000.00
6	Dust Control & Watering	1	LS	\$ 10,000.00	\$ 10,000.00
7	Construction Staking	1	LS	\$ 7,500.00	\$ 7,500.00
8	Erosion Control Compliance	1	LS	\$ 7,500.00	\$ 7,500.00
9	8" PVC (C900) Line, Fitting, Tracer Wire, Bedding, & Backfill	1,500	LF	\$ 65.00	\$ 97,500.00
10	8" Gate Valve Assembly	5	EA	\$ 5,000.00	\$ 25,000.00
11	Restore Surface Improvements	1	LS	\$ 10,000.00	\$ 10,000.00
12	Pavement Restoration	9,000	SF	\$ 6.00	\$ 54,000.00
13	Misc. Connections, Fittings, and Tie-Ins	1	LS	\$ 7,500.00	\$ 7,500.00
14	Reconnect Water Services	5	EA	\$ 1,200.00	\$ 6,000.00
SUBTOTAL					\$ 260,900.00
				CONTINGENCY 20%	\$ 52,200.00
CONSTRUCTION TOTAL					\$ 313,100.00
INCIDENTALS					
1	Engineering Design	6.4%	LS	\$ 25,000.00	\$ 25,000.00
2	Bidding & Negotiating	1.9%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services	4.7%	HR	\$ 18,300.00	\$ 18,300.00
4	Topographic & Property Survey	1.9%	EST	\$ 7,500.00	\$ 7,500.00
5	Funding and Administrative Services	2.6%	EST	\$ 10,000.00	\$ 10,000.00
6	Permitting	1.3%	EST	\$ 5,000.00	\$ 5,000.00
7	Miscellaneous Engineering Services	0.6%	EST	\$ 2,500.00	\$ 2,500.00
SUBTOTAL					\$ 75,800.00
TOTAL PROJECT COST					\$ 388,900.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost

 Northwest Hildale Transmission Line
 Hildale City

 17-Oct-23
 MCG/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 69,300.00	\$ 69,300.00
2	Traffic Control	1	LS	\$ 12,000.00	\$ 12,000.00
3	Pre-Construction DVD	1	LS	\$ 1,500.00	\$ 1,500.00
4	Dust Control & Watering	1	LS	\$ 20,000.00	\$ 20,000.00
5	Subsurface Investigation	8	HR	\$ 250.00	\$ 2,000.00
6	Restore Surface Improvements	1	LS	\$ 12,000.00	\$ 12,000.00
7	Erosion Control Compliance	2	LS	\$ 8,000.00	\$ 16,000.00
8	Construction Staking	1	LS	\$ 12,500.00	\$ 12,500.00
9	Materials Sampling & Testing	1	LS	\$ 12,000.00	\$ 12,000.00
10	Surface Restoration	32,500	SF	\$ 5.00	\$ 162,500.00
11	24" PVC (C900) Line, Fitting, Tracer Wire, Bedding, & Backfill	4,150	LF	\$ 150.00	\$ 622,500.00
12	24" Gate Valve Assembly	12	EA	\$ 9,500.00	\$ 114,000.00
13	16" PVC (C900) Line, Fitting, Tracer Wire, Bedding, & Backfill	2,350	LF	\$ 120.00	\$ 282,000.00
14	16" Gate Valve Assembly	12	EA	\$ 6,750.00	\$ 81,000.00
15	Misc. Connections, Fittings and Tie-ins	1	LS	\$ 35,000.00	\$ 35,000.00
SUBTOTAL					\$ 1,454,300.00
CONTINGENCY				20%	\$ 290,900.00
CONSTRUCTION TOTAL					\$ 1,745,200.00
INCIDENTALS					
1	Engineering Design	5.3%	LS	\$ 105,000.00	\$ 105,000.00
2	Bidding & Negotiating	0.4%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services	3.7%	HR	\$ 72,700.00	\$ 72,700.00
4	Topographic & Property Survey	0.8%	EST	\$ 15,000.00	\$ 15,000.00
5	Funding and Administrative Services	0.6%	EST	\$ 12,000.00	\$ 12,000.00
6	Permitting	0.3%	EST	\$ 5,000.00	\$ 5,000.00
7	Miscellaneous Engineering Services	0.8%	EST	\$ 15,000.00	\$ 15,000.00
SUBTOTAL					\$ 232,200.00
TOTAL PROJECT COST					\$ 1,977,400.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.



Colorado City

11 North 300 West, Washington Utah 84780
 Tel 435.652.8450 | FAX 435.652.8416

Engineer's Opinion of Probable Cost

Hildale St. Line
 Hildale City 17-Oct-23
 MCG/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 13,200.00	\$ 13,200.00
2	Pre-Construction DVD	1	LS	\$ 1,500.00	\$ 1,500.00
3	Traffic Control	1	LS	\$ 18,000.00	\$ 18,000.00
4	Subsurface Investigation	4	HR	\$ 250.00	\$ 1,000.00
5	Materials Sampling & Testing	1	LS	\$ 7,500.00	\$ 7,500.00
6	Dust Control & Watering	1	LS	\$ 7,500.00	\$ 7,500.00
7	Construction Staking	1	LS	\$ 7,000.00	\$ 7,000.00
8	Erosion Control Compliance	1	LS	\$ 7,500.00	\$ 7,500.00
9	8" PVC (C900) Line, Fitting, Tracer Wire, Bedding, & Backfill	2,650	LF	\$ 65.00	\$ 172,250.00
10	8" Gate Valve Assembly	7	EA	\$ 5,000.00	\$ 33,125.00
11	Restore Surface Improvements	1	LS	\$ 8,500.00	\$ 8,500.00
SUBTOTAL					\$ 277,075.00
				CONTINGENCY 20%	\$ 55,415.00
CONSTRUCTION TOTAL					\$ 332,490.00
INCIDENTALS					
1	Engineering Design	5.5%	LS	\$ 25,000.00	\$ 25,000.00
2	Bidding & Negotiating	1.7%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services	4.3%	HR	\$ 19,400.00	\$ 19,400.00
4	Topographic & Property Survey	1.7%	EST	\$ 7,500.00	\$ 7,500.00
5	Funding and Administrative Services	2.2%	EST	\$ 10,000.00	\$ 10,000.00
6	Land & RoW Negotiation/Acquisition	11.0%	EST	\$ 50,000.00	\$ 50,000.00
7	Miscellaneous Engineering Services	0.6%	EST	\$ 2,500.00	\$ 2,500.00
SUBTOTAL					\$ 121,900.00
TOTAL PROJECT COST					\$ 454,390.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

Engineer's Opinion of Probable Cost

Southwest Hildale Transmission Line
Hildale City

17-Oct-23
MCG/bcw

NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 28,400.00	\$ 28,400.00
2	Traffic Control	1	LS	\$ 12,000.00	\$ 12,000.00
3	Pre-Construction DVD	1	LS	\$ 1,500.00	\$ 1,500.00
4	Dust Control & Watering	1	LS	\$ 20,000.00	\$ 20,000.00
5	Subsurface Investigation	8	HR	\$ 250.00	\$ 2,000.00
6	Restore Surface Improvements	1	LS	\$ 12,000.00	\$ 12,000.00
7	Erosion Control Compliance	2	LS	\$ 8,000.00	\$ 16,000.00
8	Construction Staking	1	LS	\$ 12,500.00	\$ 12,500.00
9	Materials Sampling & Testing	1	LS	\$ 12,000.00	\$ 12,000.00
10	Roadway Restoration	9,000	SF	\$ 6.00	\$ 54,000.00
11	12" PVC (C900) Line, Fitting, Tracer Wire, Bedding, & Backfill	1,900	LF	\$ 110.00	\$ 209,000.00
12	12" Gate Valve Assembly	12	EA	\$ 6,750.00	\$ 81,000.00
13	PRV and Vault	1	LS	\$ 100,000.00	\$ 100,000.00
14	Misc. Connections, Fittings and Tie-ins	1	LS	\$ 35,000.00	\$ 35,000.00
SUBTOTAL					\$ 595,400.00
				CONTINGENCY	20%
CONSTRUCTION TOTAL					\$ 714,500.00
INCIDENTALS					
1	Engineering Design	11.6%	LS	\$ 105,000.00	\$ 105,000.00
2	Bidding & Negotiating	0.8%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services	3.3%	HR	\$ 29,800.00	\$ 29,800.00
4	Topographic & Property Survey	1.7%	EST	\$ 15,000.00	\$ 15,000.00
5	Funding and Administrative Services	1.3%	EST	\$ 12,000.00	\$ 12,000.00
6	Permitting	0.6%	EST	\$ 5,000.00	\$ 5,000.00
7	Miscellaneous Engineering Services	1.7%	EST	\$ 15,000.00	\$ 15,000.00
SUBTOTAL					\$ 189,300.00
TOTAL PROJECT COST					\$ 903,800.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.



Colorado City

11 North 300 West, Washington Utah 84780
Tel 435.652.8450 | FAX 435.652.8416

Engineer's Opinion of Probable Cost

Transmission Line to Airport
Hildale City

17-Oct-23
MCG/bcw

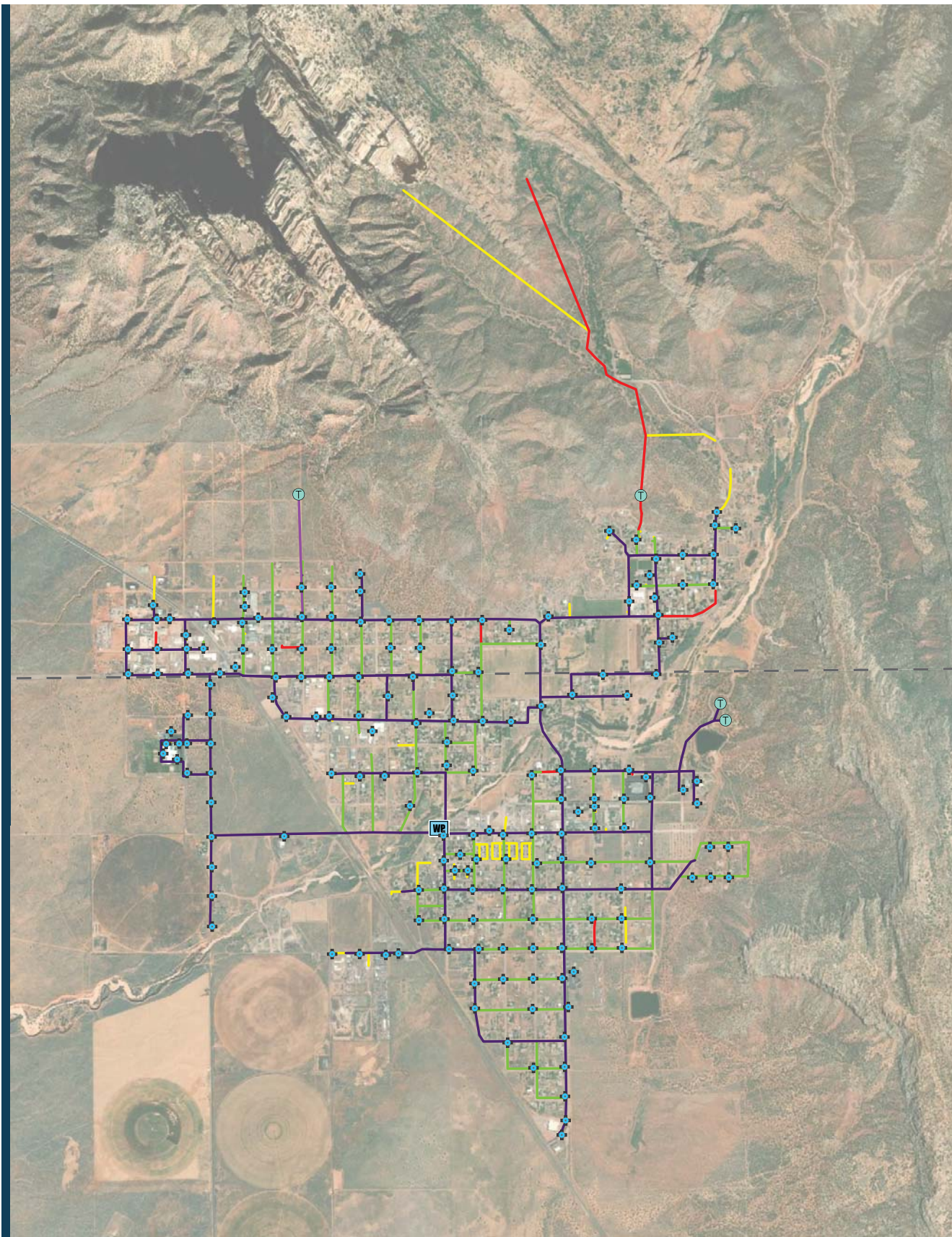
NO.	DESCRIPTION	EST. QTY	UNIT	UNIT PRICE	AMOUNT
GENERAL CONSTRUCTION					
1	Mobilization	5%	LS	\$ 71,600.00	\$ 71,600.00
2	Traffic Control	1	LS	\$ 12,000.00	\$ 12,000.00
3	Pre-Construction DVD	1	LS	\$ 1,500.00	\$ 1,500.00
4	Dust Control & Watering	1	LS	\$ 20,000.00	\$ 20,000.00
5	Subsurface Investigation	8	HR	\$ 250.00	\$ 2,000.00
6	Restore Surface Improvements	1	LS	\$ 12,000.00	\$ 12,000.00
7	Erosion Control Compliance	2	LS	\$ 8,000.00	\$ 16,000.00
8	Construction Staking	1	LS	\$ 12,500.00	\$ 12,500.00
9	Materials Sampling & Testing	1	LS	\$ 12,000.00	\$ 12,000.00
10	Roadway Restoration	42,750	SF	\$ 6.00	\$ 256,500.00
11	10" PVC (C900) Line, Fitting, Tracer Wire, Bedding, & Backfill	650	LF	\$ 90.00	\$ 58,500.00
12	10" Gate Valve Assembly	2	EA	\$ 5,250.00	\$ 10,500.00
13	12" PVC (C900) Line, Fitting, Tracer Wire, Bedding, & Backfill	7,900	EA	\$ 110.00	\$ 869,000.00
14	12" Gate Valve Assembly	17	EA	\$ 6,750.00	\$ 114,750.00
15	Misc. Connections, Fittings and Tie-ins	1	LS	\$ 35,000.00	\$ 35,000.00
				SUBTOTAL	\$ 1,503,850.00
				CONTINGENCY	20%
				CONSTRUCTION TOTAL	\$ 1,804,650.00
INCIDENTALS					
1	Engineering Design	5.1%	LS	\$ 105,000.00	\$ 105,000.00
2	Bidding & Negotiating	0.4%	HR	\$ 7,500.00	\$ 7,500.00
3	Engineering Construction Services	3.7%	HR	\$ 75,200.00	\$ 75,200.00
4	Topographic & Property Survey	0.7%	EST	\$ 15,000.00	\$ 15,000.00
5	Funding and Administrative Services	0.6%	EST	\$ 12,000.00	\$ 12,000.00
6	Permitting	0.2%	EST	\$ 5,000.00	\$ 5,000.00
7	Miscellaneous Engineering Services	0.7%	EST	\$ 15,000.00	\$ 15,000.00
				SUBTOTAL	\$ 234,700.00
				TOTAL PROJECT COST	\$ 2,039,350.00

In providing opinions of probable construction cost, the Client understands that the Engineer has no control over costs or the price of labor, equipment or materials, or over the Contractor's method of pricing, and that the opinion of probable construction cost provided herein is made on the basis of the Engineer's qualifications and experience. The Engineer makes no warranty, expressed or implied, as to the accuracy of such opinions compared to bid or actual costs.

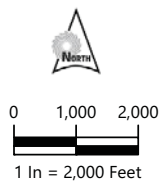
APPENDIX D

System Maps

EXISTING WATER SYSTEM



MAP LEGEND



- 2"
- 4"
- 6"
- 8"
- 12"

- ⊕ w_Hydrants
- Ⓣ Water Tank
- WP Treatment Plant

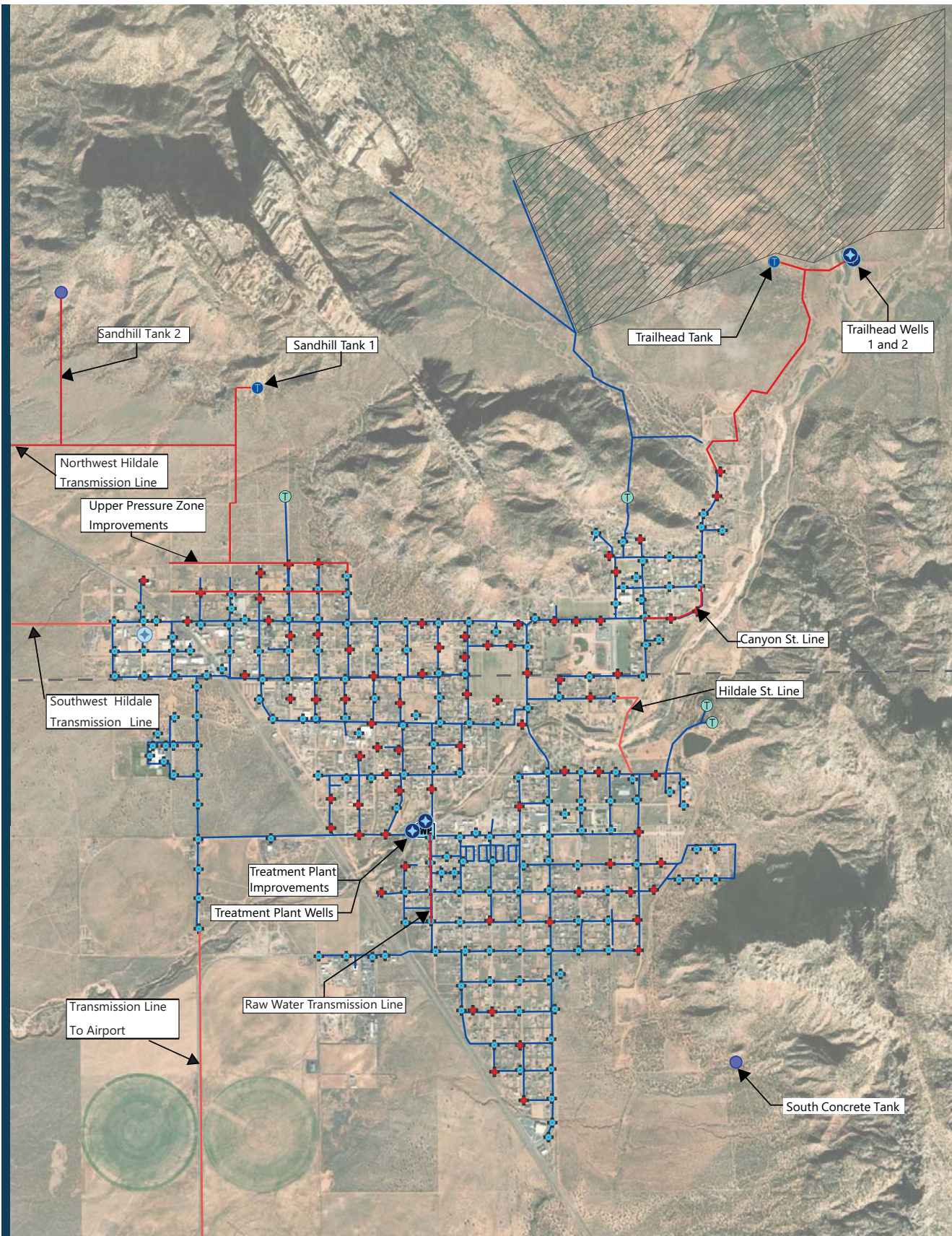
- State Boundary



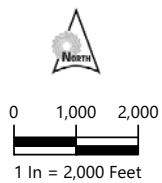
Map Date: 06.30.2022



RECOMMENDED IMPROVEMENTS



MAP LEGEND



- Recommended Improvements**
- Water Mains
 - + Water Hydrants
 - Water Tank
 - ⊕ Production Well
 - Hildale Ground Water Project Area

- Existing Water System**
- Water Mains
 - + Water Hydrants
 - Water Tank
 - ⊕ Production Well
 - Treatment Plant

State Boundary



Map Date: 06.30.2022