



INTEGRATED PIPELINE PROJECT

MONTHLY EXECUTIVE SUMMARY

March 2020

JCC1 Aerial of Pump Station



IPL PROGRAM MANAGEMENT

Tarrant Regional Water District

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TARRANT REGIONAL WATER DISTRICT (TRWD) and the **CITY OF DALLAS**

WATER UTILITIES (DWU) have partnered to finance, plan, design, construct and operate the Integrated Pipeline (IPL) Project. The IPL Project is an integrated water delivery transmission system connecting Lake Palestine to Lake Benbrook with connections to Cedar Creek and Richland-Chambers Reservoirs integrating TRWD's existing pipelines and creating flexibility in delivery as well as quick response to fluctuating customer water demands. The IPL Project consists of 150 miles of pipeline, three new lake pump stations, and three new booster pump stations delivering a required capacity of 350 million gallons per day (MGD) of raw water to North Central Texas. TRWD and DWU currently serve over 4.1 million residents and the IPL will allow these agencies to continue supporting regional community and economic growth.

PROGRAM SUPPORT SERVICES

as of 03.31.2020

CONTRACT DESIGN AND CONSTRUCTION	DESCRIPTION	BUDGET	CONTRACTS ISSUED	TOTAL INVOICED
PROGRAM WIDE PROFESSIONAL SERVICES		\$133,062,000	\$87,563,706	\$85,177,882
Program Management	Overall program management services for implementation of the IPL Project. (Extension of TRWD staff)	\$45,000,000	\$35,124,711	\$35,124,711
Conceptual Design / Environmental / Permitting	Operations plan & Prepare 404 permit application, Envision Application Completion	\$13,551,000	\$13,248,701	\$13,248,699
Value Engineering	Expert review of design	\$640,000	\$472,248	\$472,248
Surveying and Mapping	Control, property survey, legal descriptions, and Provide SUE Level A Survey, GIS	\$14,600,000	\$11,854,388	\$10,710,422
Geotechnical	Initial Characterization of entire IPL Project	\$12,037,000	\$12,026,275	\$12,026,276
Corrosion Engineering Services	Engineering Corrosion Control	\$3,891,000	\$5,326,362	\$4,576,934
Land, Easement Acquisition, & Support	Right of Entry and Land Acquisition Support Services	\$33,993,000	\$3,464,526	\$3,433,831
Studies		\$3,500,000	\$3,683,743	\$3,587,584
SCADA System	Engineering of SCADA system	\$640,000	\$0	\$0
Microwave System	Engineering of Communications System	\$5,210,000	\$2,362,752	\$1,997,177
DESIGN & CONSTRUCTION ADMINISTRATION		\$201,714,000	\$154,007,175	\$138,747,739
Completed		\$121,901,000	\$95,375,850	\$94,099,854
Active		\$24,158,000	\$58,631,324	\$44,647,885
CH2M Hill	Project Operational Information and Operations Manual		\$6,479,844	\$4,638,718
CH2M Hill	Final Conformance of Design of JCC1	\$728,000	\$9,288,681	\$7,075,268
MWH	Final Conformance of Design of Section 9/10/11	\$506,000	\$1,307,780	\$1,025,773
Black & Veatch	Engineering during Construction of Section 10/11		\$810,000	\$460,732
Black & Veatch	Final Design of Section 12/13/14	\$11,292,000	\$12,338,807	\$12,250,043
Parsons	Final Design of Sections 17/18/Tunnel	\$832,000	\$8,434,000	\$8,029,700
Brown & Gay	Final Design of Section 19-1	\$5,770,000	\$8,130,200	\$3,084,924
HDR	Final Design of Section 19-2	\$5,030,000	\$8,358,000	\$4,738,725
Burns & McDonnell Trans. Mgmt.	Development of Transportation Management Plan		\$905,203	\$866,643
Burns & McDonnell	High Voltage Design		\$2,578,809	\$2,477,360
Remaining		\$55,655,000		
CONSTRUCTION / OWNER FURNISHED EQUIPMENT		\$1,729,540,000	\$711,156,475	\$670,108,919
Completed		\$26,677,000	\$20,593,942	\$20,377,238
Active		\$875,818,000	\$690,562,533	\$649,731,681
Pipeline Section 15-1		\$115,112,000	\$93,687,256	\$93,687,256
Garney Construction	Construction of Section 15-1	\$115,112,000	\$93,687,256	\$93,687,256
JB3		\$83,013,000	\$75,779,477	\$71,157,724
MWH Constructors	Construction of JB3 Pump Station	\$51,473,000	\$57,995,805	\$56,606,782
Oncor Electric	Installation of JB3 Substation Transmission Lines	\$1,066,000	\$957,119	\$923,119
Isolux Corsan	Construction of JB3 Substation	\$7,400,000	\$4,864,888	\$4,864,888
R E Monks	Construction of JB3R Restoration	\$0	\$675,782	\$675,782
Pentair Flow Technologies	Construction of JB3 Pumps, Motors, Drives	\$23,074,000	\$11,285,883	\$8,087,153
Pipeline Section 12/13/MBR/IB4 Bypass		\$167,992,000	\$153,555,743	\$153,532,318
Thalle Midlothian	Construction of Sections 12/13/MBR/IB4 Bypass	\$146,310,000	\$143,253,968	\$143,230,542
BAR Constructors	Construction of Richland-Chambers/Cedar Creek Interconnection Facility	\$21,682,000	\$10,177,546	\$10,177,546
Hilco Electric	Relocation of Electrical Service Lines		\$0	\$0
Hilco Electric	MBR Radio Tower Power		\$33,312	\$33,312
Oncor Electric	Provide Power to IPL 2X12		\$90,918	\$90,918

PROGRAM SUPPORT SERVICES

as of 03.31.2020

CONTRACT DESIGN AND CONSTRUCTION	DESCRIPTION	BUDGET	CONTRACTS ISSUED	TOTAL INVOICED
Pipeline Section 15-2		\$97,217,000	\$50,743,593	\$50,743,593
BAR Constructors	Construction of Section 15-2	\$97,217,000	\$50,743,593	\$50,743,593
Pipeline Section 14		\$107,113,000	\$47,130,639	\$47,130,639
Garney Construction	Construction of Section 14	\$107,113,000	\$47,080,639	\$47,080,639
Magellan	Captioned Crossing Inspection Section 14	\$0	\$50,000	\$50,000
Pipeline Section 17		\$109,944,000	\$94,327,511	\$80,772,877
IPL Partners	Construction of Section 17 Tunnel	\$12,252,000	\$48,500,000	\$38,018,330
Thalle Midlothian	Construction of Sections 17/18/IB2 Bypass	\$97,692,000	\$45,827,511	\$42,754,547
JCC1		\$106,582,000	\$105,638,693	\$83,565,738
BAR Constructors	Construction of JCC1 Intake	\$21,564,000	\$18,960,214	\$18,960,214
BAR Constructors	Intake Facility & OFE Installation Package 2	\$63,900,000	\$63,453,414	\$48,590,861
Ebara	Construction of JCC1 Pumps, Motors, Drives	\$17,775,000	\$12,694,890	\$5,902,071
Lambda Construction	High Voltage		\$5,773,925	\$5,356,342
Oncor Electric	Construction of JCC1 HV Transmission Lines	\$3,343,000	\$4,756,250	\$4,756,250
Pipeline Section 10/11		\$73,679,000	\$55,393,327	\$55,392,628
IPL Partners	Construction of Section 10/11	\$72,362,000	\$41,870,338	\$41,869,640
Oncor Electric	Construction of KBR S1X10 HV Transmission Lines		\$17,452	\$17,452
BAR Constructors	Construction of KBR S1X10	\$1,317,000	\$13,505,537	\$13,505,536
Valve Packages		\$15,166,000	\$14,306,294	\$13,748,908
Garney Construction	Valve Package 1 - Section 15-1 Butterfly Valves	\$518,000	\$0	\$0
Rodney Hunt	Valve Package 2 - Section 15-1 Interconnection Facility Valves	\$474,000	\$733,206	\$733,206
Blackhall Engineering	Valve Package 3 - JB3, Section 15-2, MBR Yard Gate Valves	\$5,500,000	\$6,278,388	\$6,228,595
Crispin Valves	Valve Package 4 - Section 12 RC/CC Interconnection, JB4 Bypass, MBR Yard Butterfly Valves	\$3,999,000	\$2,269,140	\$2,187,448
Crispin Valves	Valve Package 5 - JB3 Butterfly Valves	\$1,249,000	\$1,249,222	\$1,039,098
Ross Valves	Valve Package 6 - Section 12 RC/CC Interconnection Multi-Orifice Valves	\$715,000	\$526,340	\$478,838
Crispin Valves	Valve Package 8 - Section 10 & 11 Bypass Butterfly Valves	\$1,391,000	\$1,461,040	\$1,325,916
Blackhall Engineering	Valve Package 11 - JCC1 Gate Valve	\$1,320,000	\$1,788,958	\$1,755,807
Remaining		\$827,045,000		
CONSTRUCTION MANAGEMENT		\$65,170,000	\$50,936,530	\$46,080,636
Completed		\$15,777,000	\$15,747,552	\$15,747,552
Active		\$17,665,000	\$35,188,978	\$30,333,083
Remaining		\$31,728,000		
CONSTRUCTION MATERIALS TESTING		\$17,296,000	\$12,931,086	\$9,724,638
Completed		\$203,000	\$225,133	\$225,132
Active		\$7,791,000	\$12,705,953	\$9,499,506
Remaining		\$9,302,000		
ROCIP		\$2,575,000	\$31,847,084	\$22,054,822
LAND COST		\$107,384,000	\$74,113,402	\$74,113,402
PROGRAM LEVEL CONTINGENCY		\$83,178,000		
MISCELLANEOUS		\$2,000,000	\$3,196,314	\$3,196,314
GRAND TOTAL		\$2,341,919,000	\$1,125,751,773	\$1,049,204,352
REMAINING BOND FUNDS				\$200,795,648

Note: Total Bonds issued to date \$1,250,000,000

ACCOMPLISHMENTS

through 03.31.2020

IPL PROGRAM GENERAL OPERATIONAL STATUS

The IPL System is currently able to deliver water from Richland Chambers Reservoir to the cross-connections with the existing Richland Chambers and Cedar Creek pipelines at the S2X12 Interconnect Facility near Joe Pool Lake and the future DWU connection point. The IPL System is also able to deliver water to the Arlington Outlet via the S1X10 Pressure Reduction Station, the KBR Bypass pipeline and the Line J Pipeline.

The IPL pipelines and facilities that have been completed to accomplish this delivery are:

- S5X15 Interconnect
- Pipeline Sections 15-1 and 15-2
- JB3R Suction Reservoir
- JB3 Booster Pump Station
- Pipeline Section 14
- Midlothian Balancing Reservoir
- Pipeline Sections 12 and 13
- S2X12 Interconnect Facility
- Pipeline Sections 10 and 11
- S1X10 Pressure Reduction Station

CURRENT PROJECT UPDATES

PL12, 13, MBR (Pipeline Sections 12 and 13 combined with the Midlothian Balancing Reservoir)

- Project is Substantially Complete and operational.

JB3 (250mgd Pump Station expandable to 350mgd)

- Project is Substantially Complete and operational.

PL14 (Pipeline Section 14 that delivers water from JB3 Pump Station to MBR)

- Project is Complete and will be presented for closeout on the April 2020 agenda.

PL17TUN (Trinity River Tunnel on Pipeline Section 17)

- Completed tunnel under the Trinity River and preparing tunnel for pipe installation.
- Tunnel Bore Machine re-inserted to complete western portion of tunnel.
- Installing open-cut portions of pipeline.

JCC1HV (High Voltage Substation for the JCC1 Pump Station at Cedar Creek)

- Substation was energized on January 15, 2020 and Control House was switched from temporary to permanent power.

JCC1 (Cedar Creek Lake Pump Station)

- Pumps and pump motors are installed, and pump discharge piping and discharge header are complete.
- Installed chemical pumps and piping.
- Medium voltage power feeders from substation to Electrical Room were installed.
- Completed installation of 108" gate valve including silo installation.

- Completing roof installation of all facility buildings.
- Continue installing HVAC equipment and ductwork throughout the project.
- Completed installation of electrical ductbanks and manholes on the site.
- Continued site paving around Pump Station and Electrical Room.

PL10, 11 (Pipeline Sections 10 and 11 from the JB4 Pump Station to the KBR Pressure Reduction Facility)

- Project is Substantially Complete and operational.

PL17-18 (Pipeline Sections 17 and 18 from east end of PL15-1 to JCC1 Pump Station)

- Continued installing ROW restoration work.
- Completed 108" gate valve installation at JB2 site.
- Completed hydrostatic testing of eastern portion of pipeline.

KBRPRS / S1X10 (Pressure Reduction Station at Kennedale Balancing Reservoir connecting Pipeline Section 10)

- Project is Complete and contract closeout was approved at January 2020 BOD meeting.

PL19-1 AND PL19-2 (Pipeline Sections from Lake Palestine to PL17-18 connection)

- Section 19 TXDOT tunnel crossings have been advertised for Pre-Qualification of contractors.
- Section 19 tunnels (non-TXDOT) project being prepared for advertisement.



PL1718 ROW looking east from FM 3110



PL1718 Setting silo over 108-inch gate valve at JB2

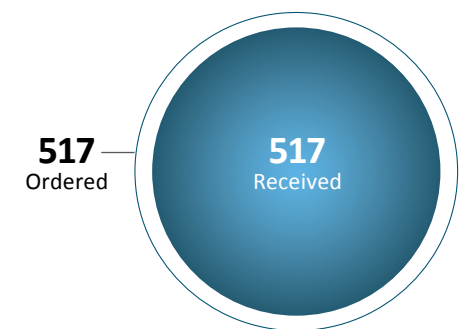
PROJECT SCHEDULE

PROJECT COMPONENTS	2019				2020				2021			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
SECTION 17 TUNNEL CONSTRUCTION												
JCC1 PUMP STATION INTAKE WET WELL CONSTRUCTION												
SECTION 17, 18 CONSTRUCTION												
JCC1 HIGH VOLTAGE SUBSTATION CONSTRUCTION												
JCC1 CONSTRUCTION												

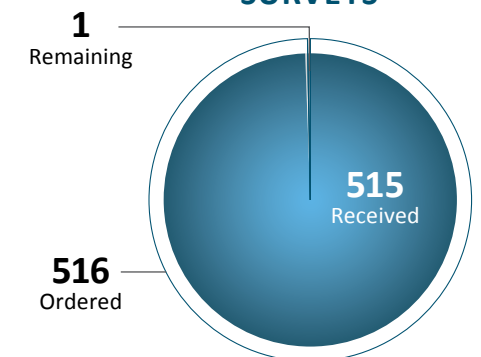
ACTIVITY STATUS

through 03.31.2020

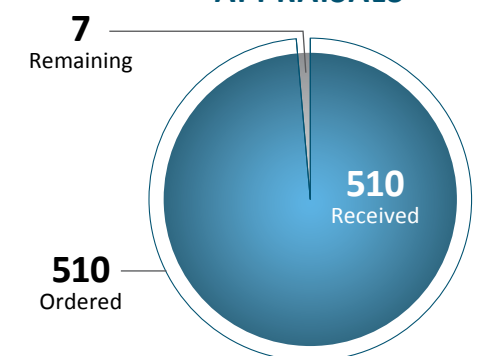
TITLE COMMITMENTS



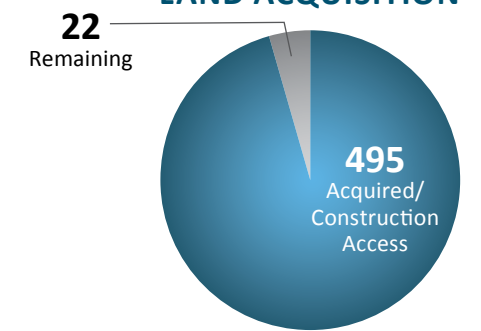
SURVEYS



APPRAISALS



LAND ACQUISITION



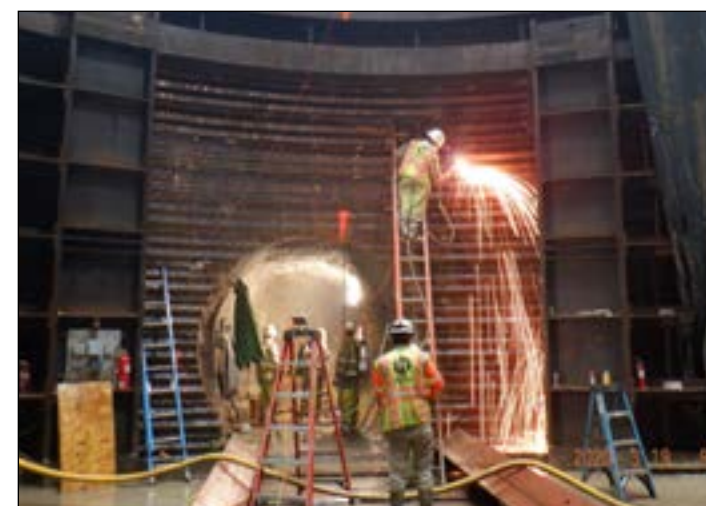
Total Parent Parcels: 517



JCC1 Dilution water piping to chemical building



PL17TUN Checking alignment of launch apron



PL17TUN Cutting access shaft casing for west tunnel run

M/WBE PARTICIPATION

as of 03.31.2020

CONTRACT DESIGN AND CONSTRUCTION	M/WBE & HUB SUB-CONTRACTORS	CONTRACT COMMITMENT		M/WBE HUB INVOICED TO DATE		TOTAL PROJECT COMPLETED TO DATE	
		\$	%	\$	% (PER COMMITMENT)	\$	%
PROGRAM WIDE PROFESSIONAL SERVICES		\$20,397,014	23%	\$19,869,650	97%	\$85,177,882	97%
Program Management		\$6,636,687	19%	\$6,636,687	100%	\$35,124,711	100%
Conceptual Design / Environmental / Permitting		\$2,655,444	20%	\$2,827,564	106%	\$13,248,699	100%
Value Engineering		\$23,178	5%	\$23,178	100%	\$472,248	100%
Surveying and Mapping		\$3,939,403	33%	\$3,831,616	97%	\$10,710,422	90%
Geotechnical		\$3,545,033	29%	\$3,545,033	100%	\$12,026,276	100%
Corrosion Engineering Services		\$1,441,900	27%	\$764,938	53%	\$4,576,934	86%
Land, Easement Acquisition, & Support		\$1,294,837	37%	\$1,534,531	119%	\$3,433,831	99%
Studies		\$41,717	1%	\$41,717	100%	\$3,587,584	97%
Microwave System		\$818,814	35%	\$664,386	81%	\$1,997,177	85%
DESIGN		\$40,047,084	26%	\$37,393,182	93%	\$138,747,739	90%
Completed		\$26,415,260	28%	\$28,273,335	107%	\$94,099,854	99%
Active		\$13,020,267	22%	\$8,577,393	66%	\$42,170,525	72%
CH2M Hill (Ops Manual)	NDM	\$1,063,611	16%	\$715,344	67%	\$4,638,718	72%
CH2M Hill (JCC1)	JQ, Gupta, APM, HVJ, XENCO	\$2,322,170	25%	\$2,838,101	122%	\$7,075,268	76%
MWH	Garzabury, Kevin Sloan	\$364,871	28%	\$221,635	61%	\$1,025,773	78%
Black & Veatch	Texas Design	\$0	0%	\$2,100	0%	\$460,732	57%
Black & Veatch	BDS, CAS, JQ, TME	\$3,056,800	25%	\$3,023,302	99%	\$12,250,043	99%
Parsons	Criado, EPB, HVJ	\$2,073,558	25%	\$0	0%	\$8,029,700	95%
Brown & Gay	AZB, TME, Lamb-Star, NDM	\$2,032,550	25%	\$649,712	32%	\$3,084,924	38%
HDR	AZB, Daltech, Word Wizards, Gupta	\$1,944,207	23%	\$1,005,701	52%	\$4,738,725	57%
Burns & McDonnell Trans. Mgmt.	Lamb-Star Engineering	\$162,500	18%	\$121,498	75%	\$866,643	96%
Burns & McDonnell	HVJ, JQ, Multatech	\$611,556	24%	\$542,455	89%	\$2,477,360	96%
Remaining		\$0	0%	\$0	0%	\$0	0%
CONSTRUCTION / OWNER FURNISHED EQUIPMENT		\$85,824,545	12%	\$165,577,782	193%	\$670,108,919	94%
Completed		\$4,217,818	21%	\$4,091,050	97%	\$20,377,238	99%
Active		\$81,606,727	19%	\$161,486,732	198%	\$649,731,681	94%
Pipeline Section 15-1		\$9,317,301	29%	\$6,649,736	71%	\$93,687,256	100%
Garney Construction	Danridge, SYB, Ricochet, Glenko, Carrasco, Cowboy, Gorrondona, Custom Fence, LKT, Astro Johnny, Pam, Father & Son, Bowden's Erosion	\$9,317,301	29%	\$6,649,736	71%	\$93,687,256	100%
JB3		\$15,259,759	26%	\$12,849,193	84%	\$71,157,724	94%
MWH Constructors	Statewide, Cowboy, TX Enviro, Champion, Ram Tool, Rent-a-Fence, Soto Steel, A-Star, Ike, Greystone, LKT, Accurate, Green Scaping	\$13,809,839	27%	\$11,399,273	83%	\$56,606,782	98%
Oncor Electric		\$1,449,920	3%	\$1,449,920	100%	\$4,864,888	8%
Isolux Corsan	Dyna Grid	\$0	0%	\$0	0%	\$923,119	96%
RE Monks		\$0	0%	\$0	0%	\$675,782	14%
Pentair Flow Technologies		\$0	0%	\$0	0%	\$8,087,153	72%
Pipeline Section 12/13/MBR/JB4 Bypass		\$22,020,463	24%	\$22,270,125	101%	\$153,532,318	100%
Thalle Midlothian	LKT, Statewide, Granados, Desert Steel, ETTL, Glenko, A.N.A., Edwards, Buzz, Bradley-Douglas, Pinnacle	\$21,207,345	27%	\$16,449,587	78%	\$143,230,542	100%
BAR Constructors	Freire's, DFW Aggregates, Ricochet, MMG, LKT, Brock, Garland Heating & Air, Texas Metal, Buzz, Rangel	\$813,119	8%	\$5,820,538	716%	\$10,177,546	100%

M/WBE PARTICIPATION

as of 03.31.2020

CONTRACT DESIGN AND CONSTRUCTION	M/WBE & HUB SUB-CONTRACTORS	CONTRACT COMMITMENT		M/WBE HUB INVOICED TO DATE		TOTAL PROJECT COMPLETED TO DATE	
		\$	%	\$	% (PER COMMITMENT)	\$	%
Hilco Electric		\$0	0%	\$0	0%	\$0	0%
Hilco Electric		\$0	0%	\$0	0%	\$33,312	100%
Oncor Electric		\$0	0%	\$0	0%	\$90,918	100%
Pipeline Section 15-2		\$3,947,329	16%	\$20,981,334	532%	\$50,743,593	100%
BAR Constructors	Ricochet, Fraire's, DFW Aggregates, Brock, Tidy Toilets, KDAT, Juan Cantu, Buyer's, RAM, Rangel, LKT, Greenscaping, Environmental Safety	\$3,947,329	16%	\$20,981,334	532%	\$50,743,593	100%
Pipeline Section 14		\$5,925,447	22%	\$6,957,922	117%	\$47,130,639	100%
Garney Construction	AEA, Gorrondona, JC Welding, LKT, Statewide, Bowdens	\$5,925,447	29%	\$6,957,922	117%	\$47,080,639	100%
Magellan	Captioned Crossing Inspection Section 14	\$0	0%	\$0	0%	\$50,000	100%
Pipeline Section 17		\$15,157,296	23%	\$6,721,316	44%	\$80,772,877	86%
IPL Partners	LKT, Industry Junction, Eagle Aggregate, Suncoast Res, ATS Drilling, RECS, ANA, Alliance, Ram, JC Welding, Luis Moreno	\$9,736,346	23%	\$3,620,295	37%	\$38,018,330	78%
Thalle Midlothian	Fleet Lube, Rambo Controls, AE Trucking, MKI Construction, Stome Water Management, Industry Junction, Ortega Land Clearing	\$5,420,950	24%	\$3,101,021	57%	\$42,754,547	93%
JCC1		\$3,069,473	3%	\$67,523,956	2200%	\$83,565,738	79%
BAR Constructors	Industry Junction, K&A Steel, Ricochet Fuel, Ricochet Fuel, Tidy Toilets, Buzz Custom Fence	\$961,990	6%	\$18,008,980	1872%	\$18,960,214	100%
BAR Constructors	Industry Junction, K&A Steel, Ricochet Fuel, Ricochet Fuel, Tidy Toilets	\$0	0%	\$48,590,861	0%	\$48,590,861	77%
Ebara		\$0	0%	\$0	0%	\$5,902,071	102%
Lambda Construction	High Voltage	\$2,107,483	37%	\$924,115	44%	\$5,356,342	93%
Oncor Electric		\$0	0%	\$0	0%	\$4,756,250	100%
Pipeline Section 10/11		\$6,909,660	20%	\$17,533,150	254%	\$55,392,628	100%
IPL Partners	LKT, Industry Junction, Eagle Aggregate, Suncoast Res, ATS Drilling, RECS, ANA, Alliance, Ram, JC Welding, Luis Moreno	\$5,505,425	25%	\$4,027,614	73%	\$41,869,640	100%
Oncor Electric		\$0	0%	\$0	0%	\$17,452	100%
BAR Constructors	Industry Junction, VSG Trucking, Ricochet, MMG Disposal, Garland HVAC, CMC Rebar, Buzz Custom Fence, K&A Steel, Rangle Land Surveying	\$1,404,235	11%	\$13,505,536	962%	\$13,505,536	100%
Valve Packages		\$0	0%	\$0	0%	\$13,748,908	96%
CONSTRUCTION MANAGEMENT		\$18,034,224	35%	\$18,390,626	102%	\$46,080,636	90%
Completed		\$5,928,803	38%	\$5,954,412	100%	\$15,747,552	100%
Active		\$12,105,421	34%	\$12,436,214	103%	\$30,333,083	86%
CONSTRUCTION MATERIALS TESTING		\$6,610,919	51%	\$5,127,297	78%	\$9,724,638	75%
Completed		\$219,036	97%	\$219,036	100%	\$225,132	100%
Active		\$6,391,882	50%	\$4,908,261	77%	\$9,499,506	75%
ROCIP		\$900,661	3%	\$370,813	41%	\$22,054,822	69%
TOTAL		\$171,814,446	22%	\$246,729,350	144%	\$971,894,636	93%
LAND COST		\$0	0%	\$61,892	0%	\$74,113,402	233%
MISCELLANEOUS		\$0	0%	\$0	0%	\$3,196,314	4%
GRAND TOTAL		\$171,814,446	22%*	\$246,791,242	144%	\$1,049,204,352	93%

* Denotes participation percentage excluding cost of pipe and owner furnished equipment.

M/WBE/HUB Invoiced	\$246,791,242
Grand Total Invoiced	\$1,049,204,352
* Exclusions Invoiced	\$280,305,227
MWBE %	32.10%

PROJECT COMPONENTS

PIPELINE SEGMENTS	CORE PROJECT	DESCRIPTION
Section 9		KBR Turn-Out Tee to existing Benbrook Connection Pipeline (10.6 mi. 84" dia. Pipe + 5 mi. 120" Tunnel)
Section 10	🔴	KBR Turn-Out Tee to KBR (2.4 mi. 84" dia. Pipe)
Section 11	🔴	JB4 to KBR Turn-Out Tee (10 mi. 84" dia. Pipe)
Section 12	🔴	JB4 to existing CC and RC Pipelines (2.2 mi. 108" dia. Pipe)
Section 13	🔴	MBR2 (Midlothian Balancing Reservoir) to JB4 (11 mi. 108" dia. Pipe)
Section 14	🔴	JB3 to MBR2 (Midlothian Balancing Reservoir) (14.9 mi. 108" dia. Pipe)
Section 15	🔴	JB2 to JB3 (28.5 mi 108" dia. Pipe)
Section 16		JRC1 (Joint Richland Chambers Lake Pump Station) to JB2 (12.3 mi. 96" dia. Pipe)
Section 17	🔴	Cedar Creek Connection to JB2 (11.2 mi. 108" dia. Pipe)
Section 18	🔴	JCC1 (Joint Cedar Creek Lake Pump Station) to Cedar Creek Connection (0.2 mi. 108" dia. Pipe)
Section 19		LP1 (Lake Palestine Pump Station) to Cedar Creek Connection (42.3 mi. 84" dia. Pipe)

PUMP STATIONS	CORE PROJECT	DESCRIPTION
Palestine Pump Station		150 mgd with new intake
Cedar Creek Pump Station	🔴	277 mgd with new intake
Richland Chambers Pump Station		250 mgd Ultimate Design Capacity
Booster Pump Stations		Two @ 347 mgd and one @ 197 mgd (🔴 one 347 mgd station - JB3)

SUPPORT FACILITIES	CORE PROJECT	DESCRIPTION
Reservoirs	🔴	Three reservoirs (80 – 400 mgd) - two for booster pump stations and one for balancing. Two of the reservoirs are core projects – JB3R and MBR
Deep Tunnels		5 mi of 10' dia. tunnel @ Crowley (included in length of Section 9)
Substations & High Voltage Transmission Lines		Six substations and 4 mi. of high voltage transmission lines (🔴 two substations)
Microwave Communications and SCADA System	🔴	Provides remote operations capability and system monitoring

