

# INTEGRATED PIPELINE PROJECT QUARTERLY EXECUTIVE SUMMARY

September 2021



## IPL PROGRAM MANAGEMENT

Tarrant Regional Water District  
804 East Northside Drive  
Fort Worth, TX 76102  
817.720.4469 p  
817.720.4397 f  
[iplproject.com](http://iplproject.com)  
[@IPL\\_Project](https://twitter.com/IPL_Project)

**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

through 09.30.2021

CONTRACT DESIGN AND CONSTRUCTION	DESCRIPTION	BUDGET	CONTRACTS ISSUED	TOTAL INVOICED
PROGRAM WIDE PROFESSIONAL SERVICES		\$133,062,000	\$87,563,707	\$85,560,105
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	\$11,854,389	\$10,955,362
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	\$4,714,215
Land, Easement Acquisition, & Support	Right of Entry and Land Acquisition Support Services	\$33,993,000	\$3,464,526	\$3,433,832
Studies		\$3,500,000	\$3,683,743	\$3,587,585
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	\$178,772,744	\$153,878,998
Completed		\$122,733,000	\$103,809,850	\$102,886,409
Active		\$23,326,000	\$52,722,524	\$42,164,946
CH2M Hill	Project Operational Information and Operations Manual		\$6,479,844	\$5,633,951
CH2M Hill	Final Conformance of Design of JCC1	\$728,000	\$9,288,681	\$7,853,159
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	\$470,995
Black & Veatch	Final Design of Section 12/13/14	\$11,292,000	\$12,338,807	\$12,278,729
Parsons	Final Design of Sections 17/18/Tunnel		\$0	\$0
Brown & Gay	Final Design of Section 19-1	\$5,770,000	\$8,130,200	\$3,998,112
HDR	Final Design of Section 19-2	\$5,030,000	\$8,358,000	\$6,664,461
Burns & McDonnell Trans. Mgmt.	Development of Transportation Management Plan		\$905,203	\$866,643
Burns & McDonnell	High Voltage Design		\$2,578,809	\$2,494,934
Burns & McDonnell	Section 19 Transportation Management Planning		\$690,000	\$100,964
Burns & McDonnell	Final Design of LP1		\$1,063,600	\$6,188
Furgo Consultants, Inc.	Section 19 Tunnel Geotechnical Testing		\$771,600	\$771,037
IPL Partners	Section 19 Tunnel Crossing		\$21,033,560	\$7,892,502
CH2M Hill	Lake Palestine Interim Stage		\$636,000	\$516,463
Furgo Consultants, Inc.	Section 19 Groundwater Pumping Testing Services		\$570,810	\$418,678
Remaining		\$55,655,000		
CONSTRUCTION / OWNER FURNISHED EQUIPMENT		\$1,729,540,000	\$719,099,657	\$706,740,127
Completed		\$346,119,000	\$212,008,947	\$211,833,088
Active		\$875,818,000	\$507,090,710	\$494,907,039
JB3		\$83,013,000	\$75,779,477	\$73,949,545
MWH Constructors	Construction of JB3 Pump Station	\$51,473,000	\$57,995,805	\$59,398,603
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/JB4 Bypass		\$167,992,000	\$153,555,744	\$153,532,318
Thalle Midlothian	Construction of Sections 12/13/MBR/JB4 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	MBR Radio Tower Power		\$33,312	\$33,312
Oncor Electric	Provide Power to IPL 2X12		\$90,918	\$90,918

PROGRAM SUPPORT SERVICES

through 09.30.2021

CONTRACT DESIGN AND CONSTRUCTION	DESCRIPTION	BUDGET	CONTRACTS ISSUED	TOTAL INVOICED
Pipeline Section 17		\$109,944,000	\$94,295,830	\$95,571,280
IPL Partners	Construction of Section 17 Tunnel	\$12,252,000	\$48,500,000	\$48,160,157
Thalle Midlothian	Construction of Sections 17/18/JB2 Bypass	\$97,692,000	\$45,795,830	\$47,411,123
CAS Consulting	Design 17, 19 Tunnels		\$3,341,651	\$410,612
Freese and Nichols	Construction Management 17,19, JCC1		\$3,771,901	\$508,011
JCC1		\$106,582,000	\$105,875,879	\$100,951,943
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	\$63,690,600	\$60,059,592
Ebara	Construction of JCC1 Pumps, Motors, Drives	\$17,775,000	\$12,694,890	\$11,680,768
Lambda Construction	High Voltage		\$5,773,925	\$5,495,119
Oncor Electric	Construction of JCC1 HV Transmission Lines	\$3,343,000	\$4,756,250	\$4,756,250
Shermco Industries, Inc.	JCC1 and JCC1HV Electrical Testing Services		\$618,000	\$480,593
Pipeline Section 10/11		\$73,679,000	\$55,545,934	\$55,545,325
IPL Partners	Construction of Section 10/11	\$72,362,000	\$42,022,945	\$42,022,337
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	\$13,957,412
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	\$2,191,128
Crispin Valves	Valve Package 5 - JB3 Butterfly Valves	\$1,249,000	\$1,249,222	\$1,175,870
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	\$1,393,968
Blackhall Engineering	Valve Package 11 - JCC1 Gate Valve	\$1,320,000	\$1,788,958	\$1,755,807
Remaining		\$507,603,000		
CONSTRUCTION MANAGEMENT		\$65,170,000	\$59,634,680	\$54,197,593
Completed		\$15,777,000	\$15,747,552	\$15,747,553
Active		\$17,665,000	\$43,887,128	\$38,450,040
Remaining		\$31,728,000		
CONSTRUCTION MATERIALS TESTING		\$17,296,000	\$13,161,251	\$10,625,213
Completed		\$203,000	\$225,133	\$225,132
Active		\$7,791,000	\$12,936,118	\$10,400,081
Remaining		\$9,302,000		
ROCIP		\$2,575,000	\$42,013,560	\$23,117,815
LAND COST		\$107,384,000	\$78,532,928	\$78,532,928
PROGRAM LEVEL CONTINGENCY		\$83,178,000		
MISCELLANEOUS		\$2,000,000	\$3,903,305	\$3,903,305
GRAND TOTAL		\$2,341,919,000	\$1,182,681,833	\$1,116,556,085
REMAINING BOND FUNDS				\$319,344,669

Note: Total Bonds issued to date \$1,500,000,000



ACCOMPLISHMENTS

through 09.30.2021

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. Water can be delivered via the IPL system and the existing pipelines to the Rolling Hills Water Treatment Plant and to Lake Benbrook.

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 complete and operational pending contract closeout.

**JB3 (250mgd Pump Station expandable to 350mgd)**

- Project is complete and contract closeout is complete.

**PL17TUN (Trinity River Tunnel on Pipeline Section 17)**

- Continue backfill of all tunnel portal shafts.
- Completed all open-cut pipe connections to tunnel and completed hydrostatic pressure test.

**JCC1 (Cedar Creek Lake Pump Station)**

- Operational Readiness Testing and Functional Demonstration Testing completed on T-screens, pumps, ball valves, VFDs, Onsite Sodium Hypochlorite Generator, and other chemical systems.
- Permanent power installed for microwave building.
- Installing conduit, boxes and wiring for security system.
- Cleaning and applying seal coating to pump station floor.
- Continue working on deficiency list items.

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

- Project is complete and operational pending contract closeout.

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

- Project has achieved Substantial Completion and is operationally ready for use.

**PL19TX (Tunnels at TxDOT Roadway Crossings for Pipeline Sections**



JCC1 Lowering intake tee screens into place

- 19-1 & 19-2)**
- Completed tunnel excavation and carrier pipe installation at FM 59.
  - Completed installation of open cut pipe at Crossroads Dr.
  - Completed tunnel excavation and carrier pipe installation at FM 2636.
  - Began installation of open cut pipe at FM 59.
  - Completed excavation of launch and receiving shafts and began tunnel excavation at SH 19.
  - Began installation of manway vaults at FM 753.

**PL19TUN (Cedar Creek; SH 31; Hollywood Lake; SH 151/Frankston ISD Tunnels for Pipeline Sections 19-1 & 19-2)**

- Conducted pre-proposal conference and project site tour for pre-qualified contractors.



JCC1 Aerial view of Pump Station facility



PL17TUN Installing pipe on East Side open cut



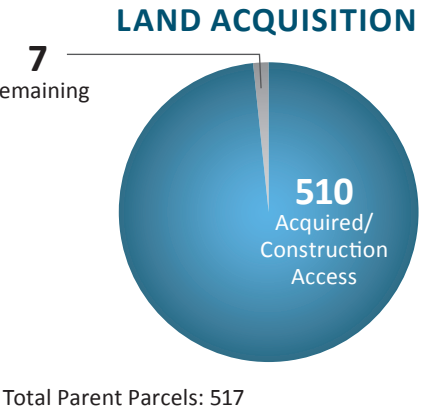
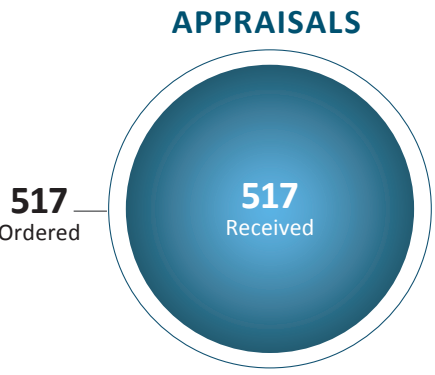
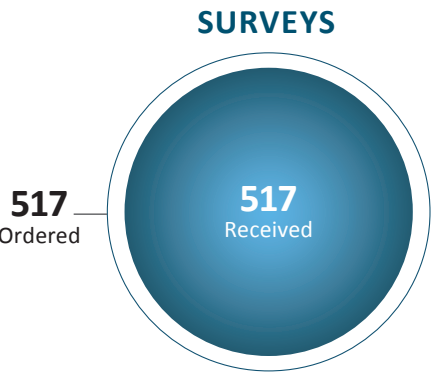
PL19TX Completed tunnel with fiber optic conduits at FM 2636



PL19TX Installation of manhole vault at FM 753

ACTIVITY STATUS

through 09.30.2021



PROJECT SCHEDULE

PROJECT COMPONENTS	2020				2021				2022			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
SECTION 17 TUNNEL CONSTRUCTION												SUBSTANTIALLY COMPLETE
JCC1 PUMP STATION INTAKE WET WELL CONSTRUCTION												SUBSTANTIALLY COMPLETE
SECTION 17, 18 CONSTRUCTION												SUBSTANTIALLY COMPLETE
JCC1 HIGH VOLTAGE SUBSTATION CONSTRUCTION												SUBSTANTIALLY COMPLETE
JCC1 CONSTRUCTION												SUBSTANTIALLY COMPLETE
PL19TX CONSTRUCTION												

M/WBE PARTICIPATION

through 09.30.2021

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		\$20,396,220	23%	\$19,869,653	97%	\$85,560,105	98%
Program Management		\$6,636,154	19%	\$6,636,689	100%	\$35,124,711	100%
Conceptual Design / Environmental / Permitting		\$2,655,040	20%	\$2,827,565	106%	\$13,248,699	100%
Value Engineering		\$23,187	5%	\$23,178	100%	\$472,248	100%
Surveying and Mapping		\$3,939,250	33%	\$3,831,614	97%	\$10,955,362	92%
Geotechnical		\$3,545,179	29%	\$3,545,034	100%	\$12,026,276	100%
Corrosion Engineering Services		\$1,442,047	27%	\$764,939	53%	\$4,714,215	89%
Land, Easement Acquisition, & Support		\$1,294,859	37%	\$1,534,532	119%	\$3,433,832	99%
Studies		\$41,738	1%	\$41,717	100%	\$3,587,585	97%
Microwave System		\$818,765	35%	\$664,385	81%	\$1,997,177	85%
DESIGN		\$45,892,011	26%	\$38,513,691	84%	\$153,878,998	86%
Completed		\$28,488,898	27%	\$28,520,009	100%	\$102,886,409	99%
Active		\$10,946,375	21%	\$9,262,327	85%	\$41,286,757	78%
CH2M Hill (Ops Manual)	NDM	\$1,063,512	16%	\$939,841	88%	\$5,633,951	87%
CH2M Hill (JCC1)	JQ, Gupta, APM, HVJ, XENCO	\$2,322,170	25%	\$3,031,286	131%	\$7,853,159	85%
MWH	Garzabury, Kevin Sloan	\$364,871	28%	\$221,636	61%	\$1,025,773	78%
Black & Veatch	Texas Design	\$0	0%	\$2,100	0%	\$470,995	58%
Black & Veatch	BDS, CAS, JQ, TME	\$3,056,716	25%	\$3,023,303	99%	\$12,278,729	100%
Parsons	Criado, EPB, HVJ	\$0	0%	\$0	0%	\$0	0%
Brown & Gay	AZB, TME, Lamb-Star, NDM	\$2,032,550	25%	\$806,674	40%	\$3,998,112	49%
HDR	AZB, Daltech, Word Wizards, Gupta	\$1,944,071	23%	\$1,115,989	57%	\$6,664,461	80%
Burns & McDonnell Trans. Mgmt.	Lamb-Star Engineering	\$162,485	18%	\$121,498	75%	\$866,643	96%
Burns & McDonnell	HVJ, JQ, Multatech	\$611,538	24%	\$542,454	89%	\$2,494,934	97%
Burns & McDonnell	Lamb-Star Engineering, LLC, Transtec Group Inc.	\$172,500	25%	\$36,509	21%	\$100,964	15%
Burns & McDonnell		\$265,900	25%	\$0	0%	\$6,188	1%
Furgo Consultants, Inc.		\$0	0%	\$0	0%	\$771,037	100%
IPL Partners	Section 19 Tunnel Crossing	\$5,258,390	25%	\$72,932	1%	\$7,892,502	38%
CH2M Hill	Lake Palestine Interim Stage	\$0	0%	\$79,460	0%	\$516,463	81%
Furgo Consultants, Inc.	Section 19 Groundwater Pumping Testing Services	\$148,411	26%	\$0	0%	\$418,678	73%
Remaining		\$0	0%	\$0	0	\$0	0%
CONSTRUCTION / OWNER FURNISHED EQUIPMENT		\$100,285,995	14%	\$177,589,916	177%	\$706,740,127	98%
Completed		\$23,397,169	11%	\$38,680,042	165%	\$211,833,088	100%
Active		\$76,888,826	32%	\$138,909,874	181%	\$494,907,039	98%
JB3		\$15,258,538	26%	\$12,849,194	84%	\$73,949,545	98%
MWH Constructors	Statewide, Cowboy, TX Enviro, Champion, Ram Tool, Rent-a-Fence, Soto Steel, A-Star, Ike, Greystone, LKT, Accurate, Green Scaping	\$13,808,801	27%	\$11,399,274	83%	\$59,398,603	102%
Oncor Electric		\$1,449,737	2%	\$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%

M/WBE PARTICIPATION

through 09.30.2021

CONTRACT DESIGN AND CONSTRUCTION	M/WBE & HUB SUB-CONTRACTORS	CONTRACT COMMITMENT		M/WBE   HUB INVOICED TO DATE		TOTAL PROJECT COMPLETED TO DATE	
		\$	%	\$	% (PER COMMITMENT)	\$	%
Pipeline Section 12/13/MBR/JB4 Bypass		\$22,014,773	24%	\$22,270,126	101%	\$153,532,318	100%
Thalle Midlothian	LKT, Statewide, Granados, Desert Steel, Ettl, Glenko, A.N.A., Edwards, Buzz, Bradley-Douglas, Pinnacle	\$21,201,587	27%	\$16,449,588	78%	\$143,230,542	100%
BAR Constructors	Fraire's, DFW Aggregates, Ricochet, MMG, LKT, Brock, Garland Heating & Air, Texas Metal, Buzz, Rangel	\$813,186	8%	\$5,820,538	716%	\$10,177,546	100%
Hilco Electric		\$0	0%	\$0	0%	\$33,312	100%
Oncor Electric		\$0	0%	\$0	0%	\$90,918	100%
Pipeline Section 17		\$15,151,597	23%	\$7,196,334	47%	\$95,571,280	101%
IPL Partners	LKT, Industry Junction, Eagle Aggregate, Suncoast Res, ATS Drilling, RECS, ANA, Alliance,Ram, JC Welding, Luis Moreno	\$9,733,950	23%	\$4,095,313	42%	\$48,160,157	99%
Thalle Midlothian	Fleet Lube, Rambo Controls, AE Trucking, MKI Construction, Stome Water Management, Industry Junction, Ortega Land Clearing	\$5,417,647	24%	\$3,101,021	57%	\$47,411,123	104%
CAS Consulting	Design 17, 19 Tunnels	\$0	0%	\$0	0%	\$410,612	12%
Freese and Nichols	Construction Management 17,19, JCC1	\$452,628	17%	\$68,383	15%	\$508,011	13%
JCC1		\$17,080,697	19%	\$78,992,687	462%	\$100,951,943	95%
BAR Constructors	Industry Junction, K&A Steel, Ricochet Fuel, Ricochet Fuel, Tidy Toilets, Buzz Custom Fence	\$961,283	6%	\$18,008,980	1873%	\$18,960,214	100%
BAR Constructors	Industry Junction, K&A Steel, Ricochet Fuel, Ricochet Fuel, Tidy Toilets	\$14,011,932	23%	\$60,059,592	429%	\$60,059,592	94%
Ebara		\$0	0%	\$0	0%	\$11,680,768	202%
Lambda Construction	High Voltage	\$2,107,483	37%	\$924,115	44%	\$5,495,119	95%
Oncor Electric		\$0	0%	\$0	0%	\$4,756,250	100%
Shermco Industries, Inc.	JCC1 and JCC1HV Electrical Testing Services	\$0	0%	\$0	0%	\$480,593	78%
Pipeline Section 10/11		\$6,930,593	20%	\$17,533,150	253%	\$55,545,325	100%
IPL Partners	LKT, Industry Junction, Eagle Aggregate, Suncoast Res, ATS Drilling, RECS, ANA, Alliance,Ram, JC Welding, Luis Moreno	\$5,526,017	25%	\$4,027,614	73%	\$42,022,337	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, Rangel Land Surveying	\$1,404,576	11%	\$13,505,536	962%	\$13,505,536	100%
Valve Packages		\$0	0%	\$0	0%	\$13,957,412	98%
CONSTRUCTION MANAGEMENT		\$18,034,362	30%	\$21,375,443	119%	\$54,197,593	91%
Completed		\$5,928,654	38%	\$5,954,412	100%	\$15,747,553	100%
Active		\$12,105,707	28%	\$15,421,031	127%	\$38,450,040	88%
CONSTRUCTION MATERIALS TESTING		\$6,696,313	51%	\$5,452,057	81%	\$10,625,213	81%
Completed		\$219,036	97%	\$219,036	100%	\$225,132	100%
Active		\$6,477,277	50%	\$5,233,021	81%	\$10,400,081	80%
ROCIIP		\$900,712	2%	\$370,813	41%	\$23,117,815	55%
TOTAL		\$192,205,614	23%	\$263,171,573	137%	\$1,034,119,851	94%
LAND COST		\$0	0%	\$61,892	0%	\$78,532,928	187%
MISCELLANEOUS		\$0	0%	\$0	0%	\$3,903,305	5%
GRAND TOTAL		\$192,205,614	23%*	\$263,233,465	137%	\$1,116,556,085	94%
* Denotes participation percentage excluding cost of pipe and owner furnished equipment.				M/WBE/HUB Invoiced		\$263,233,465	
				Grand Total Invoiced		\$1,116,556,085	
				* Exclusions Invoiced		\$322,358,973	
				MWBE %		33.1%	



# PROJECT COMPONENTS

PIPELINE SEGMENTS	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	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	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

