INTEGRATED PIPELINE PROJECT

MONTHLY EXECUTIVE SUMMARY

August 2016

PL14 Sunrise on the IPL

Photo by Ryan Moloney, Garney Construction

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

@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

as of 08.31.16

CONTRACT DESIGN AND CONSTRUCTION	DESCRIPTION	BUDGET	CONTRACTS ISSUED	TOTAL INVOICED
PROGRAM WIDE PROFESSIONAL SERVICES		**$133,061,000**	**$88,105,307**	**$82,809,926**
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	$13,472,389	$12,930,430
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	$11,858,055	$10,365,665
Geotechnical	Initial Characterization of entire IPL Project	$12,037,000	$12,026,275	$11,798,959
Corrosion Engineering Services	Engineering Corrosion Control	$3,891,000	$5,072,362	$3,754,371
Land, Easement Acquisition, & Support	Right of Entry and Land Acquisition Support Services	$33,993,000	$3,464,526	$3,327,811
Studies		$3,500,000	$3,583,743	$3,402,626
SCADA System	Engineering of SCADA system	$640,000	$1,508,213	$164,494
Microwave System	Engineering of Communications System	$5,210,000	$1,522,785	$1,468,609
DESIGN		**$152,839,000**	**$128,231,192**	**$110,663,100**
Completed		**$103,899,000**	**$96,376,989**	**$95,153,466**
Active		**$24,159,000**	**$31,315,787**	**$15,509,634**
CH2M Hill	Project Operational Information and Operations Manual		$3,044,922	$1,618,657
CH2M Hill	Final Conformance of Design of JCC1	$728,000	$2,563,376	$480,616
MWH	Final Conformance of Design of Section 9/10/11	$506,000	$524,313	$527,645
Black & Veatch	Final Design of Section 12/13/14 - 28.1 miles of 84 - inch and 108 - inch pipeline	$11,292,000	$9,704,622	$9,651,306
Parsons	Final Conformance of Design of Sections 17/18/Tunnel	$832,000	$579,753	$301,889
Brown & Gay	Final Design of Section 19-1	$5,770,000	$7,003,722	$607,728
HDR	Final Design of Section 19-2	$5,030,000	$6,989,876	$1,788,550
Burns & McDonnell Trans. Mgmt.	Development of Transportation Management Plan		$905,203	$533,243
Remaining		**$24,778,000**	**$538,417**	
CONSTRUCTION ADMINISTRATION		**$48,877,000**	**$18,045,680**	**$6,837,459**
CONSTRUCTION / OWNER FURNISHED EQUIPMENT		**$1,729,540,000**	**$508,631,281**	**$330,442,478**
Completed		**$3,700,000**	**$3,860,755**	**$3,644,051**
Active		**$641,087,000**	**$504,770,526**	**$326,798,427**
Pipeline Section 15-1		**$115,112,000**	**$93,794,582**	**$92,320,207**
Garney Construction	Construction of Section 15-1	$115,112,000	$93,794,582	$92,320,207
JB3		**$99,592,000**	**$85,259,261**	**$37,484,787**
MWH Constructors	Construction of JB3 Pump Station	$51,473,000	$56,644,382	$19,935,661
ASI Constructors	Construction of JB3 Reservoir	$16,579,000	$11,669,898	$11,669,898
Oncor Electric	Installation of JB3 Substation Transmission Lines	$1,066,000	$957,119	$923,119
Isolux Corsan	Construction of JB3 Substation	$7,400,000	$4,921,283	$3,942,122
Pentair Flow Technologies	Construction of JB3 Pumps, Motors, Drives	$23,074,000	$11,066,579	$1,013,988

PROGRAM SUPPORT SERVICES

as of 08.31.16

CONTRACT DESIGN AND CONSTRUCTION	DESCRIPTION	BUDGET	CONTRACTS ISSUED	TOTAL INVOICED
Pipeline Section 12/13/MBR/JB4 Bypass		$167,993,000	$154,255,010	$116,543,349
Thalle Midlothian	Construction of Sections 12/13/MBR/JB4 Bypass	$146,310,000	$143,594,049	$111,219,049
BAR Constructors	Construction of Richland-Chambers/Cedar Creek Interconnection Facility	$21,682,000	$10,572,961	$5,324,300
Hilco Electric	Relocation of Electrical Service Lines		$88,000	
Microwave System		$6,398,000	$5,376,289	$3,315,486
Huffman Communications	Construction of Microwave Towers	$6,398,000	$5,376,289	$3,315,486
Pipeline Section 15-2		$97,217,000	$52,558,127	$42,177,213
BAR Constructors	Construction of Section 15-2	$97,217,000	$52,558,127	$42,177,213
Pipeline Section 14		$107,113,000	$48,166,835	$30,927,852
Garney Construction	Construction of Section 14	$107,113,000	$48,166,835	$30,927,852
Pipeline Section 17 Tunnel		$12,252,000	$33,092,000	$0
IPL Partners	Construction of Section 17 Tunnel	$12,252,000	$33,092,000	$0
JCC1 Intake		$21,564,000	$19,741,750	$0
BAR Constructors	Construction of JCC1 Intake	$21,564,000	$19,741,750	$0
Valve Packages		$13,845,000	$12,526,672	$4,029,534
Garney Construction	Valve Package 1 - Section 15-1 Butterfly Valves	$518,000	$262,244	$166,900
Rodney Hunt	Valve Package 2 - Section 15-1 Interconnection Facility Valves	$474,000	$733,206	$664,995
Blackhall Engineering	Valve Package 3 - JB3, Section 15-2, MBR Yard Gate Valves	$5,500,000	$6,211,276	$2,110,111
Crispin Valves	Valve Package 4 - Section 12 RC/CC Interconnection, JB4 Bypass, MBR Yard Butterfly Valves	$3,999,000	$2,269,140	$352,962
Crispin Valves	Valve Package 5 - JB3 Butterfly Valves	$1,249,000	$1,224,944	$382,561
Ross Valves	Valve Package 6 - Section 12 RC/CC Interconnection Multi-Orifice Valves	$715,000	$526,340	$352,005
Crispin Valves	Valve Package 8 - Section 10 & 11 Bypass Butterfly Valves	$1,391,000	$1,299,522	$0
Remaining		$1,084,753,000		
CONSTRUCTION MANAGEMENT		$65,169,000	$45,397,801	$18,196,713
Completed		$15,777,000	$15,687,599	$15,687,599
Active		$17,665,000	$29,710,201	$2,509,114
Remaining		$31,728,000		
CONSTRUCTION MATERIALS TESTING		$17,295,000	$11,235,125	$2,941,485
Completed		$203,000	$225,133	$225,132
Active		$6,112,000	$11,009,992	$2,716,352
Remaining		$10,980,000		
ROCIP		$2,575,000	$32,876,613	$16,827,563
LAND COST		$107,384,000	$47,801,010	$47,801,010
PROGRAM LEVEL CONTINGENCY		$83,178,000		
MISCELLANEOUS		$2,000,000	$1,669,680	$1,669,680
GRAND TOTAL		$2,341,918,000	$881,993,690	$618,189,414
REMAINING BOND FUNDS				$631,810,586

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

ACCOMPLISHMENTS

through 09.30.16

PL15-1 (Pipeline Section 15-1 including the S5X15 Richland-Chambers Pipeline Interconnect Facility)
- Filling 15.5 miles of 108" pipe for hydrostatic testing using temporary fill line from the Richland Chambers Pipeline.

JB3R (Pump Suction Reservoir for the JB3 Pump Station)
- Regraded and reseeded embankment slopes and all disturbed areas. Installed sprinkler system using rainwater from the reservoir cells.

PL12, 13, MBR (Pipeline Sections 12 and 13 combined with the Midlothian Balancing Reservoir)
- Continue excavation of reservoir cell 3 floor and continue embankment fill.
- Performed pugmill calibration and installing conveyor belt system for production and delivery of soil cement to reservoirs.
- Installing electrical, control and communication ductbanks at MBR.
- Installing pipe on Section 12 toward tie-in to S2X12.
- Continue ROW grading and restoration and removal of excess spoil material.

COM01 (Microwave Towers and Communication Facilities for SCADA Control of the IPL)
- Received approval of submittals and released for fabrication of towers at MBR and S5X15.
- Began work on tower foundation at S5X15.

JB3 (250mgd Pump Station expandable to 350mgd)
- Placed elevated deck #4 of 6.
- Installing forms for elevated deck #5.
- Continued to manufacture and place flow fill around basement.
- Continued installation of structural steel for Data Center building
- Began installation of precast panels for the Data Center building
- Began installation of electrical raceway in pump station basement
- Continued installation of 108-inch yard pipe for YP-1.

PL15-2 (Pipeline Section15-2 that feeds the JB3 Reservoir)
- Pipe crews #1 and #2 installed a total of 4,400' of 108" pipe.
- Continue over-excavation and flowable fill backfill for foundation of 108" Gate Valve Vault.
- Continue ROW restoration and spoil dirt removal.

S2X12 (Interconnection Facility of IPL Phase 1 to existing Cedar Creek and Richland Chambers Pipelines)
- Installed roof and insulation at Interconnect Building.
- Installed bridge crane.
- Continue electrical ductbank installations.

JB3HV (High Voltage Substation for the JB3 Pump Station and Data Center)
- Received and installed pre-fabricated Control Building.
- Continue installing equipment and power/communication duct bank.

PL14 (Pipeline Section 14 that delivers water from JB3 Pump Station to MBR)
- Two crews installed 4,200' of 108" pipe and completed pre-trenching an additional 2,200'.
- Continue tunneling at IH35. All other tunnels are complete.
- Continue installing manholes at air release and blow-off valve locations and installing cathodic protection test stations

PL17TUN (Trinity River Tunnel on Pipeline Section 17)
- Completed Pre-Construction Workshops.
- Continue submittal reviews.

JCC1IN (Intake Structure and Wet Well for JCC1 Pump Station at Cedar Creek)
- Executed contract with BAR Constructors.
- No construction activity performed.

PL10, 11 (Pipeline Sections 10 and 11 from the JB4 Pump Station to the KBR Pressure Reduction Facility)
- Executing contract with IPL Partners.
- No construction activity performed.

OFE03 (Owner-Furnished 108" Gate Valves)
- IPL reps witnessed performance testing of Hydraulic Pressure Units for 108" GVs.
- Witnessed assembly process of 108" GV.

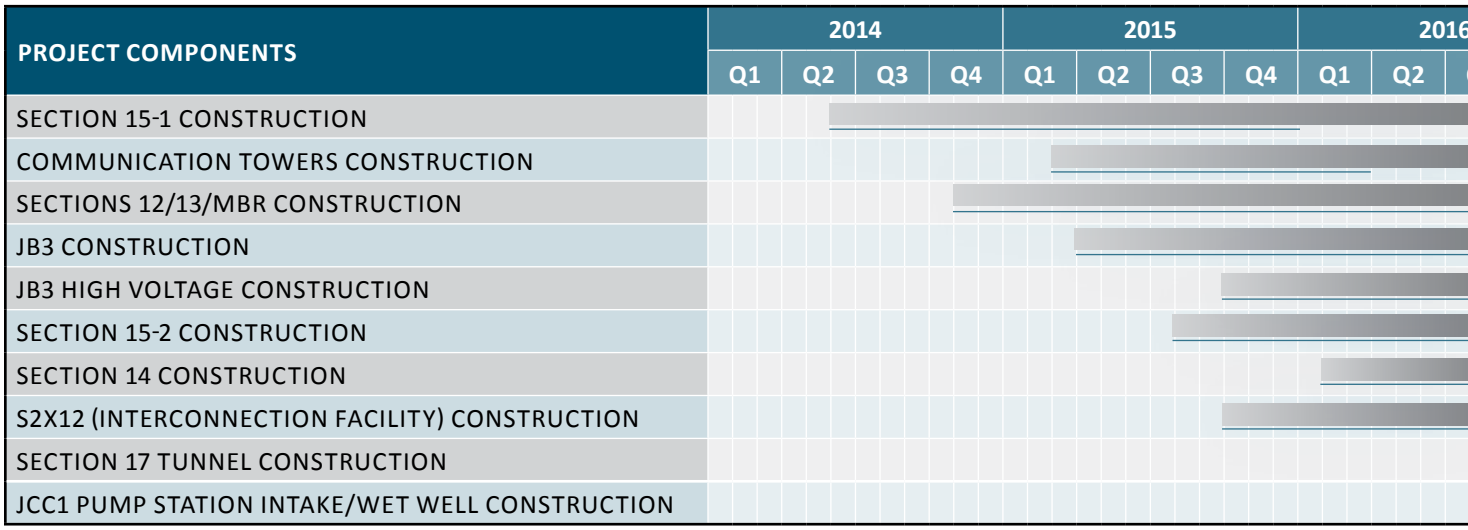
OFE04/05 (Owner-Furnished 54", 60" and 108" Butterfly Valves)
- Two 108" BFVs delivered to the MBR site.

OFE07 (Owner-Furnished pumps, motors and variable frequency drives for JB3)
- IPL reps witnessed additional pump and motor performance testing and VFD operational control testing.

OFE08 (Owner-Furnished 66", 84" and 108" Butterfly Valves)
- Awaiting contract execution with Crispin Valve.

OFE09 (Owner Furnished pumps, motors and variable frequency drives for JCC1)
- Request for Proposals for seven vertical turbine pumps, motors and variable frequency drives has been issued.

PROJECT SCHEDULE

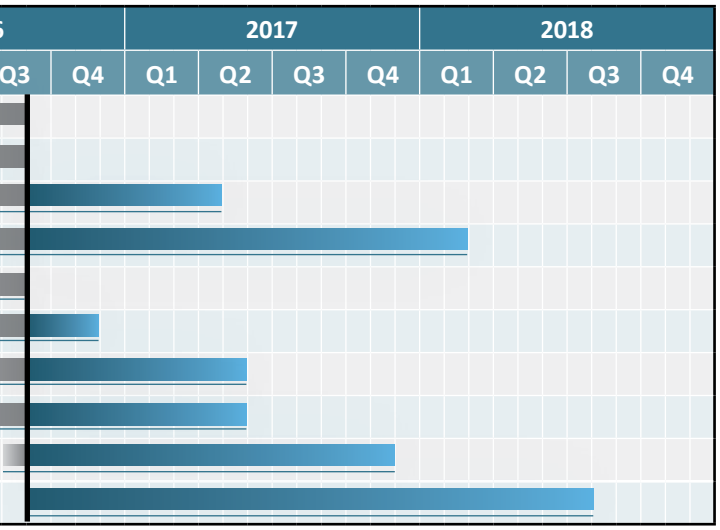


ACTIVITY STATUS

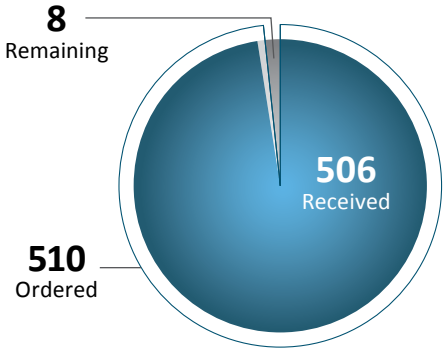
as of 09.30.16

PL1213MBR Electrical ductbank at MBR

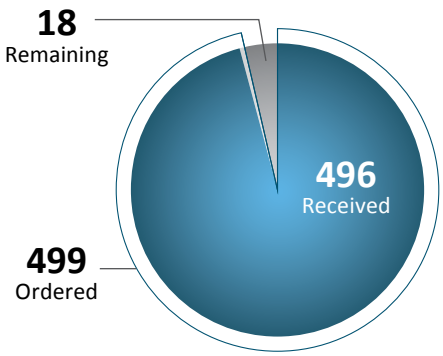
OFE03 Partially assembled 108-inch gate valve



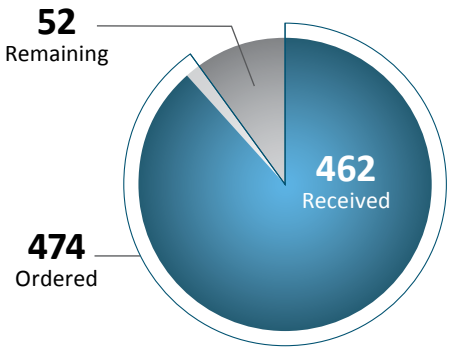
TITLE COMMITMENTS



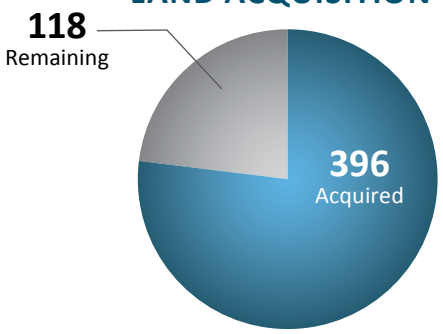
SURVEYS



APPRAISALS



LAND ACQUISITION



Total Parent Parcels: 514

M/WBE PARTICIPATION

as of 08.31.16

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		**$19,800,463**	**22%**	**$19,477,518**	**98%**	**$82,809,926**	**94%**
Program Management		$6,828,350	19%	$6,636,687	97%	$35,124,711	100%
Conceptual Design / Environmental / Permitting		$2,700,278	20%	$2,743,566	102%	$12,930,430	96%
Value Engineering		$0	0%	$23,178	100%	$472,248	100%
Surveying and Mapping		$3,548,416	30%	$3,813,538	107%	$10,365,665	87%
Geotechnical		$3,572,334	30%	$3,518,305	98%	$11,798,959	98%
Corrosion Engineering Services		$1,053,764	21%	$761,434	72%	$3,754,371	74%
Land, Easement Acquisition, & Support		$1,201,457	35%	$1,489,078	124%	$3,327,811	96%
Studies		$41,717	1%	$41,717	100%	$3,402,626	95%
SCADA System		$384,444	25%	$360	0%	$164,494	11%
Microwave System		$469,702	31%	$449,654	96%	$1,468,609	96%
DESIGN		**$34,093,623**	**27%**	**$29,778,599**	**87%**	**$110,663,100**	**86%**
Completed		**$26,511,305**	**28%**	**$25,980,682**	**98%**	**$95,153,466**	**99%**
Active		**$7,582,319**	**24%**	**$3,797,917**	**50%**	**$15,509,634**	**50%**
CH2M Hill (Ops Manual)	NDM	$479,674	16%	$358,851	75%	$1,618,657	53%
CH2M Hill (JCC1)	JQ, Gupta, APM, HVJ, XENCO	$644,571	25%	$104,501	16%	$480,616	19%
MWH	Garzabury, Kevin Sloan	$226,705	43%	$131,102	58%	$527,645	101%
Black & Veatch	BDS, CAS, JQ, TME	$2,425,531	25%	$2,577,758	108%	$9,651,306	100%
Parsons	Criado, EPB, HVJ	$144,938	25%	$0	0%	$301,889	52%
Brown & Gay	AZB, TME, Lamb-Star, NDM	$1,750,930	25%	$112,482	6%	$607,728	9%
HDR	AZB, Daltech, Word Wizards, Gupta	$1,747,469	25%	$424,644	24%	$1,788,550	26%
Burns & McDonnell Trans. Mgmt.	Lamb-Star Engineering	$162,500	18%	$88,578	55%	$533,243	59%
Remaining		**$0**	**0%**	**$0**	**0%**	**$0**	**0%**
CONSTRUCTION ADMINISTRATION		**$4,499,165**	**25%**	**$1,777,573**	**40%**	**$6,837,459**	**38%**
CONSTRUCTION / OWNER FURNISHED EQUIPMENT		**$68,598,374**	**22%***	**$41,198,507**	**60%**	**$330,442,478**	**65%**
Completed		**$1,354,402**	**35%**	**$1,354,402**	**100%**	**$3,644,051**	**94%**
Active		**$67,243,972**	**22%***	**$39,844,105**	**59%**	**$326,798,427**	**65%**
Pipeline Section 15-1		**$9,415,226**	**29%***	**$6,504,747**	**69%**	**$92,320,207**	**98%**
Garney Construction	Danridge, SYB, Ricochet, Glenko, Carrasco, Cowboy, Gorrondona, Custom Fence, LKT, Astro Johnny, Pam, Father & Son, Bowden's Erosion	$9,415,226	29%*	$6,504,747	69%	$92,320,207	98%
JB3		**$16,474,218**	**25%***	**$4,275,223**	**26%**	**$37,484,787**	**44%**
MWH Constructors	Statewide, Cowboy, TX Enviro, Champion, Ram Tool, Rent-a-Fence, Soto Steel, A-Star, Ike, Greystone, LKT, Accurate, Green Scaping	$13,580,000	27%*	$1,704,972	13%	$19,935,661	35%
ASI Constructors	Champion Fuel, Desert Steel, Green Scaping	$1,417,833	13%*	$1,525,477	108%	$11,669,898	100%

M/WBE PARTICIPATION

as of 08.31.16

CONTRACT DESIGN AND CONSTRUCTION	M/WBE & HUB SUB-CONTRACTORS	CONTRACT COMMITMENT		M/WBE | HUB INVOICED TO DATE		TOTAL PROJECT COMPLETED TO DATE	
		$	%	$	% (PER COMMITMENT)	$	%
Isolux Corsan	Dyna Grid	$1,476,385	30%	$1,044,774	71%	$3,942,122	80%
Oncor Electric		$0	0%	$0	0%	$923,119	96%
Pentair Flow Technologies		$0	0%	$0	0%	$1,013,988	9%
Pipeline Section 12/13/MBR/JB4 Bypass		$22,054,002	24%*	$14,272,292	65%	$116,543,349	76%
Thalle Midlothian	LKT, Statewide, Granados, Desert Steel, ETTL, Glenko, A.N.A., Edwards, Buzz, Bradley-Douglas, Pinnacle	$21,209,810	26%*	$10,768,698	51%	$111,219,049	77%
BAR Constructors	Fraire's, DFW Aggregates, Ricochet, MMG, LKT, Brock, Garland Heating & Air, Texas Metal, Buzz, Rangel	$844,192	8%	$3,503,594	415%	$5,324,300	50%
Hilco Electric		$0	0%	$0	0%	$0	0%
Microwave System		$1,471,554	27%	$1,073,230	73%	$3,315,486	62%
Huffman Communications	Ricochet, Edwards, Chaffin Tower	$1,471,554	27%	$1,073,230	73%	$3,315,486	62%
Pipeline Section 15-2		$4,122,200	16%*	$11,041,336	268%	$42,177,213	80%
BAR Constructors	Ricochet, Fraire's, DFW Aggregates, Brock, Tidy Toilets, KDAT, Juan Cantu, Buyer's, RAM, Rangel, LKT, Greenscaping, Environmental Safety	$4,122,200	16%	$11,041,336	268%	$42,177,213	80%
Pipeline Section 14		$6,081,897	22%*	$2,677,278	44%	$30,927,852	64%
Garney Construction	AEA, Gorrondona, JC Welding, LKT, Statewide, Bowdens	$6,081,897	22%	$2,677,278	44%	$30,927,852	64%
Pipeline Section 17 Tunnel		$6,623,125	24%*	$0	0%	$0	0%
IPL Partners	LKT, Industry Junction, Eagle Aggregate, Suncoast Res, ATS Drilling, RECS, ANA, Alliance,Ram, JC Welding, Luis Moreno	$6,623,125	24%	$0	0%	$0	0%
JCC1 Intake		$1,001,750	6%*	$0	0%	$0	0%
BAR Constructors	Industry Junction, K&A Steel, Ricochet Fuel, Ricochet Fuel, Tidy Toilets, Buzz Custom Fence	$1,001,750	6%	$0	0%	$0	0%
Valve Packages		$0	0%	$0	0%	$4,029,534	32%
CONSTRUCTION MANAGEMENT		$19,172,452	42%	$7,117,210	37%	$18,196,713	40%
Completed		$6,488,069	41%	$5,954,412	92%	$15,687,599	100%
Active		$12,684,383	43%	$1,162,799	9%	$2,509,114	8%
CONSTRUCTION MATERIALS TESTING		$5,768,945	51%	$1,384,200	24%	$2,941,485	26%
Completed		$219,036	97%	$219,036	100%	$225,132	100%
Active		$5,549,909	50%	$1,165,163	21%	$2,716,352	25%
ROCIP		$1,499,307	5%	$211,182	14%	$16,827,563	51%
TOTAL		$153,432,330	24%*	$100,944,789	66%	$568,718,724	68%
LAND COST				$54,150		$47,801,010	45%
MISCELLANEOUS						$1,669,680	
GRAND TOTAL		$153,432,330	25%*	$100,998,939	66%	$618,189,414	70%

M/WBE/HUB Invoiced	$100,998,939
Grand Total Invoiced	$618,189,414
* Exclusions Invoiced	$217,511,479
MWBE %	25.21%

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

** *This number excludes owner furnished equipment, large diameter pipe and land cost $217,511,479.*

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
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