



INTEGRATED PIPELINE PROJECT

MONTHLY EXECUTIVE SUMMARY

October 2017



PL1213MBR
Installing trash racks
at MBR outlets

IPL PROGRAM MANAGEMENT

Tarrant Regional Water District

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[@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

as of 10.31.17

CONTRACT DESIGN AND CONSTRUCTION	DESCRIPTION	BUDGET	CONTRACTS ISSUED	TOTAL INVOICED
PROGRAM WIDE PROFESSIONAL SERVICES		\$133,062,000	\$88,965,790	\$84,404,964
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	\$13,193,689
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	\$10,483,137
Geotechnical	Initial Characterization of entire IPL Project	\$12,037,000	\$12,336,425	\$12,064,733
Corrosion Engineering Services	Engineering Corrosion Control	\$3,891,000	\$5,326,362	\$4,105,529
Land, Easement Acquisition, & Support Studies	Right of Entry and Land Acquisition Support Services	\$33,993,000	\$3,464,526	\$3,422,067
SCADA System	Engineering of SCADA system	\$640,000	\$1,508,213	\$482,656
Microwave System	Engineering of Communications System	\$5,210,000	\$1,522,785	\$1,468,609
DESIGN		\$152,837,000	\$128,351,139	\$116,195,149
Completed		\$101,901,000	\$95,902,930	\$95,190,350
Active		\$24,158,000	\$31,909,793	\$21,004,798
CH2M Hill	Project Operational Information and Operations Manual		\$3,044,922	\$2,775,659
CH2M Hill	Final Conformance of Design of JCC1	\$728,000	\$2,861,718	\$1,559,918
MWH	Final Conformance of Design of Section 9/10/11	\$506,000	\$812,562	\$535,921
Black & Veatch	Final Design of Section 12/13/14 - 28.1 miles of 84 - inch and 108 - inch pipeline	\$11,292,000	\$9,712,410	\$9,651,306
Parsons	Final Conformance of Design of Sections 17/18/Tunnel	\$832,000	\$579,379	\$681,545
Brown & Gay	Final Design of Section 19-1	\$5,770,000	\$7,003,722	\$1,805,842
HDR	Final Design of Section 19-2	\$5,030,000	\$6,989,876	\$3,152,067
Burns & McDonnell Trans. Mgmt.	Development of Transportation Management Plan		\$905,203	\$842,540
Remaining		\$26,778,000	\$538,417	
CONSTRUCTION ADMINISTRATION		\$48,877,000	\$18,550,960	\$11,444,592
CONSTRUCTION / OWNER FURNISHED EQUIPMENT		\$1,729,540,000	\$633,157,069	\$508,694,495
Completed		\$26,677,000	\$20,593,942	\$20,377,238
Active		\$811,918,000	\$612,563,127	\$488,317,257
Pipeline Section 15-1		\$115,112,000	\$94,701,185	\$93,361,406
Garney Construction	Construction of Section 15-1	\$115,112,000	\$94,701,185	\$93,361,406
JB3		\$83,013,000	\$74,582,587	\$58,295,477
MWH Constructors	Construction of JB3 Pump Station	\$51,473,000	\$57,118,744	\$45,717,893
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	\$383,653	\$336,623
Pentair Flow Technologies	Construction of JB3 Pumps, Motors, Drives	\$23,074,000	\$11,258,183	\$6,452,954
Pipeline Section 12/13/MBR/JB4 Bypass		\$167,992,000	\$154,163,248	\$147,723,163
Thalle Midlothian	Construction of Sections 12/13/MBR/JB4 Bypass	\$146,310,000	\$143,445,210	\$137,822,910
BAR Constructors	Construction of Richland-Chambers/Cedar Creek Interconnection Facility	\$21,682,000	\$10,593,808	\$9,776,024
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 10.31.17

CONTRACT DESIGN AND CONSTRUCTION	DESCRIPTION	BUDGET	CONTRACTS ISSUED	TOTAL INVOICED
Pipeline Section 15-2		\$97,217,000	\$53,035,244	\$49,174,982
BAR Constructors	Construction of Section 15-2	\$97,217,000	\$53,035,244	\$49,174,982
Pipeline Section 14		\$107,113,000	\$48,335,397	\$44,035,096
Garney Construction	Construction of Section 14	\$107,113,000	\$48,335,397	\$44,035,096
Pipeline Section 17		\$109,944,000	\$78,579,258	\$40,288,119
IPL Partners	Construction of Section 17 Tunnel	\$12,252,000	\$33,067,943	\$17,410,700
Thalle Midlothian	Construction of Sections 17/18/JB2 Bypass	\$97,692,000	\$45,511,315	\$22,877,419
JCC1		\$42,682,000	\$37,769,125	\$9,714,812
BAR Constructors	Construction of JCC1 Intake	\$21,564,000	\$19,803,301	\$9,111,068
Ebara	Construction of JCC1 Pumps, Motors, Drives	\$17,775,000	\$12,694,890	\$603,745
Oncor Electric	Construction of JCC1 HV Transmission Lines	\$3,343,000	\$5,270,933	\$0
Pipeline Section 10/11		\$73,679,000	\$57,090,790	\$36,110,053
IPL Partners	Construction of Section 10/11	\$72,362,000	\$43,398,742	\$34,380,862
Oncor Electric	Construction of KBR S1X10 HV Transmission Lines		\$17,452	\$17,452
BAR Constructors	Construction of KBR S1X10	\$1,317,000	\$13,674,595	\$1,711,739
Valve Packages		\$15,166,000	\$14,306,294	\$9,614,149
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	\$5,363,170
Crispin Valves	Valve Package 4 - Section 12 RC/CC Interconnection, JB4 Bypass, MBR Yard Butterfly Valves	\$3,999,000	\$2,269,140	\$1,915,482
Crispin Valves	Valve Package 5 - JB3 Butterfly Valves	\$1,249,000	\$1,249,222	\$869,234
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	\$1,461,040	\$204,156
Blackhall Engineering	Valve Package 11 - JCC1 Gate Valve	\$1,320,000	\$1,788,958	\$176,896
Remaining		\$890,945,000		
CONSTRUCTION MANAGEMENT		\$65,170,000	\$45,397,801	\$30,110,823
Completed		\$15,777,000	\$15,687,599	\$15,687,599
Active		\$17,665,000	\$29,710,201	\$14,423,223
Remaining		\$31,728,000		
CONSTRUCTION MATERIALS TESTING		\$17,296,000	\$12,013,590	\$6,165,596
Completed		\$203,000	\$225,133	\$225,132
Active		\$7,791,000	\$11,788,457	\$5,940,464
Remaining		\$9,302,000		
ROCIP		\$2,575,000	\$23,351,087	\$18,792,429
LAND COST		\$107,384,000	\$61,052,798	\$61,052,798
PROGRAM LEVEL CONTINGENCY		\$83,178,000		
MISCELLANEOUS		\$2,000,000	\$2,252,640	\$2,252,640
GRAND TOTAL		\$2,341,919,000	\$1,013,092,874	\$839,113,485
REMAINING BOND FUNDS				\$410,886,515

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

ACCOMPLISHMENTS

through 11.30.17

PL15-1 (Pipeline Section 15-1 including the S5X15 Richland-Chambers Pipeline Interconnect Facility)

- Completed security fencing and gates at S5X15.
- Continue installing ROW fencing H-Braces added by change order.

JB3RR (Pump Suction Reservoir Grading and Grassing Project)

- Continue mowing and maintenance of embankment slopes.

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

- Continue security fencing at MBR, ROW fencing and gates, and completed cable mats at creek crossings.
- Electrical ductbanks and security camera foundations were installed on top of embankments.
- Installing trash racks at reservoir outlets.

JB3 (250mgd Pump Station expandable to 350mgd)

- Installed pumps on pump skids and installed couplings on motors.
- Installed sheetrock in the Control Room and wall covering system in the Shop.
- Continued installation of outside ductwork for Air Handling Units.
- Continued installation of YP-2 Suction Header Pipe from pump station to reservoir 1.
- Installed 108" gate valve

PL15-2 (Pipeline Section 15-2 that feeds the JB3 Reservoir)

- Continue electrical work at 108" Gate Valve facility and completed security fencing at the vault site.
- Continue ROW fences and gates, cable mat installations and cathodic protection test stations.
- Continue installing permanent access driveways from County and TxDOT roadways.

S2X12 (Interconnection Facility of IPL Phase 1 to existing Cedar Creek and Richland Chambers Pipelines)

- Completed the tie-ins to the existing Richland Chambers and Cedar Creek pipelines.
- Completed coating of 60" piping.
- Continue installation of irrigation system.

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

- Completed successful hydrostatic pressure testing of all of PL14 pipeline.
- Continue ROW restoration, fencing and gates, cathodic protection anode beds and cable mat installations.

PL17TUN (Trinity River Tunnel on Pipeline Section 17)

- Continue installation of open-cut 108" pipeline and dewatering wells for open-cut piping on east side of the river.
- Continue receiving pipe, embedment and tunnel support materials.

JCC1IN (Intake Structure and Wet Well for JCC1 Pump Station at Cedar Creek)

- Placed structural concrete at 3 lower walls, 2 front walls and at structural columns.
- Continue forming and rebar for additional wall placements.
- Completed 12 drilled piers for south wingwall.
- Continue well-point dewatering of the work area.

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

- Installed 8,200 l.f. of pipe for section 11.
- Received 108" monolithic isolation joint at JB4.
- Clean-up crews continue ROW restoration and permanent ROW fences and gates.
- Continue installing anode beds and cathodic protection test stations.

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

- Installed 2,500 l.f. of 108" pipeline and continue ROW cleanup behind pipelaying operation.
- Continue receiving pipe and installing temporary fences and gates.
- Pipe joint welding and testing is on-going.

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

- Placed forms, rebar and concrete for remaining pipe chase walls and struts.
- Continued installing duct banks for power and communication lines.
- Installed floor drains and under slab piping and risers.

OFE03 (Owner-Furnished 108" Gate Valves)

- GV#4 installed at JB3 Booster Pump Station.

OFE04/05 (Owner-Furnished 54", 60" and 108" Butterfly Valves)

- All valves have been delivered.

OFE06 (Owner-Furnished Multi-Orifice Valves for S2X12)

- Valves delivered and installed, awaiting facility start-up.

OFE07 (Owner-Furnished pumps, motors and variable frequency drives for JB3)

- No additional deliveries to the site or factory testing performed this month.

OFE08 (Owner-Furnished 66", 84" and 108" Butterfly Valves)

- Valves are in production.

OFE09 (Owner-Furnished pumps, motors and variable frequency drives for JCC1)

- Continue reviewing submittals for pump package.

OFE11 (Owner-Furnished 108" Gate Valve)

- Continue reviewing submittals received from Blackhall.



JCC1IN Concrete and rebar placement for front walls

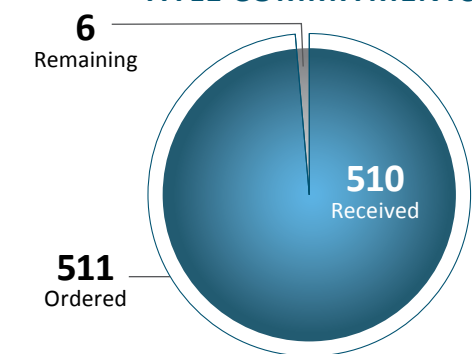


S2X12 Finish coating on 60-inch pipe

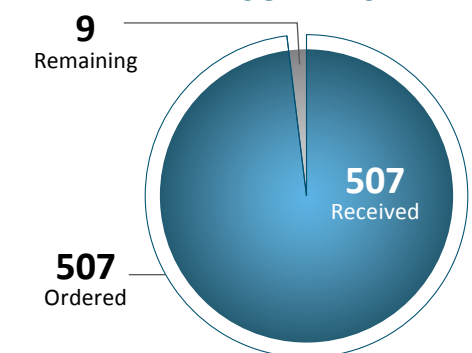
ACTIVITY STATUS

as of 11.30.17

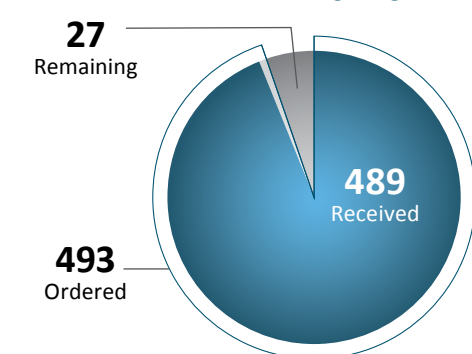
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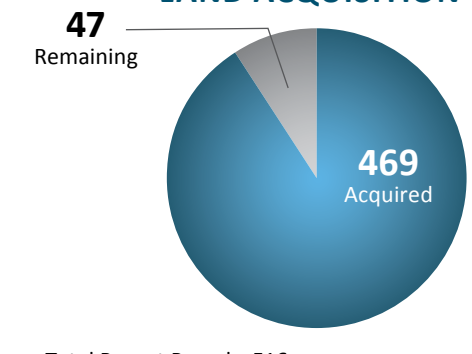
SURVEYS



APPRAISALS



LAND ACQUISITION



Total Parent Parcels: 516

PROJECT SCHEDULE

PROJECT COMPONENTS	2014				2015				2016				2017				2018			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
SECTION 15-1 CONSTRUCTION																				
SECTIONS 12, 13, MBR CONSTRUCTION																				
JB3 CONSTRUCTION																				
SECTION 15-2 CONSTRUCTION																				
SECTION 14 CONSTRUCTION																				
S2X12 (INTERCONNECTION FACILITY) CONSTRUCTION																				
SECTION 17 TUNNEL CONSTRUCTION																				
JCC1 PUMP STATION INTAKE, WET WELL CONSTRUCTION																				
SECTION 10, 11 CONSTRUCTION																				
SECTION 17, 18 CONSTRUCTION																				
KBRPRS/S1X10 (PRESSURE REDUCTION STA.) CONSTRUCTION																				

M/WBE PARTICIPATION

as of 10.31.17

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		\$20,178,105	23%	\$19,666,637	97%	\$84,404,964	95%
Program Management		\$6,636,687	19%	\$6,636,687	100%	\$35,124,711	100%
Conceptual Design / Environmental / Permitting		\$2,700,278	20%	\$2,822,344	105%	\$13,193,689	98%
Value Engineering		\$23,178	5%	\$23,178	100%	\$472,248	100%
Surveying and Mapping		\$3,939,403	33%	\$3,831,616	97%	\$10,483,137	88%
Geotechnical		\$3,638,078	29%	\$3,545,033	97%	\$12,064,733	98%
Corrosion Engineering Services		\$1,053,764	20%	\$761,434	72%	\$4,105,529	77%
Land, Easement Acquisition, & Support		\$1,294,837	37%	\$1,522,767	118%	\$3,422,067	99%
Studies		\$41,717	1%	\$41,717	100%	\$3,587,584	92%
SCADA System		\$384,444	25%	\$32,208	8%	\$482,656	32%
Microwave System		\$465,719	31%	\$449,653	97%	\$1,468,609	96%
DESIGN		\$33,817,181	26%	\$31,049,102	92%	\$116,195,149	91%
Completed		\$26,158,044	27%	\$26,046,137	100%	\$95,190,350	99%
Active		\$7,659,137	24%	\$5,002,965	65%	\$21,004,798	66%
CH2M Hill (Ops Manual)	NDM	\$479,674	16%	\$486,259	101%	\$2,775,659	91%
CH2M Hill (JCC1)	JQ, Gupta, APM, HVJ, XENCO	\$721,484	25%	\$465,685	65%	\$1,559,918	55%
MWH	Garzabury, Kevin Sloan	\$226,705	28%	\$136,372	60%	\$535,921	66%
Black & Veatch	BDS, CAS, JQ, TME	\$2,425,530	25%	\$2,577,758	106%	\$9,651,306	99%
Parsons	Criado, EPB, HVJ	\$144,845	25%	\$112,357	78%	\$681,545	118%
Brown & Gay	AZB, TME, Lamb-Star, NDM	\$1,750,930	25%	\$469,561	27%	\$1,805,842	26%
HDR	AZB, Daltech, Word Wizards, Gupta	\$1,747,469	25%	\$639,501	37%	\$3,152,067	45%
Burns & McDonnell Trans. Mgmt.	Lamb-Star Engineering	\$162,500	18%	\$115,472	71%	\$842,540	93%
Remaining		\$0	0%	\$0	0	\$0	0%
CONSTRUCTION ADMINISTRATION		\$4,533,900	24%	\$2,659,615	59%	\$11,444,592	62%
CONSTRUCTION / OWNER FURNISHED EQUIPMENT		\$81,135,769	13%	\$81,688,471	101%	\$508,694,495	80%
Completed		\$4,217,818	21%	\$4,091,050	97%	\$20,377,238	99%
Active		\$76,917,951	22%	\$77,597,421	101%	\$488,317,257	80%
Pipeline Section 15-1		\$9,418,137	28%	\$6,649,736	71%	\$93,361,406	99%
Garney Construction	Danridge, SYB, Ricochet, Glenko, Carrasco, Cowboy, Gorrondona, Custom Fence, LKT, Astro Johnny, Pam, Father & Son, Bowden's Erosion	\$9,418,137	28%	\$6,649,736	71%	\$93,361,406	99%
JB3		\$15,051,893	26%	\$10,130,515	67%	\$58,295,477	78%
MWH Constructors	Statewide, Cowboy, TX Enviro, Champion, Ram Tool, Rent-a-Fence, Soto Steel, A-Star, Ike, Greystone, LKT, Accurate, Green Scaping	\$13,601,973	27%	\$8,680,594	64%	\$45,717,893	80%
Oncor Electric		\$1,449,920	3%	\$1,449,920	100%	\$4,864,888	9%
Isolux Corsan	Dyna Grid	\$0	0%	\$0	0%	\$923,119	96%
RE Monks		\$0	0%	\$0	0%	\$336,623	7%
Pentair Flow Technologies		\$0	0%	\$0	0%	\$6,452,954	57%

M/WBE PARTICIPATION

as of 10.31.17

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		\$22,082,031	24%	\$21,485,085	97%	\$147,723,163	96%
Thalle Midlothian	LKT, Statewide, Granados, Desert Steel, ETTL, Glenko, A.N.A., Edwards, Buzz, Bradley-Douglas, Pinnacle	\$21,235,656	27%	\$16,066,070	76%	\$137,822,910	96%
BAR Constructors	Fraire's, DFW Aggregates, Ricochet, MMG, LKT, Brock, Garland Heating & Air, Texas Metal, Buzz, Rangel	\$846,375	8%	\$5,419,015	640%	\$9,776,024	92%
Hilco Electric		\$0	#DIV/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		\$4,125,596	15%	\$19,412,915	471%	\$49,174,982	93%
BAR Constructors	Ricochet, Fraire's, DFW Aggregates, Brock, Tidy Toilets, KDAT, Juan Cantu, Buyer's, RAM, Rangel, LKT, Greenscaping, Environmental Safety	\$4,125,596	15%	\$19,412,915	471%	\$49,174,982	93%
Pipeline Section 14		\$6,083,367	22%	\$6,667,972	110%	\$44,035,096	91%
Garney Construction	AEA, Gorrondona, JC Welding, LKT, Statewide, Bowdens	\$6,083,367	22%	\$6,667,972	110%	\$44,035,096	91%
Pipeline Section 17		\$12,021,917	24%	\$1,341,619	11%	\$40,288,119	51%
IPL Partners	LKT, Industry Junction, Eagle Aggregate, Suncoast Res, ATS Drilling, RECS, ANA, Alliance, Ram, JC Welding, Luis Moreno	\$6,638,370	24%	\$1,333,709	20%	\$17,410,700	53%
Thalle Midlothian	Fleet Lube, Rambo Controls, AE Trucking, MKI Construction, Stome Water Management, Industry Junction, Ortega Land Clearing	\$5,383,547	25%	\$7,909	0%	\$22,877,419	50%
JCC1		\$1,004,766	4%	\$8,195,505	816%	\$9,714,812	26%
BAR Constructors	Industry Junction, K&A Steel, Ricochet Fuel, Ricochet Fuel, Tidy Toilets, Buzz Custom Fence	\$1,004,766	6%	\$8,195,505	816%	\$9,111,068	46%
Ebara		\$0	0%	\$0	0%	\$603,745	5%
Oncor Electric		\$0	0%	\$0	0%	\$0	0%
Pipeline Section 10/11		\$7,130,243	20%	\$3,714,076	52%	\$36,110,053	63%
IPL Partners	LKT, Industry Junction, Eagle Aggregate, Suncoast Res, ATS Drilling, RECS, ANA, Alliance, Ram, JC Welding, Luis Moreno	\$5,706,391	24%	\$2,002,337	35%	\$34,380,862	79%
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	\$1,423,852	11%	\$1,711,739	120%	\$1,711,739	13%
Valve Packages		\$0	0%	\$0	0%	\$9,614,149	67%
CONSTRUCTION MANAGEMENT		\$18,613,185	41%	\$12,134,545	65%	\$30,110,823	66%
Completed		\$5,928,804	38%	\$5,954,412	100%	\$15,687,599	100%
Active		\$12,684,381	43%	\$6,180,133	49%	\$14,423,223	49%
CONSTRUCTION MATERIALS TESTING		\$7,226,826	60%	\$2,937,098	41%	\$6,165,596	51%
Completed		\$219,036	97%	\$219,036	100%	\$225,132	100%
Active		\$7,007,790	59%	\$2,718,062	39%	\$5,940,464	50%
ROCIIP		\$1,499,307	6%	\$286,187	19%	\$18,792,429	80%
TOTAL		\$167,004,272	24%	\$150,421,655	90%	\$775,808,047	82%
LAND COST		\$0	0%	\$61,892	0%	\$61,052,798	261%
MISCELLANEOUS		\$0	0%	\$0	0%	\$2,252,640	4%
GRAND TOTAL		\$167,004,272	24%*	\$150,483,547	90%	\$839,113,485	83%

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

M/WBE/HUB Invoiced	\$150,483,547
Grand Total Invoiced	\$839,113,485
* Exclusions Invoiced	\$260,686,515
MWBE %	26.02%

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

