



**dallas water utilities**  
**city of dallas**

## **AVERAGE COSTS MANUAL**

**FOR PIPELINE CONSTRUCTION COST ESTIMATION**

**SEPTEMBER 2012**

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## I. INTRODUCTION AND PURPOSE

In 2009 DWU re-issued its *DWU Bid Item and Cost Estimating Manual* which contained a clearer and more consistent use of pay items for DWU bid tabulations. This *Average Costs Manual*'s purpose is to aid the City Engineers and Consultants in estimating costs associated with pipeline construction. **This manual is not to be used for bidding purposes.** Projects requiring the construction of water and/or wastewater mains will be designed in accordance with the guidelines contained in the manuals below:

1. *DWU Bid Item and Cost Estimating Manual*. This document is available online at: <http://www.dallascityhall.com/dwu/pdf/BidItemCostManual.pdf>
2. *Dallas Water Utilities Drawings, Details and Standard Appurtenances*. This document is available online at [http://www.dallascityhall.com/dwu/dwu\\_design\\_standards.html](http://www.dallascityhall.com/dwu/dwu_design_standards.html)
3. *Dallas Water Utilities Water and Wastewater Procedures and Design Manual*. This document is available online at [http://www.dallascityhall.com/dwu/dwu\\_design\\_standards.html](http://www.dallascityhall.com/dwu/dwu_design_standards.html)
4. City of Dallas Pavement Cut Manual. This document is available online at: [http://www.dallascityhall.com/public\\_works/manuals\\_construction-standards.html](http://www.dallascityhall.com/public_works/manuals_construction-standards.html)

## II. METHODOLOGY AND APPROACH

DWU advertises projects based on fiscal years. The fiscal year begins on October 1 and concludes on September 30. Data for this manual was gathered over from 2010 through 2012 by DWU from actual construction bid tabulations on City and Joint (F) Contracts. DWU did not incorporate Private Rehabilitation Contracts in this average cost manual because of the methodology used by Private parties when deciding on their pay items. Data in Appendix A and B are based on fiscal years, 2010, 2011, and 2012. In some cases the N value, or number of bids per pay item, was less than 20. It was also common to see that out of the 1648 bid items DWU has only 340 or so that are used regularly on an annual basis. All bidders were taken into account with the average price but DWU used the methodologies from the following documents

- "A Method for identifying High Outliers in Construction Contract Auctions".  
September 29, 2000 Report by Martin Skitmore and H P Lo
- "Identifying Non-competitive Bids in Construction Contract Auctions"  
October 11, 2001 Report by Martin Skitmore

DWU recognizes that other approaches are feasible and urges caution when utilizing this manual for all types of construction bids. Any questions regarding our chosen statistical approach can be discussed with DWU Engineering Services.

**APPENDIX A—DWU City Contracts 2010-2012**

**Biditem Prices For City Contracts From October 2009 To July 2012**

BidItem	Item Description	Units	2010			2011			2012		
			Count	Average	Std. Deviation	Count	Average	Std. Deviation	Count	Average	Std. Deviation
1100 J	8" Temporary Water Main	LS				8	\$30.75	\$11.47			
1500 D	2" Ductile Iron Water Pipe	LF	6	\$60.17	\$21.24						
1500 F	4" Ductile Iron Water Pipe	LF	35	\$43.81	\$14.30	17	\$48.90	\$14.60	6	\$59.20	\$35.23
1500 H	6" Ductile Iron Water Pipe	LF	40	\$47.55	\$16.79	20	\$44.48	\$15.83	13	\$53.91	\$23.80
1500 J	8" Ductile Iron Water Pipe	LF	35	\$55.21	\$18.73	20	\$52.88	\$13.18	13	\$62.11	\$25.87
1500 K	10" Ductile Iron Water Pipe	LF	27	\$58.15	\$14.15	14	\$55.68	\$17.55			
1500 L	12" Ductile Iron Water Pipe	LF	42	\$84.45	\$29.54	21	\$82.14	\$29.09	6	\$88.27	\$38.97
1500 Q	16" Ductile Iron Water Pipe	LF	52	\$124.79	\$49.87	36	\$131.70	\$61.70	12	\$141.95	\$58.68
1500 S	20" Ductile Iron Water Pipe	LF	15	\$149.93	\$70.11	7	\$139.86	\$73.37			
1500 V	24" Ductile Iron Water Pipe	LF	12	\$145.67	\$40.50	13	\$165.31	\$76.99	5	\$191.20	\$49.34
1500 Y	30" Ductile Iron Water Pipe	LF				6	\$466.33	\$280.82			
1500 AA	36" Ductile Iron Water Pipe	LF	5	\$268.00	\$66.86	8	\$208.13	\$64.58			
1600 V	24" Steel Water Pipe	LF	7	\$325.00	\$193.11						
1800 D	2" PVC Water Pipe	LF	5	\$50.40	\$33.43						
1800 F	4" PVC Water Pipe	LF	58	\$42.38	\$13.54	58	\$49.47	\$18.49	12	\$52.23	\$20.22
1800 H	6" PVC Water Pipe	LF	98	\$45.17	\$13.39	63	\$47.92	\$11.53	31	\$55.53	\$23.54
1800 J	8" PVC Water Pipe	LF	97	\$51.88	\$13.29	60	\$50.59	\$9.42	32	\$63.15	\$23.85
1800 K	10" PVC Water Pipe	LF	29	\$74.73	\$26.78	23	\$67.20	\$26.89	13	\$98.17	\$64.38
1800 L	12" PVC Water Pipe	LF	74	\$79.75	\$28.19	56	\$74.87	\$14.26	19	\$78.18	\$19.93
1805 Q	16" PVC Water Pipe	LF				17	\$171.90	\$69.70	12	\$122.21	\$38.60
2000 Q	16" Bar-Wrapped Concrete Cylinder Pipe	LF	7	\$130.11	\$30.76						
2000 V	24" Bar-Wrapped Concrete Cylinder Pipe	LF	13	\$151.31	\$16.06				6	\$409.00	\$221.73
2000 AA	36" Bar-Wrapped Concrete Cylinder Pipe	LF				7	\$230.43	\$31.72			
2000 AE	48" Bar-Wrapped Concrete Cylinder Pipe	LF	5	\$327.40	\$48.67						
2010 S	20" Prestressed Concrete Cylinder Pipe	LF				8	\$383.88	\$85.96			
2010 AA	36" Prestressed Concrete Cylinder Pipe	LF				8	\$405.38	\$182.24			
2010 AC	42" Prestressed Concrete Cylinder Pipe	LF				8	\$635.25	\$325.63			
2010 AF	54" Prestressed Concrete Cylinder Pipe	LF				8	\$680.13	\$324.27			
2010 AJ	72" Prestressed Concrete Cylinder Pipe	LF	7	\$606.14	\$168.01	5	\$3,693.20	\$1,035.70			
2100 HX	6" Extra Depth Water Pipe (+20')	LF	6	\$30.83	\$20.35				6	\$97.90	\$92.01
2100 JX	8" Extra Depth Water Pipe (+20')	LF	6	\$32.50	\$18.64				6	\$98.27	\$92.29
2100 KX	10" Extra Depth Water Pipe (+20')	LF	6	\$38.33	\$23.59				6	\$106.97	\$104.94
2100 LX	12" Extra Depth Water Pipe (+20')	LF	6	\$40.83	\$22.68				6	\$107.33	\$105.16
2200 F	Rehabilitation of Existing 4" Water Main	LF	7	\$69.00	\$14.35						
2200 H	Rehabilitation of Existing 6" Water Main	LF	7	\$72.57	\$14.11	14	\$169.14	\$52.18			
3000 H	6" Clay Wastewater Pipe	LF	27	\$53.09	\$20.71				12	\$69.98	\$56.80
3000 J	8" Clay Wastewater Pipe	LF	20	\$60.57	\$25.17				12	\$80.22	\$62.16
3000 K	10" Clay Wastewater Pipe	LF	7	\$79.89	\$40.21				6	\$76.13	\$46.09
3000 L	12" Clay Wastewater Pipe	LF	7	\$89.23	\$45.85				6	\$84.00	\$50.48

**Biditem Prices For City Contracts From October 2009 To July 2012**

BidItem	Item Description	Units	2010			2011			2012		
			Count	Average	Std. Deviation	Count	Average	Std. Deviation	Count	Average	Std. Deviation
3000 N	15" Clay Wastewater Pipe	LF	6	\$102.83	\$20.04						
3100 H	6" PVC Wastewater Pipe	LF	14	\$49.34	\$15.57						
3100 J	8" PVC Wastewater Pipe	LF	13	\$57.58	\$19.47						
3100 K	10" PVC Wastewater Pipe	LF	6	\$74.57	\$10.91						
3100 L	12" PVC Wastewater Pipe	LF	7	\$61.00	\$11.92						
3100 V	24" PVC Wastewater Pipe	LF	6	\$165.50	\$60.39						
3100 AA	36" PVC Wastewater Pipe	LF	7	\$135.71	\$137.43						
3100 AC	42" PVC Wastewater Pipe	LF	6	\$127.00	\$130.87	8	\$211.71	\$34.44			
3100 AE	48" PVC Wastewater Pipe	LF	6	\$157.83	\$149.59						
3110 H	6" PVC Pressure Rated Wastewater Pipe	LF	21	\$49.27	\$18.60	11	\$40.09	\$7.83	19	\$62.25	\$28.90
3110 J	8" PVC Pressure Rated Wastewater Pipe	LF	84	\$50.14	\$10.34	56	\$48.55	\$8.96	32	\$62.06	\$24.65
3110 K	10" PVC Pressure Rated Wastewater Pipe	LF	63	\$56.38	\$12.34	31	\$56.22	\$13.26	19	\$60.37	\$17.79
3110 L	12" PVC Pressure Rated Wastewater Pipe	LF	59	\$69.64	\$25.08	49	\$61.39	\$13.85	19	\$72.81	\$23.82
3120 Q	16" PVC Pressure Rated Wastewater Pipe	LF	18	\$75.25	\$21.66	20	\$74.05	\$18.65			
3120 R	18" PVC Pressure Rated Wastewater Pipe	LF	5	\$97.30	\$13.94	15	\$128.93	\$57.74			
3120 V	24" PVC Pressure Rated Wastewater Pipe	LF	6	\$93.67	\$51.98	5	\$228.20	\$123.95	12	\$136.42	\$23.07
3120 Y	30" PVC Pressure Rated Wastewater Pipe	LF				5	\$266.20	\$161.26			
3420 W	27" RTRP Wastewater Pipe	LF				4	\$114.75	\$15.00			
3420 Z	33" RTRP Wastewater Pipe	LF	6	\$300.33	\$117.17						
3420 AA	36" RTRP Wastewater Pipe	LF	6	\$58.33	\$142.89	5	\$223.60	\$79.48			
3420 AC	42" RTRP Wastewater Pipe	LF	12	\$245.00	\$236.77						
3420 AE	48" RTRP Wastewater Pipe	LF	6	\$81.67	\$200.04						
3420 AF	54" RTRP Wastewater Pipe	LF	6	\$542.67	\$77.79						
3420 AJ	72" RTRP Wastewater Pipe	LF	6	\$864.17	\$299.64						
3430 U	21" HDPE Wastewater Pipe	LF				6	\$209.00	\$88.79			
3430 V	24" HDPE Wastewater Pipe	LF							6	\$175.33	\$42.01
3520 H	Rehabilitation Of Ex. 6" Wastewater Main	LF	22	\$55.26	\$19.35	25	\$34.46	\$7.01	13	\$67.15	\$31.94
3520 J	Rehabilitation Of Ex. 8" Wastewater Main	LF	25	\$43.65	\$10.12	31	\$36.76	\$9.75	13	\$57.81	\$40.58
3520 K	Rehabilitation Of Ex. 10" Wastewater Main	LF	20	\$62.34	\$17.64	8	\$44.06	\$7.75	6	\$86.83	\$49.55
3520 L	Rehabilitation Of Ex. 12" Wastewater Main	LF	11	\$65.24	\$13.09				6	\$97.83	\$54.44
3520 N	Rehabilitation Of Ex. 15" Wastewater Main	LF	6	\$103.42	\$14.04						
3540 H	Point Repair of 6" Wastewater Main	LF	36	\$990.69	\$643.74	27	\$952.74	\$444.74	12	\$1,450.17	\$1,041.83
3540 J	Point Repair of 8" Wastewater Main	LF	32	\$934.22	\$658.06	36	\$1,096.89	\$523.18	17	\$1,428.24	\$904.94
3540 K	Point Repair of 10" Wastewater Main	LF	20	\$1,657.00	\$1,724.83	13	\$1,178.15	\$730.93	6	\$2,310.00	\$2,009.45
3540 L	Point Repair of 12" Wastewater Main	LF	11	\$1,636.36	\$1,135.14				6	\$2,583.33	\$2,525.44
3540 N	Point Repair of 15" Wastewater Main	LF	5	\$2,490.00	\$1,304.99	6	\$1,918.33	\$962.51	6	\$2,404.17	\$1,061.65
3540 V	Point Repair of 24" Wastewater Main	LF	5	\$9,800.00	\$2,841.65						
3540 Y	Point Repair of 30" Wastewater Main	LF	5	\$2,560.00	\$1,800.83						
3550	Removal of Int. Obstructionfor WW Mains	EA	48	\$586.67	\$373.75	30	\$566.00	\$216.52	18	\$536.39	\$349.49

**Biditem Prices For City Contracts From October 2009 To July 2012**

BidItem	Item Description	Units	2010			2011			2012		
			Count	Average	Std. Deviation	Count	Average	Std. Deviation	Count	Average	Std. Deviation
3560	Connection to Existing Manhole	EA	78	\$980.08	\$558.54	53	\$968.77	\$435.07	18	\$901.17	\$477.55
3570 HxJ	Pipe Bursting (6" to 8")	LF	42	\$63.49	\$17.71	25	\$45.60	\$8.05			
3570 JxJ	Pipe Bursting (8" to 8")	LF	35	\$63.04	\$13.27	17	\$48.82	\$11.41	13	\$58.58	\$29.41
3570 JxK	Pipe Bursting (8" to 10")	LF	13	\$78.23	\$9.16	14	\$46.93	\$8.02	13	\$62.04	\$32.57
3570 JxL	Pipe Bursting (8" to 12")	LF	5	\$90.90	\$9.17				12	\$109.67	\$45.75
3570 KxK	Pipe Bursting (10" to 10")	LF	7	\$61.07	\$4.36						
3570 KxL	Pipe Bursting (10" to 12")	LF	7	\$94.69	\$18.19						
3700 HX	6" Extra Depth Wastewater Pipe (+20')	LF	6	\$49.50	\$32.55				6	\$141.10	\$164.26
3700 JX	8" Extra Depth Wastewater Pipe (+20')	LF	6	\$43.83	\$34.09				6	\$141.27	\$164.18
3700 KX	10" Extra Depth Wastewater Pipe (+20')	LF	6	\$45.83	\$37.87				6	\$141.43	\$164.11
3700 LX	12" Extra Depth Wastewater Pipe (+20')	LF	6	\$51.67	\$49.46				6	\$158.27	\$197.26
5020	Cast Iron Fittings	TN	91	\$537.14	\$974.75	56	\$389.52	\$782.08	24	\$1,478.46	\$2,298.78
5050	Water Service	EA	89	\$814.20	\$163.22	59	\$800.51	\$118.04	26	\$1,125.96	\$440.45
5055 X	Water Service - Extra Depth	LF	6	\$21.83	\$8.13				6	\$65.07	\$110.98
5060 FxF	4" Comb. Service with 4" Meter and Transfer	EA	8	\$5,087.50	\$1,776.38	5	\$7,960.00	\$912.69			
5060 HxH	6" Comb. Service with 6" Meter and Transfer	EA	15	\$5,786.67	\$1,573.38	10	\$9,940.00	\$2,509.18			
5060 JxH	8" Comb. Service with 6" Meter and Transfer	EA	6	\$12,075.00	\$3,341.82						
5060 JxJ	8" Comb. Service with 8" Meter and Transfer	EA	7	\$6,042.86	\$1,873.37	5	\$12,820.00	\$3,116.21			
5061 FxF	4" Dom. Service with 4" Meter and Transfer	EA				9	\$8,072.22	\$1,141.03	6	\$8,066.67	\$1,790.72
5061 HxH	6" Dom. Service with 6" Meter and Transfer	EA				5	\$8,570.00	\$1,650.61			
5062 FxF	4" Closed F. Serv. w/ 4" D.C. Dev. and Trans.	EA				16	\$5,456.25	\$1,967.05			
5062 HxH	6" Closed F. Serv. w/ 6" D.C. Dev. and Trans.	EA	7	\$6,717.71	\$2,408.06	19	\$5,397.37	\$1,729.12	7	\$6,171.43	\$1,983.23
5062 JxH	8" Closed F. Serv w/ 6" D.C. Dev. and Trans.	EA	6	\$6,955.00	\$2,101.65	17	\$6,119.71	\$1,895.00	6	\$6,867.17	\$2,211.96
5062 JxJ	8" Closed F. Serv. w/ 8" D.C. Dev. and Trans.	EA	5	\$6,040.00	\$2,506.59	5	\$6,540.00	\$1,487.62			
5065 FxE	4" Domestic Service with 3" Meter	EA	6	\$6,833.33	\$1,032.80						
5065 FxF	4" Domestic Service with 4" Meter	EA				8	\$6,331.25	\$2,364.76			
5066 FxF	4" Closed F. Serv w/ 4" D.C. Dev.	EA							6	\$5,943.33	\$2,493.04
5066 JxH	8" Closed Fireline Service with 6" D.C.Device	EA	6	\$7,000.00	\$1,140.18						
5080	Reconnect Existing Water Service	EA				8	\$588.13	\$263.60			
5091	Install Fire Hydrant	EA	92	\$2,245.54	\$224.16	59	\$2,238.23	\$177.61	26	\$2,620.46	\$509.16
5092	Remove Existing Fire Hydrant	EA	97	\$202.00	\$202.27	62	\$146.05	\$80.83	24	\$202.08	\$112.60
5093	Deliver Fire Hydrant	EA	89	\$57.49	\$40.63	63	\$50.97	\$32.93	24	\$56.63	\$43.45
5100 F	4" Gate Valve	EA	49	\$664.33	\$101.18	53	\$668.87	\$94.94	19	\$743.74	\$160.79
5100 H	6" Gate Valve	EA	90	\$800.75	\$117.76	59	\$788.08	\$88.80	25	\$945.18	\$165.30
5100 J	8" Gate Valve	EA	85	\$1,049.71	\$124.83	58	\$1,046.98	\$110.40	26	\$1,281.73	\$170.45
5100 K	10" Gate Valve	EA	21	\$1,586.86	\$210.00	12	\$1,479.58	\$236.46	6	\$1,596.67	\$123.56
5100 L	12" Gate Valve	EA	67	\$1,957.19	\$242.39	59	\$1,891.27	\$214.91	19	\$2,065.79	\$257.71
5100 Q	16" Gate Valve	EA	33	\$7,541.79	\$2,303.52	26	\$8,299.65	\$1,304.97	12	\$9,238.33	\$1,747.36
5100 S	20" Gate Valve	EA				7	\$33,535.71	\$6,967.83			

**Biditem Prices For City Contracts From October 2009 To July 2012**

BidItem	Item Description	Units	2010			2011			2012		
			Count	Average	Std. Deviation	Count	Average	Std. Deviation	Count	Average	Std. Deviation
5100 V	24" Gate Valve	EA	7	\$27,035.71	\$12,351.14						
5100 AA	36" Gate Valve	EA				7	\$90,857.14	\$14,893.27			
5105 Q	16" Gate Valve (Place Only)	EA				6	\$22,058.33	\$9,503.07			
5105 R	18" Gate Valve (Place Only)	EA				6	\$25,583.33	\$7,683.86			
5105 S	20" Gate Valve (Place Only)	EA				6	\$30,166.67	\$8,835.53			
5105 V	24" Gate Valve (Place Only)	EA	5	\$6,000.00	\$3,330.92	6	\$35,500.00	\$11,536.90			
5105 Y	30" Gate Valve (Place Only)	EA				5	\$40,000.00	\$11,045.36			
5105 AA	36" Gate Valve (Place Only)	EA				5	\$45,600.00	\$13,849.19			
5110 AAxJ	36"x6" Tapping Sleeve	EA				8	\$5,437.50	\$1,749.23	7	\$8,642.86	\$2,180.10
5110 HxF	6"x4" Tapping Sleeve	EA	6	\$1,345.83	\$143.54	8	\$1,338.75	\$310.32			
5110 HxH	6"x6" Tapping Sleeve	EA	6	\$1,475.00	\$362.97				7	\$2,314.29	\$1,873.31
5110 JxF	8"x4" Tapping Sleeve	EA				6	\$2,500.00	\$701.43			
5110 JxH	8"x6" Tapping Sleeve	EA	14	\$1,405.36	\$472.12				6	\$2,176.67	\$1,490.53
5110 JxJ	8"x8" Tapping Sleeve	EA	26	\$1,585.58	\$453.22				6	\$2,508.33	\$1,546.74
5110 KxJ	10"x8" Tapping Sleeve	EA	15	\$2,225.73	\$775.18				7	\$3,277.14	\$2,022.78
5110 LxJ	12"x8" Tapping Sleeve	EA	43	\$2,278.30	\$748.58	29	\$2,426.38	\$724.89	18	\$2,191.67	\$632.98
5110 LxL	12"x12" Tapping Sleeve	EA	7	\$3,268.57	\$925.70				6	\$3,483.33	\$2,357.47
5110 QxH	16"x6" Tapping Sleeve	EA	6	\$4,483.33	\$2,079.82				6	\$2,854.17	\$924.45
5110 QxJ	16"x8" Tapping Sleeve	EA	33	\$2,836.27	\$1,031.71	12	\$2,645.83	\$542.07	18	\$3,165.83	\$1,173.44
5110 QxL	16"x12" Tapping Sleeve	EA				15	\$3,028.67	\$946.45			
5110 RxJ	18"x8" Tapping Sleeve	EA							6	\$4,000.00	\$1,464.24
5110 SxJ	20"x8" Tapping Sleeve	EA	6	\$3,543.33	\$1,331.19						
5110 VxJ	24"x8" Tapping Sleeve	EA	19	\$3,660.53	\$1,351.29	11	\$5,168.18	\$1,114.51	13	\$6,373.12	\$1,451.87
5110 VxL	24"x12" Tapping Sleeve	EA	13	\$4,238.85	\$1,792.60	6	\$4,683.33	\$1,699.90			
5110 VxQ	24"x16" Tapping Sleeve	EA							6	\$9,025.00	\$2,884.05
5110 YxL	30"x12" Tapping Sleeve	EA	6	\$6,225.00	\$1,897.83	5	\$6,425.00	\$879.63			
5120 V	Remove, Salvage, & Deliver 24" Valve	EA	7	\$1,114.29	\$595.62						
5130 H	6" Cut-In Valve	EA	7	\$3,043.71	\$554.36				7	\$2,975.71	\$1,451.14
5130 J	8" Cut-In Valve	EA	7	\$3,672.00	\$770.55				6	\$3,121.67	\$1,204.63
5130 L	12" Cut-In Valve	EA	7	\$4,749.71	\$1,181.17				7	\$4,814.29	\$2,388.46
5140 J	8" Flap Valve	EA	16	\$1,085.00	\$471.30	5	\$1,400.00	\$400.00			
5140 K	10" Flap Valve	EA	6	\$1,441.67	\$366.63	6	\$3,166.67	\$925.02			
5150 AG	60" Access Manhole	EA				6	\$20,926.67	\$12,243.05			
5150 AJ	72" Access Manhole	EA	7	\$20,100.00	\$8,476.63						
5155 AE	48" Access Manhole with Blowoff	EA	5	\$11,180.00	\$4,363.71						
5155 AJ	72" Access Manhole with Blowoff	EA	12	\$19,775.00	\$9,188.44	7	\$15,721.43	\$7,275.64			
5160 AG	60" Diameter Water Manhole	EA	13	\$8,636.54	\$2,207.95	12	\$7,241.67	\$2,278.54			
5160 AJ	72" Diameter Water Manhole	EA	12	\$10,618.75	\$2,661.96	12	\$10,186.67	\$2,966.29			
5205 AA	36" Butterfly Valve (Place Only)	EA				6	\$62,166.67	\$22,772.06			



**Biditem Prices For City Contracts From October 2009 To July 2012**

BidItem	Item Description	Units	2010			2011			2012		
			Count	Average	Std. Deviation	Count	Average	Std. Deviation	Count	Average	Std. Deviation
5205 AE	48" Butterfly Valve (Place Only)	EA	5	\$19,600.00	\$5,504.54	5	\$78,200.00	\$25,713.81			
5205 AJ	72" Butterfly Valve (Place Only)	EA				5	\$116,200.00	\$21,323.70			
5300	Deep Anode Cathodic Protection System	EA				5	\$68,000.00	\$9,192.39			
5310	Corrosion Control Test Station	EA				5	\$3,494.00	\$3,553.12			
5500 H	6" Water Main (BOTO)	LF				5	\$151.20	\$8.79	5	\$164.60	\$30.92
5500 J	8" Water Main (BOTO)	LF	42	\$184.93	\$65.54	39	\$185.41	\$54.95	12	\$189.25	\$46.53
5500 L	12" Water Main (BOTO)	LF	20	\$214.50	\$65.34	27	\$237.48	\$60.09	6	\$242.83	\$112.05
5500 Q	16" Water Main (BOTO)	LF				7	\$332.14	\$72.51			
5500 V	24" Water Main (BOTO)	LF	7	\$442.00	\$147.99						
5500 AA	36" Water Main (BOTO)	LF				7	\$575.00	\$90.14			
5505 H	6" Water Main By Horiz. Directional Drilling	LF				9	\$77.22	\$29.84			
5505 J	8" Water Main By Horiz. Directional Drilling	LF	14	\$99.36	\$38.48	12	\$77.13	\$17.14			
5510 J	8" Water, Highway Crossing (BOTO)	LF				5	\$259.60	\$44.77			
5510 L	12" Water, Highway Crossing (BOTO)	LF	6	\$432.50	\$106.67	9	\$241.11	\$44.98			
5510 Q	16" Water, Highway Crossing (BOTO)	LF				10	\$357.10	\$79.60			
5510 AJ	72" Water, Highway Crossing (BOTO)	LF	7	\$2,000.00	\$177.37						
5520 L	12" Water, Highway Crossing (By Open Cut)	LF				9	\$111.22	\$41.01			
5520 AJ	72" Water, Highway Crossing (By Open Cut)	LF		\$759.17	\$195.95						
5530 AA	36" Water, RR Crossing (BOTO)	LF				7	\$692.43	\$133.08			
5530 L	12" Water, RR Crossing (BOTO)	LF				5	\$337.00	\$57.98			
5550 J	8" Water Main Crossing (BOTO)	LF	14	\$208.71	\$73.44	15	\$180.93	\$44.60			
5550 L	12" Water Main Crossing (BOTO)	LF				9	\$218.33	\$44.65			
5550 AE	48" Water Main Crossing (BOTO)	LF	6	\$1,046.33	\$321.41						
5560 F	4" Water Main Crossing (By Open Cut)	LF		\$67.67	\$16.41						
5560 H	6" Water Main Crossing (By Open Cut)	LF				6	\$75.67	\$29.98			
5560 J	8" Water Main Crossing (By Open Cut)	LF		\$81.18	\$23.98	35	\$89.49	\$33.04	12	\$90.83	\$36.02
5560 L	12" Water Main Crossing (By Open Cut)	LF		\$107.50	\$36.68	27	\$94.07	\$35.28	5	\$103.00	\$43.84
5560 Q	16" Water Main Crossing (By Open Cut)	LF				13	\$139.23	\$84.46			
5560 AE	48" Water Main Crossing (By Open Cut)	LF	5	\$411.20	\$125.61						
5580 AJ	72" Dished Head Plug	EA	6	\$7,166.83	\$4,106.56						
5585 V	24" Test Fitting	EA	6	\$3,019.33	\$1,703.23						
5585 AE	48" Test Fitting	EA	6	\$5,833.50	\$3,043.74						
5585 AJ	72" Test Fitting	EA	6	\$13,158.33	\$9,421.81						
5590 AA	36" Night Cap Plug	EA				7	\$765.71	\$276.10			
5590 V	24" Night Cap Plug	EA	6	\$598.50	\$451.42						
5590 AE	48" Night Cap Plug	EA	6	\$1,388.50	\$932.02						
5590 AJ	72" Night Cap Plug	EA	6	\$1,833.50	\$1,428.96						
5600	Cut and Plug Existing Water Main	EA	84	\$360.73	\$280.48	58	\$316.52	\$271.86	24	\$372.46	\$351.43
5605	Cut and Plug Existing Asbestos-Cement Water Main	EA	13	\$480.38	\$362.25	10	\$618.10	\$411.71			

**Biditem Prices For City Contracts From October 2009 To July 2012**

BidItem	Item Description	Units	2010			2011			2012		
			Count	Average	Std. Deviation	Count	Average	Std. Deviation	Count	Average	Std. Deviation
5610	Cut and Plug Water Main for Test	EA	79	\$274.77	\$309.16	58	\$205.17	\$255.59	18	\$318.78	\$425.96
5620 X	Cut and Plug Mains - Extra Depth (+20')	VF	6	\$247.50	\$221.81				6	\$1,334.17	\$2,041.34
5650	Remove & Dispose of Lead Pipe Joint	EA	60	\$264.50	\$234.97	57	\$237.49	\$190.38	25	\$185.60	\$175.42
5750 B	1" Flush Point	EA	74	\$814.93	\$252.11	43	\$936.63	\$361.83	13	\$1,227.69	\$815.30
5750 D	2" Flush Point	EA	9	\$2,492.78	\$1,396.06						
5755 B	Automated 1" Flush Point	EA	8	\$2,840.63	\$1,547.46	32	\$3,640.63	\$781.90	6	\$3,563.33	\$655.49
5755 D	Automated 2" Flush Point	EA	18	\$2,786.11	\$1,410.24	17	\$4,232.94	\$1,558.05	12	\$5,585.00	\$1,678.71
5761	Type 1 Air Valve Installation	EA	13	\$3,173.08	\$780.12	8	\$4,500.00	\$1,870.83			
5762 H	6" Type 2 Air Valve Installation	EA	12	\$10,416.67	\$5,201.19	8	\$12,725.00	\$3,695.46			
5762 J	8" Type 2 Air Valve Installation	EA	6	\$11,183.33	\$5,983.78						
5770 J	Standard 8" Water Main Lowering	EA	8	\$5,237.50	\$3,100.66						
5770 L	Standard 12" Water Main Lowering	EA	8	\$6,643.75	\$3,262.06						
5800 A	3/4" Water Service	EA	7	\$1,219.29	\$275.23				6	\$1,657.17	\$404.65
5800 B	1" Water Service	EA	7	\$1,302.29	\$272.35				6	\$1,748.33	\$420.50
5800 C	1 1/2" Water Service	EA	7	\$2,142.29	\$441.23				6	\$2,476.67	\$673.70
5800 D	2" Water Service	EA	7	\$2,638.29	\$362.25				6	\$3,051.67	\$790.61
5801 A	3/4" Water Deadhead Connection	EA	7	\$790.00	\$392.60				6	\$1,064.17	\$700.87
5801 B	1" Water Deadhead Connection	EA	7	\$852.71	\$404.06				6	\$1,140.00	\$733.35
5801 C	1 1/2" Water Deadhead Connection	EA	6	\$1,270.00	\$457.30				6	\$1,763.33	\$920.21
5801 D	2" Water Deadhead Connection	EA	6	\$1,604.17	\$563.56				6	\$2,251.67	\$1,217.71
5802	Bullhead Water Service	EA	6	\$2,260.33	\$1,009.63				6	\$2,928.33	\$1,731.46
5803	Bullhead Water Service (Extra Length)	LF	7	\$34.89	\$6.56				6	\$48.47	\$50.24
5804 A	3/4" Water Service (Extra Length)	LF	7	\$17.69	\$7.73				6	\$26.77	\$13.43
5804 B	1" Water Service (Extra Length)	LF	7	\$20.03	\$8.35				6	\$29.85	\$15.74
5804 C	1 1/2" Water Service (Extra Length)	LF	7	\$27.49	\$8.87				6	\$44.23	\$38.05
5804 D	2" Water Service (Extra Length)	LF	7	\$32.40	\$10.60				6	\$55.00	\$45.12
5805 X	Water Service - Extra Depth (+12')	LF	6	\$29.50	\$13.90				6	\$42.07	\$43.10
5990 H	6" Wastewater Main (BOTO)	LF	8	\$177.69	\$32.45						
5990 J	8" Wastewater Main (BOTO)	LF	40	\$209.68	\$104.82	21	\$278.33	\$123.59	12	\$206.00	\$30.35
5990 K	10" Wastewater Main (BOTO)	LF	20	\$297.75	\$180.97	5	\$533.00	\$83.49	7	\$221.00	\$16.63
5990 L	12" Wastewater Main (BOTO)	LF	8	\$184.38	\$82.92	5	\$543.00	\$79.10			
5990 Q	16" Wastewater Main (BOTO)	LF	7	\$617.14	\$84.06	5	\$565.00	\$84.04			
5990 V	24" Wastewater Main (BOTO)	LF	7	\$630.00	\$69.16				6	\$426.33	\$126.65
5990 R	18" Wastewater Main (BOTO)	LF				5	\$595.00	\$94.47			
5990 W	27" Wastewater Main (BOTO)	LF				5	\$536.00	\$73.69			
5990 AA	36" Wastewater Main (BOTO)	LF	6	\$797.00	\$224.05	6	\$605.83	\$305.25			
5990 AC	42" Wastewater Main (BOTO)	LF	7	\$930.86	\$265.54						
5990 AE	48" Wastewater Main (BOTO)	LF	6	\$935.17	\$234.09						
5990 AF	54" Wastewater Main (BOTO)	LF	6	\$1,454.67	\$729.03						

**Biditem Prices For City Contracts From October 2009 To July 2012**

BidItem	Item Description	Units	2010			2011			2012		
			Count	Average	Std. Deviation	Count	Average	Std. Deviation	Count	Average	Std. Deviation
6000 K	10" Wastewater, Highway Crossing (BOTO)	LF							5	\$249.40	\$64.28
6000 Q	16" Wastewater, Highway Crossing (BOTO)	LF				8	\$347.88	\$67.66			
6020 K	10" Wastewater, RR Crossing (BOTO)	LF				6	\$257.00	\$43.54			
6040 J	8" Wastewater Main Crossing (BOTO)	LF	12	\$161.50	\$57.03	11	\$182.55	\$56.98			
6040 R	18" Wastewater Main Crossing (BOTO)	LF				9	\$382.78	\$132.34			
6050 J	8" Wastewater Main Crossing (By Open Cut)	LF	27	\$87.00	\$27.43	19	\$98.89	\$48.15	6	\$125.00	\$60.33
6050 K	10" Wastewater Main Crossing (By Open Cut)	LF				10	\$128.30	\$51.11	6	\$130.83	\$52.59
6050 L	12" Wastewater Main Crossing (By Open Cut)	LF	7	\$125.29	\$48.19	5	\$166.80	\$49.21			
6050 R	18" Wastewater Main Crossing (By Open Cut)	LF	6	\$240.83	\$118.85						
6050 U	21" Wastewater Main Crossing (By Open Cut)	LF				5	\$135.00	\$50.37			
6050 V	24" Wastewater Main Crossing (By Open Cut)	LF				6	\$285.83	\$99.82	5	\$153.00	\$39.94
6050 Y	30" Wastewater Main Crossing (By Open Cut)	LF				6	\$349.67	\$119.49			
6060	Wastewater Lateral	EA	85	\$918.61	\$240.65	61	\$873.02	\$221.42	26	\$1,296.15	\$605.41
6061	6" Wastewater Lateral with Cleanout	EA	6	\$1,198.00	\$230.53				6	\$1,339.17	\$465.82
6062	6" Wastewater Lateral (Extra Length)	LF	6	\$29.50	\$15.51				6	\$39.22	\$18.15
6065 X	Wastewater Lateral - Extra Depth (+20')	LF	6	\$30.33	\$13.74				6	\$70.33	\$105.82
6066 X	Wastewater Lateral - Extra Depth (+20')	LF	6	\$73.33	\$33.42				6	\$132.00	\$125.80
6070	External Wastewater Lateral Connection	EA	45	\$973.78	\$336.92	26	\$1,090.58	\$437.37	19	\$1,220.00	\$563.65
6075	Internal Wastewater Lateral Connection	EA	45	\$449.00	\$493.46	11	\$103.27	\$51.58	19	\$417.63	\$321.84
6080	Standard Mainline Cleanout	EA	43	\$686.74	\$209.83	49	\$635.00	\$222.76	13	\$713.46	\$307.28
6100	Wastewater Access Device	EA	97	\$1,899.25	\$379.06	54	\$1,854.86	\$447.64	32	\$2,247.84	\$476.00
6110 AE	48" Drop Manhole	EA	79	\$6,731.04	\$1,630.80	44	\$7,202.27	\$1,759.55	25	\$7,099.40	\$2,001.10
6110 AG	60" Drop Manhole	EA	30	\$10,509.33	\$5,125.77	10	\$8,022.50	\$1,970.21	18	\$10,205.00	\$3,359.86
6110 AJ	72" Drop Manhole	EA	12	\$16,037.50	\$8,689.05	7	\$17,685.71	\$7,449.26			
6110 AN	96" Drop Manhole	EA	5	\$28,300.00	\$6,320.60						
6111 AEX	48" Drop Manhole - Extra Depth (+20')	EA				6	\$19,216.67	\$9,798.04			
6111 AGX	60" Drop Manhole - Extra Depth (+20')	EA	6	\$19,566.67	\$13,399.50	6	\$28,916.67	\$14,479.01			
6120 AE	48" Type "S" Manhole	EA	14	\$4,989.29	\$1,312.10	9	\$5,322.22	\$680.12			
6120 AG	60" Type "S" Manhole	EA	14	\$6,342.86	\$1,900.59	9	\$8,151.11	\$1,411.39			
6125 AG	60" Type "S" Drop Manhole	EA	6	\$11,650.00	\$4,237.33						
6130 AE	48" Wastewater Manhole	EA	95	\$5,085.84	\$854.08	62	\$5,327.82	\$890.17	33	\$5,612.27	\$1,322.26
6130 AG	60" Wastewater Manhole	EA	48	\$8,005.17	\$2,390.98	31	\$7,647.58	\$2,263.98	18	\$7,860.83	\$1,567.56
6130 AJ	72" Wastewater Manhole	EA	6	\$15,675.00	\$9,941.11	12	\$14,116.67	\$5,548.93			
6130 AN	96" Wastewater Manhole	EA	5	\$25,700.00	\$2,280.35						
6131 AEX	48" Wastewater Manhole - Extra Depth (+20')	EA	13	\$6,818.75	\$10,076.37	6	\$16,816.67	\$7,266.48	7	\$6,271.43	\$6,815.29
6131 AGX	60" Wastewater Manhole - Extra Depth (+20')	EA	7	\$465.74	\$278.37				7	\$8,992.86	\$8,235.62
6140	Abandon Existing Manhole	EA	53	\$570.30	\$244.78	29	\$630.17	\$355.03	19	\$586.84	\$287.64
6141	Vacuum Test for Wastewater Manhole	EA	93	\$135.15	\$51.38	59	\$121.32	\$42.79	31	\$177.26	\$83.93
6142	Drop Connection to Existing Manhole	EA	18	\$1,476.94	\$540.90	24	\$1,724.79	\$806.97	11	\$1,915.91	\$590.27

**Biditem Prices For City Contracts From October 2009 To July 2012**

BidItem	Item Description	Units	2010			2011			2012		
			Count	Average	Std. Deviation	Count	Average	Std. Deviation	Count	Average	Std. Deviation
6150 AE	48" Manhole Rehabilitation	EA	41	\$2,516.07	\$815.35	25	\$2,207.60	\$665.42	18	\$2,341.67	\$782.53
6150 AF	54" Manhole Rehabilitation	EA	8	\$2,520.00	\$852.51						
6150 AG	60" Manhole Rehabilitation	EA	6	\$3,016.67	\$263.94				6	\$3,221.67	\$995.20
6150 AJ	72" Manhole Rehabilitation	EA	6	\$4,075.00	\$748.16						
6155 AE	48" Drop Manhole Rehabilitation	EA	7	\$2,391.43	\$452.42				5	\$3,135.00	\$588.85
6160 AE	48" Special Manhole	EA	6	\$4,791.67	\$648.40	6	\$5,100.00	\$2,433.93			
6160 AG	60" Special Manhole	EA	10	\$7,495.00	\$2,512.91						
6160 AJ	72" Special Manhole	EA				5	\$29,550.00	\$18,240.27			
6161 AJX	72" Special Manhole - Extra Depth (+20')	EA	6	\$38,450.00	\$23,765.84	6	\$41,333.33	\$27,392.82	6	\$73,800.00	\$49,802.01
6162 AGX	60" Spec. Internal Drop Conn. MH with Odor Control Insert - Extra Depth (+20')	EA	7	\$41,321.43	\$19,496.11						
6162 AJ	72" Special Internal Drop Connection Manhole with Odor Control Insert	EA	7	\$42,585.71	\$25,844.43						
6162 AJX	72" Spec. Internal Drop Conn. MH with Odor Control Insert - Extra Depth (+20')	EA	6	\$40,816.67	\$16,857.10						
6180 AG	60" Gas Sealed Drop Manhole	EA				10	\$9,746.00	\$2,607.39			
6260	Clearing & Grubbing	LS				5	\$121,830.00	\$179,520.53	3	\$245,000.00	\$169,041.42
6270	Fence Replacement	LF	86	\$17.27	\$6.60	53	\$18.87	\$10.10	17	\$19.28	\$7.11
6800	Project Partnering	LS	84	\$8,746.81	\$4,796.38	68	\$8,219.93	\$3,977.12	22	\$8,536.36	\$4,090.35
6902	Place Block Sod	SY	98	\$4.07	\$1.10	58	\$3.71	\$0.69	25	\$5.12	\$1.87
6905	Seed	SY	7	\$0.59	\$0.36						
6908	Place Brick Paving	SY	22	\$72.57	\$31.69						
6920	Television Inspection	LF	71	\$1.02	\$0.21	61	\$0.95	\$0.15	23	\$1.15	\$0.38
6921	Television Inspection	LF	7	\$0.86	\$0.13						
6925	Trench Safety & Support	LF	99	\$0.76	\$0.45	69	\$1.23	\$2.36	29	\$1.63	\$2.30
6930 AA	36" Closure Section	EA				7	\$8,857.29	\$4,533.94			
6930 AF	54" Closure Section	EA				7	\$13,713.71	\$7,064.09			
6942	Street Surface Milling	SY	25	\$2.92	\$1.11	22	\$1.79	\$0.31	6	\$4.67	\$1.03
6950	Gabions for Slope Protection	CY				5	\$214.40	\$26.25	3	\$238.33	\$70.77
6960 V	Remove 24" Internal Test Plug	EA	6	\$3,714.17	\$3,453.06						
6960 At	Remove 48" Internal Test Plug	EA	5	\$3,617.00	\$3,728.93						
6970	Pipe to Soil Potential Monitoring Station	EA	11	\$1,195.45	\$860.07	7	\$1,278.57	\$865.96			
6980 H	Encasement for 6" Wastewater Pipe through Storm Sewer	LF				5	\$76.00	\$31.30			
6980 J	Encasement for 8" Wastewater Pipe through Storm Sewer	LF	16	\$71.63	\$35.22	12	\$77.58	\$50.74			
6980 K	Encasement for 10" Wastewater Pipe through Storm Sewer	LF	8	\$79.13	\$48.22	5	\$90.00	\$38.08			
6980 L	Encasement for 12" Wastewater Pipe through Storm Sewer	LF	8	\$96.00	\$70.42						

**Biditem Prices For City Contracts From October 2009 To July 2012**

BidItem	Item Description	Units	2010			2011			2012		
			Count	Average	Std. Deviation	Count	Average	Std. Deviation	Count	Average	Std. Deviation
7020	Steel Guard Post (Bollard)	EA				18	\$351.11	\$167.58			
7030	Rock Foundation	CY	86	\$24.81	\$11.91	63	\$25.40	\$13.67	13	\$26.02	\$13.11
7040	Stabilized Backfill	CY	26	\$51.42	\$19.91	24	\$47.83	\$17.08	16	\$45.33	\$20.72
7041	Flowable Backfill	CY	92	\$69.48	\$20.87	50	\$69.19	\$22.41	30	\$85.34	\$25.46
7042	Modified Flowable Backfill	CY	7	\$96.23	\$28.60				6	\$90.83	\$25.38
7043	Four "F" Flowable Backfill	CY	74	\$83.43	\$23.94	56	\$74.47	\$25.18	19	\$74.95	\$31.50
7044	Four "F" Flow.Base - High Strength & Fast Set	CY	82	\$147.33	\$38.01	62	\$145.22	\$43.45	24	\$161.35	\$31.90
7050	Sand Backfill	CY	60	\$11.90	\$9.31	50	\$13.26	\$7.87	18	\$12.94	\$9.17
7051	Topsoil	CY	6	\$10.17	\$9.15	6	\$10.17	\$6.71			
7052	Cement Treated Base Backfill	CY	57	\$49.86	\$18.19	11	\$46.50	\$15.81	25	\$61.18	\$28.45
7053	Cement Stabilized Sand Backfill	CY	36	\$46.42	\$15.74	41	\$38.68	\$11.26	13	\$59.54	\$15.77
7060	Concrete Backfill	CY	11	\$82.36	\$31.61						
7071	Class "B" Concrete	CY	88	\$83.45	\$33.86	62	\$77.97	\$35.29	24	\$86.31	\$27.93
7074	Class "E" Concrete	CY	6	\$84.50	\$47.74						
7075	Class "F" Concrete	CY	6	\$162.17	\$71.89						
7090	Furnish and Place Rip Rap	SY	6	\$74.17	\$9.70	14	\$84.50	\$43.11			
7095	Furnish and Place Dry Rip Rap (Type A)	SY	18	\$78.67	\$28.62	6	\$68.33	\$21.60	5	\$58.80	\$13.54
7100	Lump Sum Cost Difference - Other Than Dry Kiln Portland Cement	LS				25	\$0.12	\$0.33			
7200 AE	48"Diameter Storm Sewer Manhole for Wastewater Passthrough	EA				4	\$5,100.00	\$454.61			
7525	Flex Base (Crushed Rock) Alley Surface	CY	77	\$45.22	\$13.54	51	\$43.06	\$9.19	18	\$50.75	\$8.59
7530	Concrete Curb and/or Gutter	LF	88	\$19.99	\$4.88	68	\$21.09	\$5.83	25	\$23.76	\$8.53
7531	Asphalt Curb and/or Gutter	LF	6	\$19.67	\$12.99						
7540	Concrete Curb	LF	21	\$10.69	\$6.71	30	\$8.91	\$5.09	7	\$23.34	\$13.80
7560	Crushed Rock for Temporary Paving Base	CY	88	\$35.90	\$11.02	69	\$34.84	\$12.01	25	\$46.42	\$12.84
7570	Reinforced Concrete Paving	CY	103	\$189.72	\$28.35	64	\$191.39	\$21.24	32	\$228.54	\$36.47
7575	Type 3K-2 Reinforced Concrete Paving	CY	85	\$419.46	\$108.07	46	\$427.33	\$104.34	18	\$516.28	\$91.75
7580	Reinforced Concrete Sidewalk	SY	83	\$38.36	\$4.16	60	\$35.52	\$3.39	25	\$40.76	\$7.08
7583	Reinforced Concrete Driveway	SY	77	\$45.35	\$6.71	61	\$40.49	\$4.81	19	\$44.47	\$7.20
7584	Slurry Seal Surface Treatment	SY	87	\$4.83	\$3.64	63	\$4.21	\$1.88	23	\$5.43	\$0.64
7585	Barrier Free Ramp	EA	78	\$1,022.28	\$263.69	48	\$963.75	\$184.61	24	\$1,317.92	\$328.14
7590	Reinforced Concrete Driveway	CY	18	\$137.72	\$80.20				7	\$150.00	\$73.26
7600	Reinforced Concrete Base	CY	99	\$169.92	\$34.06	62	\$173.07	\$31.18	32	\$201.27	\$44.13
7605	Type 3K-2 Reinforced Concrete Base	CY	14	\$470.14	\$84.82				7	\$532.43	\$141.18
7655	Hot Mix Asphalt Concrete Pavement	TN	100	\$93.74	\$13.45	63	\$88.17	\$8.81	32	\$106.81	\$36.24
7703	Geotextile Fabric (Embedment)	SY	5	\$2.08	\$0.73						
7712	Storm Water Pollution Prevention Plan	EA	90	\$10,727.78	\$5,936.54	66	\$11,701.52	\$4,847.51	26	\$11,127.69	\$6,896.94

**Biditem Prices For City Contracts From October 2009 To July 2012**

BidItem	Item Description	Units	2010			2011			2012		
			Count	Average	Std. Deviation	Count	Average	Std. Deviation	Count	Average	Std. Deviation
7730	Disposal of Heavy Chlorinated Water Main Flushing Water	LS	94	\$3,120.23	\$2,894.86	67	\$4,171.22	\$3,876.74	23	\$2,969.57	\$3,148.22
8000	Barricading (Water & WW Mains)	LF	7	\$26,714.29	\$15,518.42						
8005	Concrete Barricading (Water & WW Mains)	LF	7	\$49.29	\$31.68	5	\$42.00	\$34.02			
8011	Construction Surveying & Staking (Water & WW Mains)	LF	103	\$1.10	\$0.44	67	\$1.05	\$0.71	25	\$1.10	\$0.39
8012	Construction Surveying & Staking (Paving)	LF	85	\$0.58	\$0.42	68	\$0.69	\$1.01	19	\$0.64	\$0.56
20500	Investigation	EA	108	\$475.80	\$424.12	67	\$407.16	\$305.43	34	\$614.71	\$629.23

**APPENDIX B—DWU Joint Contracts 2010-2012**

**Biditem Prices For Joint Contracts From October 2009 To July 2012**

BidItem	Item Description	Units	2010			2011			2012		
			Count	Average	Std. Deviation	Count	Average	Std. Deviation	Count	Average	Std. Deviation
1100 H	6" Temporary Water Main	LS	4	\$52,020.28	\$13,115.89						
1100 FP	4" Temporary Water Main with Paving	LS	6	\$50.77	\$14.26						
1500 QP	16" Ductile Iron Water Pipe with Paving	LF	6	\$106.11	\$20.60						
1500 Q	16" Ductile Iron Water Pipe	LF	5	\$91.06	\$5.85						
1500 F	4" Ductile Iron Water Pipe	LF				8	\$45.64	\$9.43			
1500 K	10" Ductile Iron Water Pipe	LF							15	\$54.53	\$11.11
1800 HP	6" PVC Water Pipe with Paving	LF	23	\$38.85	\$12.31	8	\$99.82	\$34.97			
1800 JP	8" PVC Water Pipe with Paving	LF	25	\$45.88	\$13.49	8	\$103.34	\$36.61			
1800 H	6" PVC Water Pipe	LF	18	\$58.77	\$23.23	23	\$38.62	\$8.92			
1800 J	8" PVC Water Pipe	LF	23	\$67.60	\$25.78	14	\$46.26	\$10.31			
1800 L	12" PVC Water Pipe	LF	18	\$71.44	\$23.78	14	\$54.84	\$7.08			
1800 F	4" PVC Water Pipe	LF	13	\$64.46	\$31.93						
1800 LP	12" PVC Water Pipe with Paving	LF	9	\$57.58	\$10.53						
1800 K	10" PVC Water Pipe	LF							8	\$170.63	\$82.04
1805 Q	16" PVC Water Pipe	LF	5	\$370.26	\$204.96						
1805 QP	16" PVC Water Pipe with Paving	LF	9	\$81.28	\$7.63						
2010 S	20" Prestressed Concrete Cylinder Pipe	LF				6	\$407.50	\$145.52			
3000 H	6" Clay Wastewater Pipe	LF				5	\$109.40	\$53.05			
3100 U	21" PVC Wastewater Pipe	LF	8	\$79.88	\$15.13						
3100 J	8" PVC Wastewater Pipe	LF				18	\$40.74	\$8.29			
3110 LP	12" PVC Pressure Rated Wastewater Pipe with Paving	LF	6	\$68.29	\$21.00						
3110 L	12" PVC Pressure Rated Wastewater Pipe	LF	5	\$106.45	\$12.24						
3110 JP	8" PVC Pressure Rated Wastewater Pipe with Paving	LF	16	\$56.65	\$17.87	8	\$73.18	\$29.40			
3110 KP	10" PVC Pressure Rated Wastewater Pipe with Paving	LF	11	\$54.91	\$16.41						
3110 J	8" PVC Pressure Rated Wastewater Pipe	LF	17	\$49.93	\$13.58	21	\$74.03	\$50.57			
3110 LP	12" PVC Pressure Rated Wastewater Pipe with Paving	LF	8	\$48.76	\$11.42						
3110 K	10" PVC Pressure Rated Wastewater Pipe	LF				24	\$50.94	\$10.06			
3120 QP	16" PVC Pressure Rated Wastewater Pipe with Paving	LF	5	\$94.20	\$34.62						
3120 Q	16" PVC Pressure Rated Wastewater Pipe	LF	5	\$140.78	\$19.59						
3120 R	18" PVC Pressure Rated Wastewater Pipe	LF	8	\$152.50	\$35.29						
3120 V	24" PVC Pressure Rated Wastewater Pipe	LF	8	\$165.23	\$42.90						
3420 R	18" RTRP Wastewater Pipe	LF	4	\$165.00	\$61.51						
3420 V	24" RTRP Wastewater Pipe	LF	4	\$170.00	\$87.18						
3540 J	Point Repair of 8" Wastewater Main	LF	6	\$1,058.33	\$333.79						
3540 K	Point Repair of 10" Wastewater Main	LF	6	\$1,150.00	\$262.68						
3560	Connection to Existing Manhole	EA	13	\$1,277.46	\$898.70	26	\$889.63	\$401.81			
3570 JxJ	Pipe Bursting (8" to 8")	LF	6	\$47.14	\$3.56						
3570 JxK	Pipe Bursting (8" to 10")	LF	6	\$64.43	\$8.20						
3570 KxL	Pipe Bursting (10" to 12")	LF	6	\$92.57	\$18.11						
5020	Cast Iron Fittings	TN	49	\$1,602.55	\$1,491.60	40	\$2,377.27	\$1,836.23			
5050	Water Service	EA	41	\$967.05	\$449.74	30	\$1,310.90	\$534.44	42	\$208.21	\$102.19
5061 FxF	4" Domestic Service with 4" Meter and Transfer	EA				8	\$6,860.00	\$2,228.98			
5066 HxH	6" Closed Fireline Service with 6" D.C. Device	EA	16	\$6,499.38	\$2,422.87						
5066 FxF	4" Closed Fireline Service with 4" D.C. Device	EA	11	\$6,725.49	\$2,951.26						
5080	Reconnect Existing Water Service	EA	6	\$491.83	\$355.27	16	\$842.34	\$473.44	29	\$1.56	\$0.51
5091	Install Fire Hydrant	EA	44	\$2,505.73	\$517.49	23	\$2,597.20	\$301.73			
5092	Remove Existing Fire Hydrant	EA	38	\$266.01	\$168.35	23	\$243.00	\$158.70			
5093	Deliver Fire Hydrant	EA	35	\$76.18	\$57.31	23	\$68.18	\$40.15			
5100 H	6" Gate Valve	EA	61	\$831.19	\$272.04	38	\$947.71	\$185.61			
5100 J	8" Gate Valve	EA	51	\$1,208.13	\$275.47	33	\$1,266.12	\$218.13			
5100 Q	16" Gate Valve	EA	27	\$8,008.36	\$1,681.91	9	\$8,300.00	\$2,288.70			
5100 F	4" Gate Valve	EA	5	\$1,036.15	\$154.22						
5100 L	12" Gate Valve	EA	23	\$2,187.55	\$388.08	14	\$2,075.34	\$197.55			
5110 HxH	6"x6" Tapping Sleeve	EA	6	\$2,450.39	\$908.65						



**Biditem Prices For Joint Contracts From October 2009 To July 2012**

BidItem	Item Description	Units	2010			2011			2012		
			Count	Average	Std. Deviation	Count	Average	Std. Deviation	Count	Average	Std. Deviation
5110 JxI	8"x8" Tapping Sleeve	EA	12	\$1,976.81	\$388.19						
5110 LxI	12"x8" Tapping Sleeve	EA	12	\$2,487.50	\$584.30						
5110 JxH	8"x6" Tapping Sleeve	EA	7	\$1,545.71	\$107.06						
5140 H	6" Flap Valve	EA				6	\$1,366.67	\$422.69			
5155 AJ	72" Access Manhole with Blowoff	EA				6	\$22,416.67	\$9,552.05			
5500 J	8" Water Main (BOTO)	LF	11	\$211.29	\$90.03						
5500 H	6" Water Main (BOTO)	LF	4	\$313.56	\$41.15						
5500 L	12" Water Main (BOTO)	LF	4	\$417.12	\$55.85						
5520 J	8" Water, Highway Crossing (By Open Cut)	LF	5	\$114.52	\$22.93						
5550 J	8" Water, Highway Crossing (By Open Cut)	LF	3	\$44.50	\$5.07						
5560 J	8" Water Main Crossing (By Open Cut)	LF	14	\$101.92	\$36.66						
5560 D	2" Water Main Crossing (By Open Cut)	LF	5	\$85.44	\$47.97						
5560 L	12" Water Main Crossing (By Open Cut)	LF	13	\$132.83	\$53.04						
5560 Q	16" Water Main Crossing (By Open Cut)	LF	5	\$220.04	\$68.13						
5560 H	6" Water Main Crossing (By Open Cut)	LF	8	\$84.25	\$31.35						
5560 S	20" Water Main Crossing (By Open Cut)	LF				7	\$334.57	\$164.38			
5585 S	20" Test Fitting	EA				7	\$3,371.43	\$2,296.17			
5600 P	Cut and Plug Existing Water Main with Paving	EA	22	\$414.49	\$290.36	8	\$943.48	\$369.22			
5600	Cut and Plug Existing Water Main	EA	13	\$652.57	\$368.88	29	\$678.99	\$457.88			
5610	Cut and Plug Water Main for Test	EA	47	\$368.25	\$320.31	28	\$571.99	\$318.14	40	\$27.98	\$16.61
5650	Remove & Dispose of Lead Pipe Joint	EA	6	\$390.12	\$292.50						
5761	Type 1 Air Valve Installation	EA	5	\$7,448.00	\$1,100.69	8	\$4,085.64	\$2,434.62			
5770 J	Standard 8" Water Main Lowering	EA	15	\$3,524.78	\$1,405.59						
5990 Q	16" Wastewater Main (BOTO)	LF	4	\$482.44	\$45.97						
6050 H	6" Wastewater Main Crossing (By Open Cut)	LF	5	\$118.71	\$24.29						
6050 L	12" Wastewater Main Crossing (By Open Cut)	LF	4	\$174.32	\$22.94						
6050 Q	16" Wastewater Main Crossing (By Open Cut)	LF	4	\$210.57	\$34.43						
6050 V	24" Wastewater Main Crossing (By Open Cut)	LF	4	\$432.91	\$65.28						
6050 U	21" Wastewater Main Crossing (By Open Cut)	LF	8	\$188.16	\$66.86						
6050 K	10" Wastewater Main Crossing (By Open Cut)	LF				8	\$119.74	\$37.20			
6050 J	8" Wastewater Main Crossing (By Open Cut)	LF				6	\$55.69	\$11.56			
6060	Wastewater Lateral	EA	40	\$1,011.90	\$471.82	45	\$964.00	\$313.78	39	\$100.05	\$27.26
6070	External Wastewater Lateral Connection	EA	6	\$1,268.67	\$379.22						
6080 P	Standard Mainline Cleanout with Paving	EA	9	\$462.56	\$309.06						
6080	Standard Mainline Cleanout	EA				10	\$613.90	\$290.69			
6090	Adjust Existing Wastewater Lateral	EA				13	\$492.59	\$216.09	40	\$98.58	\$27.20
6100	Wastewater Access Device	EA	23	\$2,080.06	\$489.84	15	\$2,207.13	\$347.98	41	\$17.46	\$10.92
6100	Wastewater Access Device	EA	6	\$1,994.93	\$415.27	8	\$1,646.93	\$930.79			
6110 AE	48" Drop Manhole	EA	11	\$7,953.28	\$2,539.22						
6110 AJ	72" Drop Manhole	EA	5	\$17,693.96	\$2,612.81						
6110 AEP	48" Drop Manhole with Paving	EA	16	\$8,423.09	\$3,624.80						
6120 AE	48" Type "S" Manhole	EA	4	\$5,500.00	\$1,779.51	5	\$8,080.00	\$2,943.98			
6120 AG	60" Type "S" Manhole	EA	4	\$6,375.00	\$1,701.71						
6126 AEX	48" Type "S" Drop Manhole - Extra Depth (+20')	EA				5	\$15,840.00	\$8,473.67			
6130 AE	48" Wastewater Manhole	EA	17	\$5,313.91	\$922.80	26	\$5,655.63	\$1,434.03			
6130 AJ	72" Wastewater Manhole	EA	4	\$13,338.92	\$208.20						
6130 AEP	48" Wastewater Manhole with Paving	EA	16	\$6,850.35	\$2,840.06	9	\$6,095.43	\$1,729.78			
6130 AG	48" Wastewater Manhole with Paving	EA	8	\$7,750.63	\$1,184.05	8	\$8,521.25	\$1,632.27			
6140	Abandon Existing Manhole	EA	11	\$831.91	\$299.83	8	\$849.81	\$215.48			
6141	Vacuum Test for Wastewater Manhole	EA	37	\$173.73	\$91.60	49	\$193.95	\$109.90	31	\$2.02	\$1.07
6150 AJ	72" Manhole Rehabilitation	EA	5	\$6,170.62	\$2,034.52						
6270	Fence Replacement	LF	5	\$69.13	\$34.30						
6902	Place Block Sod	SY	9	\$4.18	\$2.14						
6905	Seed	SY	5	\$33.15	\$27.70						
6920	Television Inspection	LF							30	\$3.85	\$8.90
6921	Television Inspection	LF	37	\$1.52	\$0.70	48	\$1.76	\$1.08	36	\$141.06	\$119.06
6925	Trench Safety & Support	LF	52	\$1.56	\$1.39	53	\$2.67	\$4.61	7	\$363.29	\$397.68

**Biditem Prices For Joint Contracts From October 2009 To July 2012**

BidItem	Item Description	Units	2010			2011			2012		
			Count	Average	Std. Deviation	Count	Average	Std. Deviation	Count	Average	Std. Deviation
6980 J	Encasement for 8" Wastewater Pipe through Storm Sewer	LF	5	\$102.00	\$40.87						
7030	Rock Foundation	CY	50	\$29.42	\$13.45	54	\$36.58	\$18.74	33	\$1,586.76	\$1,821.99
7041	Flowable Backfill	CY	25	\$86.04	\$22.38	38	\$96.32	\$30.74	33	\$766.70	\$523.83
7044	Four "F" Flowable Base - High Strength & Fast Set	CY	6	\$150.00	\$47.33						
7050	Sand Backfill	CY	47	\$10.88	\$5.74	50	\$24.76	\$19.40	33	\$114.58	\$37.66
7053	Cement Stabilized Sand Backfill	CY	5	\$69.45	\$37.97	9	\$59.72	\$28.25			
7070	Class "A" Concrete	CY	4	\$102.50	\$49.41						
7071	Class "B" Concrete	CY	50	\$101.40	\$34.55	29	\$95.85	\$24.90			
7520	Temporary Paving (Hot Mix Or High Performance Mix)	TN	36	\$88.90	\$26.79	32	\$85.63	\$11.85	9	\$3.84	\$1.48
7530	Concrete Curb and/or Gutter	LF	16	\$21.24	\$6.68	9	\$26.05	\$7.40			
7540	Concrete Curb	LF	5	\$8.49	\$2.67						
7560	Crushed Rock for Temporary Paving Base	CY	13	\$33.65	\$12.70	30	\$36.01	\$12.80	9	\$1,106.67	\$682.29
7570	Reinforced Concrete Paving	CY				11	\$203.01	\$146.22			
7575	Type 3K-2 Reinforced Concrete Paving	CY	6	\$379.97	\$99.31						
7580	Reinforced Concrete Sidewalk	SY	9	\$39.12	\$5.96						
7582	Reinforced Concrete Paving	SY	16	\$215.35	\$76.80	7	\$66.96	\$25.34			
7583	Reinforced Concrete Driveway	SY	6	\$43.45	\$4.89						
7584	Slurry Seal Surface Treatment	SY	6	\$8.05	\$5.79						
7590	Reinforced Concrete Driveway	CY	5	\$60.19	\$12.93						
7600	Reinforced Concrete Base	CY	20	\$144.41	\$57.63	6	\$206.24	\$96.41	4	\$123.82	\$45.11
7605	Type 3K-2 Reinforced Concrete Base	CY	6	\$396.63	\$91.27						
7655	Hot Mix Asphalt Concrete Pavement	TN	21	\$109.89	\$30.83	6	\$135.33	\$58.80	4	\$140.07	\$37.53
7710	Silt Fence	LF	23	\$2.01	\$1.18	14	\$2.94	\$1.92	4	\$337.52	\$135.41
7711	Silt Fence and Hay Bales	LF	8	\$3.25	\$1.81						
7713	Erosion Control	LS				6	\$5,408.33	\$5,285.87			
7730	Disposal of Heavy Chlorinated Water Main Flushing Water	LS	48	\$1,187.51	\$808.59	37	\$1,404.19	\$1,383.83	4	\$366.09	\$105.19
7765	Disposal of Class I Non-Hazardous Industrial Waste	CY				6	\$90.45	\$38.08			
7766	Disposal of Class II Non-Hazardous Industrial Waste	CY				6	\$67.13	\$33.86			
7767	Disposal of Petroleum Contaminated Groundwater	GAL				6	\$5.17	\$1.90			
7801 H	6" Reinforced Concrete Pavement Or Base	SF	9	\$6.45	\$2.64						
7801 J	8" Reinforced Concrete Pavement Or Base	SF	9	\$7.45	\$3.08	17	\$27.62	\$19.18			
7804 D	2" Hot-Mix Asphalt Concrete Pavement	SF	8	\$3.79	\$2.15						
7829	Barrier Free Ramp (Inside Dallas City Limits)	EA	4	\$1,093.87	\$125.95						
7833	Adjustment Of Water Valve Stack Box Riser And Lid In Adv. Of Resurfacing	EA	8	\$110.24	\$29.67						
8010	Construction Staking	LS	4	\$10,325.00	\$7,568.96						
20300	Adjust and/or Relocate Water Meter Box	EA	87	\$206.63	\$141.45	38	\$203.98	\$185.04	4	\$235.59	\$100.19
20330	Adjust Water Valve Covers & Stacks	EA	88	\$169.55	\$88.13	41	\$155.86	\$101.84	4	\$242.41	\$89.35
20331	Install and Adjust Water Valve Covers & Stacks in Advance of Resurfacing	EA				4	\$259.66	\$30.27			
20332	Adjust Water Valve Covers & Stacks in Advance of Resurfacing	EA	5	\$101.00	\$17.82				4	\$349.66	\$144.22
20340	Adjust Wastewater Lateral Cleanout	EA	74	\$182.32	\$130.91	23	\$138.88	\$83.27			
20350	Adjust Wastewater Mainline Cleanout	EA				8	\$401.27	\$186.01	22	\$771.36	\$206.51
20351	Adjust Wastewater Access Device	EA	48	\$292.63	\$150.31	15	\$456.60	\$240.42	25	\$651.20	\$266.57
20353	Adjust Wastewater Mainline Cleanout in Advance of Resurfacing	EA	10	\$220.81	\$101.38				7	\$122.43	\$36.30
20360	Adjust Wastewater Manhole	EA	72	\$470.33	\$259.83	39	\$486.58	\$311.15	24	\$110.13	\$27.45
20361	Adjust Wastewater Manhole in Advance of Resurfacing	EA	4	\$173.75	\$55.88						
20363	Adjust Type "S" Wastewater Manhole in Advance of Resurfacing	EA							22	\$32.77	\$6.82
20380	Adjust Water Manhole	EA	12	\$387.17	\$225.15	10	\$1,065.40	\$788.36	7	\$244.29	\$37.80
20381	Adjust Water Manhole in Advance of Resurfacing	EA	9	\$225.54	\$84.37				24	\$214.58	\$61.30
20400	Adjust Flush Point	EA				8	\$264.82	\$297.85			
20430	Install Fire Hydrant Extension	EA	35	\$515.64	\$219.16	14	\$474.56	\$198.11			
20440	Remove Fire Hydrant Extension	EA	35	\$266.95	\$209.69	14	\$201.72	\$112.89			
20450	Adjust Large Water Service Cover and Frame	EA	23	\$785.07	\$478.18	15	\$986.37	\$607.64			
20500	Investigation	EA	50	\$370.64	\$328.09	43	\$434.10	\$484.93	7	\$175.00	\$145.77
20540	Alter Water Valve Covers & Stacks	EA	5	\$76.76	\$39.26	8	\$199.84	\$136.72			
20550	Alter Wastewater Mainline Cleanout	EA				8	\$263.93	\$214.81			
20560	Alter Wastewater Manhole	EA	4	\$462.61	\$142.52	9	\$937.39	\$587.41	25	\$335.96	\$114.73
20620	Replace Existing Wastewater Lateral Cleanout	EA				8	\$452.82	\$214.06	6	\$6,066.67	\$3,513.77

**Biditem Prices For Joint Contracts From October 2009 To July 2012**

BidItem	Item Description	Units	2010			2011			2012		
			Count	Average	Std. Deviation	Count	Average	Std. Deviation	Count	Average	Std. Deviation
20650	Replace Existing Fire Hydrant	EA	5	\$812.31	\$393.48						
20651	Replace Existing Fire Hydrant To Final Grade	EA	14	\$1,951.43	\$903.76	10	\$2,566.70	\$231.27			
20652	Adjust/Relocate New Fire Hydrant	EA	36	\$1,109.63	\$657.01	15	\$659.93	\$377.71			
20700	Adjust Existing Wastewater Lateral	EA				9	\$239.18	\$113.94			

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