

**WATER SERVICING INFRASTRUCTURE AVERAGE UNIT PRICES (2018 - Southwestern Region)**

**A) Watermain Installation with Minimum Restoration (Top Soil and Seed only) (FOR INSTALLATION IN DITCHES)**

	Nom. Pipe Size (mm)	Outer Diameter (m)	Depth to Invert (m)	Minimum Trench Width (m)	Excavation		Bedding		Pipe		Backfill		Restoration Allowance (\$/m)	Subtotal Unit Cost (\$/m)	Appurtenance Allowance (\$/m)	Subtotal Unit Cost (\$/m)	Dewatering Allowance (\$/m)	Subtotal Unit Cost (\$/m)	Conting @20% (\$/m)	Eng. @15% (\$/m)	TOTAL (excl. HST) (\$/m)
					Vol.	Cost	Vol.	Cost	Cost	Installation	Vol.	Cost									
					(m <sup>3</sup> )	(\$/m)	(m <sup>3</sup> )	(\$/m)	(\$/m)	(\$/m)	(m <sup>3</sup> )	(\$/m)									
PVC	100	0.14	2.4	0.74	2.8	16.80	0.44	19.70	24.80	2.48	2.80	14.00	40.00	117.78	59.00	176.78	10	186.78	37.40	33.60	260.00
	150	0.20	2.4	0.80	3.10	18.60	0.52	23.40	38.25	3.83	2.85	14.30	40.00	138.38	59.00	197.38	10	207.38	41.50	31.11	280.00
	200	0.26	2.4	0.86	3.4	20.40	0.61	27.50	63.00	6.30	2.90	14.50	40.00	171.70	64.00	235.70	10	245.70	49.10	36.86	340.00
	250	0.33	2.4	0.93	3.7	22.20	0.73	32.70	91.00	9.10	2.95	14.80	40.00	209.80	67.00	276.80	10	286.80	57.40	43.02	390.00
	300	0.38	2.4	0.98	4.0	24.00	0.81	36.70	124.50	12.45	3.00	15.00	40.00	252.65	80.00	332.65	15	347.65	69.50	52.15	470.00
	350	0.45	2.4	1.05	4.4	26.40	0.94	42.60	279.00	27.90	3.00	15.00	40.00	430.90	85.00	515.90	15	530.90	106.20	79.64	720.00
	400	0.50	2.4	1.10	4.5	27.00	1.04	47.10	312.00	31.20	3.05	15.30	40.00	472.60	103.00	575.60	15	590.60	118.10	88.59	800.00
	450	0.55	2.4	1.15	4.6	27.60	1.15	51.80	385.00	38.50	3.05	15.30	40.00	558.20	123.00	681.20	15	696.20	139.20	104.43	940.00
	500	0.60	2.4	1.20	4.9	29.40	1.26	56.70	450.00	45.00	3.05	15.30	40.00	636.40	134.00	770.40	20	790.40	158.10	118.56	1,070.00
CPP	600	0.73	2.4	1.33	5.8	34.80	1.57	70.70	719.00	71.90	3.05	15.30	40.00	951.70	174.00	1,125.70	20	1,145.70	229.10	171.86	1,550.00
	750	0.90	2.4	1.50	7.0	42.00	2.02	91.20	850.00	85.00	3.00	15.00	40.00	1,123.20	150.00	1,273.20	20	1,293.20	258.60	193.98	1,750.00
	900	1.10	3.0	1.70	8.7	52.20	2.63	118.60	1,000.00	100.00	3.35	16.80	40.00	1,327.60	180.00	1,507.60	20	1,527.60	305.50	229.14	2,070.00

**B) Watermain Installation with Granular Road Restoration**

	Nom. Pipe Size (mm)	Outer Diameter (m)	Depth to Invert (m)	Minimum Trench Width (m)	Excavation		Bedding		Pipe		Backfill		Restoration Allowance (\$/m)	Subtotal Unit Cost (\$/m)	Appurtenance Allowance (\$/m)	Subtotal Unit Cost (\$/m)	Dewatering Allowance (\$/m)	Subtotal Unit Cost (\$/m)	Conting @20% (\$/m)	Eng. @15% (\$/m)	TOTAL (excl. HST) (\$/m)
					Vol.	Cost	Vol.	Cost	Cost	Installation	Vol.	Cost									
					(m <sup>3</sup> )	(\$/m)	(m <sup>3</sup> )	(\$/m)	(\$/m)	(\$/m)	(m <sup>3</sup> )	(\$/m)									
PVC	100	0.14	2.4	0.74	2.8	16.80	0.44	19.70	24.80	2.48	2.80	14.00	72.00	149.78	59.00	208.78	10	218.78	43.80	39.40	310.00
	150	0.20	2.4	0.80	3.10	18.60	0.52	23.40	38.25	3.83	2.85	14.30	72.00	170.38	59.00	229.38	10	239.38	47.90	35.91	330.00
	200	0.26	2.4	0.86	3.4	20.40	0.61	27.50	63.00	6.30	2.90	14.50	72.00	203.70	64.00	267.70	10	277.70	55.50	41.66	380.00
	250	0.33	2.4	0.93	3.7	22.20	0.73	32.70	91.00	9.10	2.95	14.80	72.00	241.80	67.00	308.80	10	318.80	63.80	47.82	440.00
	300	0.38	2.4	0.98	4.0	24.00	0.81	36.70	124.50	12.45	3.00	15.00	72.00	284.65	80.00	364.65	15	379.65	75.90	56.95	520.00
	350	0.45	2.4	1.05	4.4	26.40	0.94	42.60	279.00	27.90	3.00	15.00	72.00	462.90	105.00	567.90	15	582.90	116.60	87.44	790.00
	400	0.50	2.4	1.10	4.5	27.00	1.04	47.10	312.00	31.20	3.05	15.30	72.00	504.60	123.00	627.60	15	642.60	128.50	96.39	870.00
	450	0.55	2.4	1.15	4.6	27.60	1.15	51.80	385.00	38.50	3.05	15.30	72.00	590.20	153.00	743.20	15	758.20	151.60	113.73	1,030.00
	500	0.60	2.4	1.20	4.9	29.40	1.26	56.70	450.00	45.00	3.05	15.30	72.00	668.40	164.00	832.40	20	852.40	170.50	127.86	1,160.00
CPP	600	0.73	2.4	1.33	5.8	34.80	1.57	70.70	719.00	71.90	3.05	15.30	72.00	983.70	194.00	1,177.70	20	1,197.70	239.50	179.66	1,620.00
	750	0.90	2.4	1.50	7.0	42.00	2.02	91.20	850.00	85.00	3.00	15.00	72.00	1,155.20	150.00	1,305.20	20	1,325.20	265.00	198.78	1,790.00
	900	1.10	3.0	1.70	8.7	52.20	2.63	118.60	1,000.00	100.00	3.35	16.80	72.00	1,359.60	180.00	1,539.60	20	1,559.60	311.90	233.94	2,110.00

**C) Watermain Installation with Road Restoration (Assumes 1 Lane restored, along with Curb & Gutter, and Sidewalk one side)**

	Nom. Pipe Size (mm)	Outer Diameter (m)	Depth to Invert (m)	Minimum Trench Width (m)	Excavation		Bedding		Pipe		Backfill		Restoration Allowance (\$/m)	Subtotal Unit Cost (\$/m)	Appurtenance Allowance (\$/m)	Subtotal Unit Cost (\$/m)	Dewatering Allowance (\$/m)	Subtotal Unit Cost (\$/m)	Conting @20% (\$/m)	Eng. @15% (\$/m)	TOTAL (excl. HST) (\$/m)
					Vol.	Cost	Vol.	Cost	Cost	Installation	Vol.	Cost									
					(m <sup>3</sup> )	(\$/m)	(m <sup>3</sup> )	(\$/m)	(\$/m)	(\$/m)	(m <sup>3</sup> )	(\$/m)									
PVC	100	0.14	2.4	0.74	2.8	16.80	0.44	19.70	24.80	2.48	2.80	14.00	214.12	291.90	59.00	350.90	10	360.90	72.20	65.00	500.00
	150	0.20	2.4	0.80	3.1	18.60	0.52	23.40	38.25	3.83	2.85	14.30	214.12	312.50	59.00	371.50	10	381.50	76.30	57.22	520.00
	200	0.26	2.4	0.86	3.4	20.40	0.61	27.50	63.00	6.30	2.90	14.50	214.12	345.82	64.00	409.82	10	419.82	84.00	62.97	570.00
	250	0.33	2.4	0.93	3.7	22.20	0.73	32.70	91.00	9.10	2.95	14.80	214.12	383.92	67.00	450.92	10	460.92	92.20	69.14	630.00
	300	0.38	2.4	0.98	4.0	24.00	0.81	36.70	124.50	12.45	3.00	15.00	214.12	426.77	80.00	506.77	15	521.77	104.40	78.27	710.00
	350	0.45	2.4	1.05	4.4	26.40	0.94	42.60	279.00	27.90	3.00	15.00	214.12	605.02	105.00	710.02	15	725.02	145.00	108.75	980.00
	400	0.50	2.4	1.10	4.5	27.00	1.04	47.10	312.00	31.20	3.05	15.30	214.12	646.72	123.00	769.72	15	784.72	156.90	117.71	1,060.00
	450	0.55	2.4	1.15	4.6	27.60	1.15	51.80	385.00	38.50	3.05	15.30	214.12	732.32	153.00	885.32	15	900.32	180.10	135.05	1,220.00
	500	0.60	2.4	1.20	4.9	29.40	1.26	56.70	450.00	45.00	3.05	15.30	214.12	810.52	164.00	974.52	20	994.52	198.90	149.18	1,350.00
CPP	600	0.73	2.4	1.33	5.8	34.80	1.57	70.70	719.00	71.90	3.05	15.30	214.12	1,125.82	194.00	1,319.82	20	1,339.82	268.00	200.97	1,810.00
	750	0.90	2.4	1.50	7	42.00	2.02	91.20	850.00	85.00	3.00	15.00	214.12	1,297.32	150.00	1,447.32	20	1,467.32	293.50	220.10	1,990.00
	900	1.10	3.0	1.70	8.7	52.20	2.63	118.60	1,000.00	100.00	3.35	16.80	214.12	1,501.72	180.00	1,681.72	20	1,701.72	340.30	255.26	2,300.00

**Notes**

- Cost of excavation: \$6/m<sup>3</sup>
- Cost of bedding/pipe surrounding: \$45/m<sup>3</sup> includes supply and place
- PVC Pipe (up to 600 mm) Cost provided by IPEX on 30 Oct 17
- Pipe Installation Allowance based on 10% of pipe cost
- Backfill trench \$5/m<sup>3</sup> based on replacement of native material and compaction
- Includes costs for mainline valves and hydrant sets. No hydrants connected to 750mm and larger mains. Service connections and special appurtenances excluded
- Restoration for route along existing road allowance (Cost varies with type of restoration). Minimum 4.0m width of restoration (2.0m trench plus 1.0 m each side)
- Includes allowance for dewatering
- PVC DR18 (100mm to 600mm)

Prepared By: D. Prashad Date: 30-Nov-17  
 Checked By: S. Winchester Date: