

VANDERWEIL ENGINEERS, LLP - OPINION OF PROBABLE COST ESTIMATE SUMMARY

JOB NO.: 25513.00	M.T.O. BY: cjs III	EST DATE: 06/18/10
PROJECT: Hot Water Distribution Piping	PRICED BY: cjs III	PRINT DATE: 06/22/10
CLIENT: Veolia Energy, Montpelier, Vermont	Estimate Type: Order of Magnitude	CHECKED BY: GW/CH
		Revision: 0: 01/00/00

DWG/REF &	LOCATION & DESCRIPTION	QUANTITY	UNIT	MATERIAL OTHER	LAB HRS	LABOR	SUB-CONTRACTOR \$	CONSTRUCTION EQUIPMENT	UNIT PRICE / ITEM	TOTAL
SUMMARY										
Hot Water Distribution Piping										
1	2 - 4" Buried Hot/Cold Water Distribution Piping			79,669	2,359	56,782	104,444	134,030		374,924
2	2 - 4" Buried Pipe Manholes and Expansion Chamber			9,817	271	6,410	34,095	18,876		69,198
3	2 - 6" Buried Hot/Cold Water Distribution Piping			921,502	30,438	791,972	956,457	705,410		3,375,341
4	2 - 6" Buried Pipe Manholes and Expansion Chamber			60,736	1,258	27,550	34,095	187,785		310,166
	Subtotal			1,071,723	34,326	882,714	1,129,091	1,046,101		4,129,629
	Sales Tax (Assume Exempt)		Exempt %							
	Freight - Equipment		3 %				33,873			33,873
	Site Indirect Costs		15 %	160,758		132,407		156,915		450,081
	Subtotal			1,232,482	34,326	1,015,121	1,162,963	1,203,016		4,613,582
	Contractor Mark up - sub-contractor prices		5.00 %				58,148			58,148
	Contractor Overhead		15.00 %	184,872		152,268		180,452		517,593
	Contractor Profit		5.00 %	70,868		58,369		69,173		198,411
	Subtotal			1,488,222	34,326	1,225,759	1,221,112	1,452,642		5,387,734
	Bond		1.00 %							53,877
	Subtotal									5,441,611
	Engineering		8.00 %							435,329
	Subtotal									5,876,940
	Permits		1.00 %							54,416
TOTAL ESTIMATED COST										\$ 5,931,356

Note:

- 1 - Estimate is based on current Northern Vermont prevailing labor rates obtained from State Of Vermont Construction Prevailing Wage Rates June 2010.
- 2 -
- 3 -

R.G. Vanderweil Engineers, LLP (RGV) construction cost estimates are based upon traditional sources such as the Means Cost Estimating Guide, actual experience or an actual quotation. Due to the volatile nature of labor and material pricing and unforeseeable factors affecting the construction industry, RGV does not expressly or implicitly warrant or represent that RGV's cost estimates will be the actual cost of installation.

R.G. VANDERWEIL ENGINEERS, LLP - OPINION OF PROBABLE COST ESTIMATE WORKSHEET

JOB NO.: 25513.00
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project description
 Estimate Type: New Construction
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				MATERIAL/ OTHER	LABOR				SubContract \$	CONSTR. EQUIP.								
					M/H	P.F.	ID	RATE										
1.0000	2 - 4" Buried Hot/Cold Water Distribution Piping					0.98	s		20.66									
1.1000	Survey and Lay-out Trench	740	Ln.Ft.															
1.1010	Survey and install offset markers etc. for trench excavation	740	Ln.Ft.	1.00	0.03	1.00	s		59.60		1.50	740	22	1,323		1,110	4	3,173
1.2000	Excavation Protection																	
1.2010	Trench protection - barricades with lights - 5 ft lg each est as company owned say \$345 ea x 20% = \$69 ea say 500 ft on ea side = 200 barr. In use at one time	17	Each	69.00		0.97	me		22.17			1,199					69	1,199
1.2020	Load, distribute, place, move barricades twice & pu	17	Each		1.00	0.97	me		22.17	2.00			17	374		35	24	408
1.2030	Trench protection - barrels say spaced at 10 ft ea est as company owned say \$38 ea @ 20% = \$7.60 ea say 10% in use at one time	7	Each	7.60		0.97	me		22.17			56					8	56
1.2040	Load, distribute, place, move barrels twice & pu	7	Each		1.00	0.97	me		22.17	2.00			7	159		15	24	174
1.2050	Trench protection - steel plates covering trench - 1" thick x 1" thick x 8 ft w x 20 ft lg plate at \$105 mo say 300 ln ft or 15 plates in use at one time	2	Each			0.97	me		22.17	105.00						194	105	194
1.2060	Load, distribute, place, move plates twice & pu	4	Each		2.000	0.97	me		22.17	175.00			7	159		648	218	807
1.3000	Excavation Flaggers																	
1.3010	Laborers - flaggers at each end of excavation - say 2 week for excavation, pipe installation, backfill and paving restoration	10	Days	2.00	16.00	0.97	me		22.17			20	155	3,440			346	3,460
1.4000	Trench Paving Removal	740	Ln.Ft.															
1.4010	Saw cut both sides of trench in street - 750 ln ft x say 2 in dp plus 4 in binder = 8 in x 2 sides	1,480	Ln.Ft.	0.86	0.20	0.97	s		20.66		1.75	1,273	280	5,783		2,590	7	9,646
1.4020	Load asphalt	658	Sq Yd		0.095	0.97	s		20.66	85.00			61	1,252		55,911	87	57,163
1.4030	Dispose of asphalt	24	Cu Yd	50.00	0.500	0.97	s		20.66			1,218	12	244			60	1,462
1.5000	Excavation/Backfill For 2 - 4" Buried Pipes	740	Ln.Ft.															
1.0010	Excavation, stone base, backfill, compaction and minor parking lot repairs are all included in unit price from Russell Construction Services - 2 ft 2 in w x 5 ft 2 in dp x 750 lf =	393	Cu Yd							265.63					104,444		266	104,444
1.6000	Buried Hot/Cold Water Piping	740	Ln.Ft.															
1.6010	4" ID/est8"OD preinsulated pipe x est 30 ft section = 740 ft x 2 = 1,480 ln. ft. - pricing is from Urecon # ? Comp. 2000 - Urecon Quote # 14089a - est 1/3/10	1,480	Ln.Ft.	18.46	0.75	0.66	p		24.58		2.66	27,321	733	18,007		3,937	33	49,265
1.6020	4" ID/est8"OD preinsulated pipe - 5/45 degree fittings for obstructions and interferences in excavation - 3 per 100 ft	44	Each	18.46	0.75	0.66	p		24.58		2.66	820	22	540		118	33	1,478
1.6030	4" ID/est8"OD preinsulated pipe 90 deg elbow - est - Urecon Quote # 14089a - 1/3/10	10	Each	207.49	5.50	0.66	p		24.58	19.50	2,075	36	892		195	316	3,162	
1.6040	4" ID/est8"OD preinsulated pipe run to 2" "T" tap - for future tap - Urecon Quote 14089a est 1/3/10	8	Each	353.55	8.00	0.66	p		24.58	25.00	2,828	42	1,038		200	508	4,067	
1.6050	4" ID/est8"OD preinsulated pipe terminal end - for connection to butterfly valve - for connection at user source	2	Each	88.90	8.00	0.66	p		24.58	25.00	178	11	260		50	244	487	
1.6060	4" ID/est8"OD preinsulated pipe splice ?? joint kit - Urecon # ?? Using BX joint kit Quote 14089a 1/3/10 - 1,500/30	158	Each	88.90	8.00	0.66	p		24.58	25.00	14,058	835	20,523		3,953	244	38,534	
1.6060	4" flange - welded - on pipe - for valve connection	2	Each	42.50	1.60	0.66	p		24.58	5.85	85	2	52		12	74	149	
1.6070	4" valve - 200 # - butterfly - iron body - manual - flanged	2	Each	310.00	3.20	0.66	p		24.58	25.00	620	4	104		50	387	774	
1.6080	4" valve flange - welded - other side of valve	2	Each	42.50	1.60	0.66	p		24.58	5.85	85	2	52		12	74	149	
1.6090	4" bolts, nuts And gasket	4	Each	9.00	1.00	0.66	p		24.58		36	3	65			25	101	

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				MATERIAL/ OTHER	LABOR				SubContract \$	CONSTR. EQUIP.											
					M/H	P.F.	ID	RATE													
1.6100	4" cs sch 40 pipe x 5 ft lg - connect to existing pipe ??	2	Each	79.75	2.16	0.66	p	24.58		7.90	160	3	70	-	16	123	245				
1.6110	4" cs sch 40 pipe cap welded	2	Each	38.50	1.30	0.66	p	24.58		5.85	77	2	42	-	12	65	131				
1.7000	Buried Expansion Joint	2	Each																		
1.7010	See item 2.4000 for precast concrete box									2.55	1,680	4	104	-	5	894	1,789				
1.7020	4"ss flanged expansion joint	2	Each	840.00	3.20	0.66	p	24.58		5.85	170	4	104	-	23	74	297				
1.7030	4" flange - welded - on pipe - for valve connection	4	Each	42.50	1.60	0.66	p	24.58			36	3	65	-		25	101				
1.7040	4" bolts, nuts And gasket	4	Each	9.00	1.00	0.66	p	24.58													
1.8000	Buried Future Connection - Estimated At 2" Direct Buried - No Precast Box	8	Eac																		
1.8010	2" cs sch 40 pipe x 3 ft lg - each side of valve	16	Each	39.30	1.57	0.66	p	24.58		5.76	629	17	408	-	92	71	1,129				
1.8020	2" cs sch 40 pipe flange - welded	16	Each	29.50	0.80	0.66	p	24.58		2.93	472	8	208	-	47	45	727				
1.8030	2" bolts, nuts and gasket	16	Each	39.30	1.57	0.66	p	24.58		5.76	629	17	408	-	92	71	1,129				
1.8040	2" çs ball valve - 150 # - manual - flanged	8	Each	485.00	1.80	0.66	p	24.58		10.00	3,880	10	234	-	80	524	4,194				
1.8050	Mark surface - brass plaque ??	8	Each	25.00	1.00	0.66	p	24.58			200	5	130	-		41	330				
1.9000	Trench Paving Replacemrnt	750	Ln.Ft.																		
1.9010	4" binder course	833	Sq Yd	14.15	0.021	0.60	s	20.66		0.62	11,792	11	217	-	517	15	12,525				
1.9020	2" wear course	833	Sq Yd	7.90	0.015	0.60	s	20.66		0.44	6,583	8	155	-	367	9	7,105				
1.9020	Replace pavement markings - allowance	750	Ln Ft	1.00	0.030	0.80	s	20.66		85.00	750	18	372	-	63,750	86	64,872				
TOTAL																79,669	2,359	56,782	104,444	134,030	\$374,924

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					M/H	P.F.	ID	RATE									
2.0000	2 - 4" Buried Pipe Manholes and Expansion Chamber																
2.1000	Manhole Paving Removal	2	Each														
2.1010	Saw cut both sides of trench in street - 30' x 30' x say 2 in dp plus 4 in binder = 8 in x 4 sides x 2 =	240	Ln.Ft.	0.86	0.20	0.60	s	20.66		1.75	206	28	580		420	5	1,206
2.1020	Load asphalt	200	Sq Yd		0.095	0.80	s	20.66	85.00			15	314		17,000	87	17,314
2.1030	Dispose of asphalt	7	Cu Yd	50.00	0.500	0.80	s	20.66	10.00	370	3	61		74	68	506	
2.2000	Manhole Excavation/Backfill	2	Each														
2.0010	Excavation, stone base, backfill and compaction are all included if unit price from Russell Construction Services - 10 ft dia x 8 ft dp =	128	Cu Yd						265.63				34,095			286	34,095
2.3000	Manhole	2	Each														
2.3010	Piping precast concrete manhole - 6 ft dia x 8 ft dp - set in place	2	Each	2,700.00	24.000	0.97	p	24.58		340	340	47	1,144		680	1,082.21	2,164
2.3020	Manhole top	2	Each	555.00	4.000	0.97	p	24.58	49	340	8	191		97	313.87	628	
2.3030	Manhole frame and cover	2	Each	525.00	4.000	0.97	p	24.58	59	340	8	191		117	323.87	648	
2.3040	Pipe supports inside manhole	2	Each	500.00	16.000	0.97	p	24.58		340	31	763			551.47	1,103	
2.3050	Seal pipe entrance into manhole	4	Each	250.00	12.000	0.97	p	24.58		340	47	1,144			371.11	1,484	
2.4000	Expansion Chamber	2	Each														
2.4010	Precast concrete expansion chamber - 4' - 6" x 3' - 2" x 2' heavy duty with precast cover - buried in trench	2	Each	1,200.00	8.000	0.97	p	24.58	113.00	2,400	16	381		226	1,504	3,007	
2.4020	Seal pipe entrance into expansion chamber	4	Each	250.00	12.000	0.97	p	24.58		340	47	1,144			371.11	1,484	
2.4030	Mark box location on surface - bronze marker ?	2	Each	250.00	4.000	0.97	p	24.58		340	8	191			265.37	531	
2.5000	Manhole Paving Replacemrnt	2	Each														
2.5010	4" binder course - 30 ft x 30 ft	200	Sq Yd	14.15	0.021	0.97	s	20.66	0.62	2,830	4	84		124	15	3,038	
2.5020	2" wear course - 30 ft x 30 ft	200	Sq Yd	7.90	0.015	0.97	s	20.66	0.44	1,580	3	60		88	9	1,728	
2.5020	Replace pavement markings - allowance	2	Lp Sm	25.00	4.000	0.97	s	20.66	25.00	50	8	160		50	130	260	
TOTAL											9,817	271	6,410	34,095	18,876		\$69,198

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JOB NO.: 25,513.00
 PROJECT: Hot Water Distribution Piping
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project description: New Construction
 Estimate Type: Order of Magnitude

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				MATERIAL/ OTHER	LABOR				SubContract \$	CONSTR. EQUIP.								
					M/H	P.F.	ID	RATE										
3.0000	2 - 6" Buried Hot/Cold Water Distribution Piping						0.69	p	24.58									
3.1000	Survey and Lay-out Trench	6,080	Ln.Ft.															
3.1010	Survey and install offset markers etc. for trench excavation	6,080	Ln.Ft.	1.00	0.03	1.00	s		59.60		1.50	6,080	182	10,871	-	9,120	4	26,071
3.2000	Excavation Protection																	
3.2010	Trench protection - barricades with lights - 5 ft lg each est as company owned say \$345 ea x 20% = \$69 ea say 500 ft on ea side = 200 barr. In use at one time	143	Each	69.00		0.97	me		22.17			9,850	-	-	-	-	69	9,850
3.2020	Load, distribute, place, move barricades twice & pu	143	Each		1.00	0.97	me		22.17		2.00	-	138	3,069	-	286	24	3,355
3.2030	Trench protection - barrels say spaced at 10 ft ea est as company owned say \$38 ea @ 20% = \$7.60 ea say 10% in use at one time	61	Each	7.60		0.97	me		22.17			462	-	-	-	-	8	462
3.2040	Load, distribute, place, move barrels twice & pu	61	Each		1.00	0.97	me		22.17		2.00	-	59	1,307	-	122	24	1,429
3.2050	Trench protection - steel plates covering trench - 1" thick x 1" thick x 8 ft w x 20 ft lg plate at \$105 mo say 300 ln ft or 15 plates in use at one time	15	Each			0.97	me		22.17		105.00	-	-	-	-	1,596	105	1,596
3.2060	Load, distribute, place, move plates twice & pu	30	Each		2.000	0.97	me		22.17		175.00	-	59	1,307	-	5,320	218	6,627
3.3000	Excavation Flaggers																	
3.3010	Laborers - flaggers at each end of excavation - say 15 week for excavation, pipe installation, backfill and paving restoration	75	Days	2.00	16.00	0.97	me		22.17			150	1,164	25,801	-	-	346	25,951
3.4000	Trench Paving Removal	6,080	Ln.Ft.															
3.4010	Saw cut both sides of trench in street - 5,830 ln ft x say 2 in dp plus 4 in binder = 8 in x 2 sides	12,160	Ln.Ft.	0.86	0.20	0.97	s		20.66		1.75	10,458	2,300	47,515	-	21,280	7	79,253
3.4020	Load asphalt	5,404	Sq Yd		0.095	0.97	s		20.66		2.00	-	498	10,288	-	10,809	4	21,097
3.4030	Dispose of asphalt	200	Cu Yd	50.00	0.500	0.97	s		20.66		10.00	10,008	97	2,006	-	2,002	70	14,015
3.5000	Excavation/Backfill For 2 - 4" Buried Pipes	6,080	Ln.Ft.															
3.0010	Excavation, stone base, backfill and compaction are all included if unit price from Russell Construction Services - 2 ft 2 in w x 5 ft 2 in dp x 750 lf =	3,601	Cu Yd							265.63		-	-	-	956,457	-	266	956,457
3.6000	Buried Hot/Cold Water Piping	6,080	Ln.Ft.															
3.6010	6" ID/est10"OD preinsulated pipe x est 30 ft section = 5,830 5,830 x 2 = 11,660 ln. ft. - pricing is from Urecon # ? Comp. 2,000 Urecon Quote # 14089a - est 1/3/10	12,160	Ln.Ft.	27.61	1.04	0.66	p		24.58		2.55	335,738	8,371	205,748	-	31,008	47	572,493
3.6020	6" ID/est8"OD preinsulated pipe 5/45 deg elbow - for obstructions and interferences - say 3 per 100 ft = est - Urecon Quote # 14089a - 1/3/10	108	Each	362.23	6.00	0.66	p		24.58		19.50	39,129	428	10,514	-	2,106	479.06	51,749
3.6030	6" ID/est8"OD preinsulated pipe 45/90 deg elbow - say 1 every 250 ft - est - Urecon Quote # 14089a - 1/3/10	49	Each	362.23	6.00	0.66	p		24.58		19.50	17,619	193	4,734	-	948	479.06	23,302
3.6040	6" ID/est8"OD preinsulated pipe run to 2" "T" tap - for future tap - Urecon Quote 14089a est 1/3/10	10	Each	483.79	12.00	0.66	p		24.58		25.00	4,838	79	1,947	-	250	703.46	7,035
3.6050	6" ID/est8"OD preinsulated pipe terminal end - for connection to butterfly valve - for connection at user source	12	Each	88.90	8.00	0.66	p		24.58		25.00	1,067	63	1,557	-	300	243.68	2,924
3.6060	6" ID/est8"OD preinsulated pipe splice ?? joint kit - Urecon # ?? Using BX joint kit Quote 14089a 1/3/10 - 11,660/30	761	Each	104.32	12.00	0.66	p		24.58		25.00	79,352	6,024	148,077	-	19,016	324	246,445
3.6070	6" flange - welded - on pipe - for valve connection	12	Each	64.00	2.40	0.66	p		24.58		5.85	768	19	467	-	70	108.78	1,305
3.6080	6" valve - 200 # - butterfly - iron body - manual - flanged	12	Each	430.00	4.80	0.66	p		24.58		35.00	5,160	38	934	-	420	543	6,514
3.6090	6" valve flange - welded - other side of valve	12	Each	64.00	2.40	0.66	p		24.58		5.85	768	19	467	-	70	109	1,305
3.6100	6" bolts, nuts and gasket	24	Each	9.00	1.00	0.66	p		24.58			216	16	389	-	-	25	605

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				MATERIAL/ OTHER	LABOR				SubContract	CONSTR. EQUIP.							
					M/H	P.F.	ID	RATE									
3.6110	6" cs sch 40 pipe x 5 ft lg - connect to existing pipe ??	12	Each	132.50	3.34	0.66	p	24.58		8.15	1,590	26	649	-	98	194.75	2,337
3.6120	6" cs sch 40 pipe cap welded	12	Each	65.50	1.33	0.66	p	24.58		4.88	786	11	259	-	59	92	1,103
3.6500	Exposed Under Bridge	210	Ln.Ft.														
3.6510	6" ID/est10"OD preinsulated pipe x est 30 ft section = 210 lf 210 x 2 = 420 ln. ft. - pricing is from Urecon # ? Comp. 2,000 Urecon Quote # 14089a - est 1/3/10	420	Ln.Ft.	27.61	1.56	0.66	p	24.58		2.55	11,596	434	10,660	-	1,071	56	23,327
3.6520	6" ID/est8"OD preinsulated pipe 5 deg elbow - for obstructions and interferences - say 3 per 100 ft = est - Urecon Quote # 14089a - 1/3/10	13	Each	362.23	6.00	0.66	p	24.58		19.50	4,564	50	1,226	-	246	479.06	6,036
3.6530	6" ID/est8"OD preinsulated pipe fittings to connect to buried pipe	4	Each	362.23	6.00	0.66	p	24.58		19.50	1,449	16	389	-	78	479.06	1,916
3.6540	6" ID/est8"OD preinsulated pipe splice ?? joint kit - Urecon # ?? Using BX joint kit Quote 14089a 1/3/10 - 11,660/30	47	Each	104.32	12.00	0.66	p	24.58		25.00	4,924	374	9,188	-	1,180	324	15,292
3.6550	Temporary personnel supports to install trapeze supports under bridge	210	Ln.Ft.		2.00	0.66	p	24.58		50.00	-	277	6,813	-	10,500	82	17,313
3.6560	6" ID/est10"OD preinsulated pipe trapeze type supports under bridge for 2 pipes at 5 ft	42	Each	250.00	16.00	0.66	p	24.58		2.55	10,500	444	10,902	-	107	512	21,509
3.7000	Bore Under North Branch Winsookie River																
3.7010	Saw cut asphalt in parking area - 50' x 50' on west side of the river and remove 30' wide x 30' lg to edge of river	260	Ln.Ft.	0.86	0.20	0.97	s	20.66		1.75	224	49	1,016	-	455	6.52	1,695
3.7020	Load asphalt	2,600	SqYd		0.095	0.97	s	20.66		2.00	-	240	4,950	-	5,200	4	10,150
3.7030	Dispose of asphalt	96	CuYd	50.00	0.500	0.97	s	20.66		10.00	4,815	47	965	-	963	70	6,743
3.7040	Excavate pit for boring machine	1	Lp Sm	50.00	16.00	0.97	s	20.66		500.00	50	16	321	-	500	870.62	871
3.7100	Micro Bore - 215 L.In. Ft. Under River																
3.7110	Mobilize boring machine, pipe and associated equip't	1	Lp.Sm	40,000.00	80.000	1.00	cs	23.69			40,000	80	1,896	-		41,895.56	41,896
3.7120	Bore hole for 24" dia. casing under river incl 2 operating technician - est at 50% rock boring - boring is based on 24 hour operation and 50 ft per 24 hrs or 6 days - dewatering is not required	215	Ln.Ft.	0.00	22.400	1.00	cs	35.54		60.00	-	4,816	171,169	-	12,900	856.13	184,069
3.7130	Operating Engineer 1 to assist the boring tech (if required - stand-by) at straight time	6	Days	0.00	8.000	1.00	cs	23.69			-	48	1,137	-		189.56	1,137
3.7140	Operating Engineer 1 to assist the boring tech (if required - stand - by) - overtime at 1½	6	Days	0.00	16.000	1.00	cs	35.54			-	96	3,412	-		568.67	3,412
3.7150	Pipe fitters at 2 to assist the boring tech - straight time	6	Days	0.00	16.000	1.00	p	24.58			-	96	2,360	-		393.27	2,360
3.7160	Pipe fitters 2 to assist the boring tech - overtime at 1½	6	Days	0.00	32.000	1.00	p	36.87			-	192	7,079	-		1,179.82	7,079
3.7170	24" dia. outer casing - sch 40 - welded - 20 ft pcs pipe - installation labor for pipe is included with boring	220	Ln.Ft.	193.03		1.00	p	24.58			42,467	-	-	-		193.03	42,467
3.7180	6" cs sch 40 - pipe - inside 24" outer pipe - 220 ft x 2 = installation labor for pipe is included with boring	440	Ln.Ft.	25.18		1.00	p	24.58			11,077	-	-	-		25.18	11,077
3.7190	Spacer at 5 ft to support 2 - 6" pipes with-in 24" carrier pipe	43	Each	50.00	2.000	1.00	cs	23.69			2,150	86	2,038	-		97.39	4,188
3.7200	Terminate outer 24" casing at the manhole	2	Each	750.00	16.000	1.00	p	24.58			1,500	32	787	-		1,143.27	2,287
3.7210	Terminate inner 6" cs pipe in manhole to the 6"ID/est 10"OD preinsulated pipe in the manhole - allowance	4	Each	500.00	16.000	1.00	p	24.58			2,000	64	1,573	-		893.27	3,573
3.7220	Demobilize boring machine, pipe and associated equip't	1	Lp.Sm	25,000.00	80.000	1.00	cs	23.69			25,000	80	1,896	-		26,895.56	26,896

R.G. VANDERWEIL ENGINEERS, LLP - OPINION OF PROBABLE COST ESTIMATE WORKSHEET

JOB NO.: 25,513.00
 PROJECT: Hot Water Distribution Piping
 CLIENT: Veolia Energy, Montpelier, Vermont

project description: New Construction
 Estimate Type: Order of Magnitude

M.T.O. BY: cjs III
 PRICED BY: cjs III
 CHECKED BY: GWICH

EST DATE: 06/18/10
 PRINT DATE: 06/22/10
 Revision: 0: 01/00/00

DWG/REF & ACCNT	LOCATION & DESCRIPTION	QUANTITY	UNIT	COST OR M/HOURS PER UNIT							MATERIAL OTHER	LAB HRS	LABOR	EQUIPMENT \$	CONSTRUCTION EQUIPMENT	UNIT PRICE / ITEM	TOTAL
				MATERIAL/ OTHER	LABOR				SubContract \$	CONSTR. EQUIP.							
					M/H	P.F.	ID	RATE									
3.7500 Protect Existing Sewer Pipe Between Buildings																	
Estimated At 100 Ln. Ft.																	
3.7510 Preinsulated pipe is with item 3.6000																	
3.7520	Survey, dig test pits and locate existing sewer line between buildings - survey crew - 1 day	1	Lp.Sm	250.00	24.000	1.00	cs	59.60		500.00	250	24	1,430	-	500	2,180.46	2,180
3.7530	Mobilize and demobilize pile driving rig equipment	1	Lp.Sm	2,000.00	24.000	1.00	cs	23.69		2,500.00	2,000	24	569	-	2,500	5,068.67	5,069
3.7540	Steel sheet piling - say 15 ft dp - on both sides of trench between buried sewer line - est at 100 In ft for one side x 2 = 200 In ft drive, extract and salvage - plus 3 ft toe-in - no dewatering	3,600	VSF	6.90	0.140	1.00	cs	23.69		7.05	24,840	505	11,976	-	25,380	17.28	62,196
3.7550	Hand excavation / backfill - say 25% of 100 ft x 10 ft x 6 ft dp around existing sewer pipe	1,800	CuYd		1.000	1.00	cs	23.69		7.05		1,800	42,850	-	12,890	30.74	55,340
3.8000 Buried Expansion Joint																	
3.8010 See item 4.4000 for precast concrete box																	
3.8020	6"ss flanged expansion joint	14	Each	840.00	3.20	0.66	p	24.58		2.55	11,760	30	727	-	36	894	12,522
3.8030	6" flange - welded - on pipe - for valve connection	28	Each	64.00	2.40	0.66	p	24.58		5.85	1,792	44	1,090	-	164	109	3,046
3.8040	6" bolts, nuts And gasket	28	Each	9.00	1.00	0.66	p	24.58			252	18	454	-		25	706
3.8500 Buried Future Connection - Estimated At 2"																	
Direct Buried - No Precast Box																	
3.8510	2" cs sch 40 pipe x 3 ft lg - each side of valve	108	Each	39.30	1.57	0.66	p	24.58		5.76	4,244	112	2,754	-	622	71	7,621
3.8520	2" cs sch 40 pipe flange - welded	108	Each	29.50	0.80	0.66	p	24.58		2.93	3,186	57	1,402	-	316	45	4,904
3.8530	2" bolts, nuts and gasket	108	Each	39.30	1.57	0.66	p	24.58		5.76	4,244	112	2,754	-	622	71	7,621
3.8540	2" cs ball valve - 150 # - manual - flanged	54	Each	485.00	1.80	0.66	p	24.58		10.00	26,190	64	1,577	-	540	524	28,307
3.8550	Mark surface - brass plaque ??	54	Each	25.00	1.00	0.66	p	24.58			1,350	36	876	-		41	2,226
3.9000 Trench Paving Replacemrnt																	
3.9010	4" binder course	6,756	Sq Yd	14.15	0.021	0.60	s	20.66		0.62	95,591	85	1,758	-	4,188	15	101,538
3.9020	2" wear course	6,756	Sq Yd	7.90	0.015	0.60	s	20.66		0.44	53,369	61	1,256	-	2,972	9	57,597
3.9020	Replace pavement markings - allowance	6,080	Ln Ft	1.00	0.030	0.80	s	20.66		85.00	6,080	146	3,014	-	516,800	86	525,894
TOTAL											921,502	30,438	791,972	956,457	705,410		\$3,375,341

R.G. VANDERWEIL ENGINEERS, LLP - OPINION OF PROBABLE COST ESTIMATE WORKSHEET

JOB NO.: 25,513.00
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M.T.O. BY: cjs III
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DWG/REF & ACCNT	LOCATION & DESCRIPTION	QUANTITY	UNIT	COST OR M/HOURS PER UNIT							MATERIAL OTHER	LAB HRS	LABOR	EQUIPMENT \$	CONSTRUCTION EQUIPMENT	UNIT PRICE / ITEM	TOTAL	
				MATERIAL/ OTHER	LABOR				SubContract \$	CONSTR. EQUIP.								
					M/H	P.F.	ID	RATE										
4.0000	2 - 6" Buried Pipe Manholes and Expansion Chamber																	
4.1000	Manhole Paving Removal	21	Each															
4.1010	Saw cut both sides of trench in street - 30' x 30' x say 2 in dp plus 4 in binder = 8 in x 4 sides x 2 =	2,520	Ln.Ft.	0.86	0.20	0.97	s	20.66			1.75	2,167	477	9,847		4,410	7	16,424
4.1020	Load asphalt	2,100	Sq Yd		0.095	0.97	s	20.66			85.00		194	3,998		178,500	87	182,498
4.1030	Dispose of asphalt	78	Cu Yd	50.00	0.500	0.97	s	20.66			10.00	3,889	38	779		778	70	5,446
4.2000	Manhole Excavation/Backfill	21	Each															
4.0010	Excavation, stone base, backfill and compaction are all included if unit price from Russell Construction Services - 10 ft dia x 8 ft dp =	128	Cu Yd						265.63						34,095		266	34,095
4.3000	Manhole	21	Each															
4.3010	Piping precast concrete manhole - 6 ft dia x 8 ft dp - set in place	2	Each	2,700.00	24.000	0.97	p	24.58			340	340	47	1,144		680	1,082.21	2,164
4.3020	Manhole top	2	Each	555.00	4.000	0.97	p	24.58			49	340	8	191		97	313.87	628
4.3030	Manhole frame and cover	2	Each	525.00	4.000	0.97	p	24.58			59	340	8	191		117	323.87	648
4.3040	Pipe supports inside manhole	2	Each	500.00	16.000	0.97	p	24.58			340	340	31	763			551.47	1,103
4.3050	Seal pipe entrance into manhole	4	Each	250.00	12.000	0.97	p	24.58			340	340	47	1,144			371.11	1,484
4.4000	Hand Hole At Bridge	2	Each															
4.4010	Precast concrete hand hole 4 ft x 4 ft x 4 ft dp heavy duty with precast cover - for buried to exposed pipe	2	Each	1,025.00	12.000	0.97	p	24.58			113.00	2,050	23	572		226	1,424	2,848
4.4020	Seal pipe entrance into hand hole	4	Each	250.00	12.000	0.97	p	24.58			340	340	47	1,144			371.11	1,484
4.4030	Mark box location on surface - bronze marker ?	2	Each	250.00	4.000	0.97	p	24.58			340	340	8	191			265.37	531
4.4040	Transition from preinsulated buried pipe to insulated pipe on bridge	4	Each	1,000.00	16.000	0.97	p	24.58			340	340	62	1,526			466.47	1,866
4.4000	Expansion Chamber	14	Each															
4.4010	Precast concrete expansion chamber - 4' - 6" x 3' - 2" x 2' heavy duty with precast cover - buried in trench	2	Each	1,200.00	8.000	0.97	p	24.58			113.00	2,400	16	381		226	1,504	3,007
4.4020	Seal pipe entrance into expansion chamber	4	Each	250.00	12.000	0.97	p	24.58			340	340	47	1,144			371.11	1,484
4.4030	Mark box location on surface - bronze marker ?	14	Each	250.00	4.000	0.97	p	24.58			340	340	54	1,335			119.65	1,675
4.5000	Manhole Paving Replacemnt	21	Each															
4.5010	4" binder course - 30 ft x 30 ft	2,100	Sq Yd	14.15	0.021	0.97	s	20.66			0.62	29,715	43	884		1,302	15	31,901
4.5020	2" wear course - 30 ft x 30 ft	2,100	Sq Yd	7.90	0.015	0.97	s	20.66			0.44	16,590	31	631		924	9	18,145
4.5020	Replace pavement markings - allowance	21	Lp Sm	25.00	4.000	0.97	s	20.66			25.00	525	81	1,683		525	130	2,733
TOTAL											60,736	1,258	27,550	34,095	187,785		310,166	