

## Appendix F – Unit Costs

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Notes to Cost Estimator:

**estimate level Class 5**

**all costs to be installed costs, including commissioning if applicable**

**all costs to be in units indicated or approved equal measurement**

**pump station cost lump sum**

**grinder lift station cost lump sum**

<b>Description</b>	<b>Unit</b>	<b>Multiplier</b>
Paved Area Construction	\$/LF	1
Undeveloped Area Construction	\$/LF	0.7
Downtown Area Construction	\$/LF	3
Railroad Bore and Jack	\$/LF	6
Bridge Pipe Hanger	\$/LF	3
Major Intersection	\$/LF	3
Residential Intersection	\$/LF	1.5
Highway Bore and Jack	\$/LF	6
Major Utility-Cross Section	\$/LF	2
High groundwater	\$/LF	1.14

**Gravity Sewer**

PVC bell and spigot, includes pre-cast manhole (4 ft dia) cost every 900 ft

		cost/LF in a paved area	
		Burial Depth to invert (ft)	
diameter	7-13	14-20	
8	282.28	399.78	
10	300.03	418.24	
12	328.87	447.79	
14	338.32	457.95	
15	351.54	471.52	
16	366.78	486.72	
18	385.14	506.18	
21	410.46	532.57	
24	461.31	584.47	
27	487.44	621.72	
30	605.62	735.16	
36	709.05	840.71	

**Pump Station**

Submersible pumps, duty standby pump configuration (assume 2 pumps)

gpm	special	cost (each)	
100	undeveloped, green field, 20 ft depth	\$ 220,400	
200	undeveloped, green field, 20 ft depth	\$ 220,517	
300	undeveloped, green field, 20 ft depth	\$ 222,247	
400	undeveloped, green field, 20 ft depth	\$ 233,313	
500	undeveloped, green field, 20 ft depth	\$ 233,940	
600	undeveloped, green field, 20 ft depth	\$ 234,077	
100	wetland, high groundwater, 15 ft depth	\$ 343,627	
200	wetland, high groundwater, 15 ft depth	\$ 343,744	
300	wetland, high groundwater, 15 ft depth	\$ 345,474	
400	wetland, high groundwater, 15 ft depth	\$ 356,540	
500	wetland, high groundwater, 15 ft depth	\$ 357,167	
600	wetland, high groundwater, 15 ft depth	\$ 357,304	
100	paved area, existing residential area, 20 ft depth	\$ 220,849	
200	paved area, existing residential area, 20 ft depth	\$ 220,966	
300	paved area, existing residential area, 20 ft depth	\$ 222,696	
400	paved area, existing residential area, 20 ft depth	\$ 233,762	
500	paved area, existing residential area, 20 ft depth	\$ 234,389	
600	paved area, existing residential area, 20 ft depth	\$ 234,526	
700	paved area, existing residential area, 20 ft depth	\$ 234,663	See Note
800	paved area, existing residential area, 20 ft depth	\$ 234,800	See Note
60	paved area, existing residential area, 20 ft depth	\$ 220,802	See Note
60	undeveloped, green field, 20 ft depth	\$ 220,353	See Note
60	wetland, high groundwater, 15 ft depth	\$ 343,580	See Note

**Forcemain**

HDPE butt fused, includes air valve chamber every 1000 ft,

cost/LF in a paved area	
Burial Depth to invert (ft)	
diameter	5.7 feet
2	206.72
4	223.46
6	235.02
8	271.78

**Grinder Lift Station**

Submersible pump, single pump

gpm	special	cost (each)
5-9	greenfield, 5 ft burial	\$ 24,714

