

Cost Savings Case Study: Gravity Drainage vs. Siphonic Drainage

Brennan,

Without releasing our labor, overhead or profit to go Siphonic vs a Conventional Storm System on a Warehouse, Private Wage Project, below are the values we had on the Distribution Project.

Conventional Storm Installation (Cast Iron) with Labor and Materials Installed Turn Key the cost would be **\$240,956.00**

Siphonic Storm Installation (PVC) with Labor and Materials Installed Turn Key the cost would be **\$148,357.00**

Total Savings to utilize Siphonic Storm Drain System (PVC) Turn Key is a Savings of **\$92,599.00**

Keep in mind that this is a traditional storm drain system in cast iron and the Siphonic approach utilizing PVC. If you wanted an idea on the impact to go to Cast Iron Pipe you could use a R.O.M Figure of 35% Impact in pipe and Fittings.

So assume in this case our pipe and fittings (PVC) were about \$27,500.00 in the Siphonic piping design x 35% = \$9,625.00. Assume some mark up, profit and overhead @ \$3,000.00 for a total impact of \$12,625.00 to got to cast iron in lieu of PVC.

\$12,625.00 would be your Impact to your savings above off the \$92,599.00.

If were to be piped in cast iron in lieu of PVC the Value Engineering would now be a R.O.M of **\$79,974.00**

I hope this helps and please keep these values private as far as where you got them. They are however factual and from the actual Project.... :) If you have any questions please feel free to call or email me.

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|--------------------------------|-------------|--------------------------|-------------|
| | | Pipe PVC Schedule 40 2" | 40 |
| | | Pipe PVC Schedule 40 3" | 140 |
| | | Pipe PVC Schedule 40 4" | 160 |
| | | Pipe PVC Schedule 40 6" | 1400 |
| No-Hub Cast Iron Soil Pipe 8" | 2139 | Pipe PVC Schedule 40 8" | 1260 |
| No-Hub Cast Iron Soil Pipe 10" | 1035 | Pipe PVC Schedule 40 10" | 120 |
| No-Hub Cast Iron Soil Pipe 12" | 351 | | |
| Totals | 3525 | Totals | 3120 |

Other Areas of Savings

- Gravity design had 5 discharge points vs. 1 discharge point with Siphonic design
- Gravity design required excavation inside of the building vs. complete elimination of internal excavation with Siphonic design
- Smaller diameter pipe created requirement for smaller fittings, couplings, and hangers
- Less pipe requires less labor to perform install