



Sisu Global

Memo

To: David Peterson, PE
From: Nate Mecham, PE
cc:
Date: March 10, 2016
Re: Wasatch Mental Health - Payson Lift Station
Preliminary Opinion of Cost - **Regional Sewer Solution**

David,

Based on feedback from your team and the project owner, Payson City has chosen to move forward with the regional sewer lift station, (wet well / dry well option #2 from the original preliminary opinion of cost), and include an additional 38 acres of surrounding land. In addition, a request has been made to change the fuel source of the standby generator to something other than natural gas (to eliminate the need for extending the gas service), add a SCADA system that is compatible with the system already in use at the wastewater treatment plant, and update the preliminary opinion of cost for review by City Council.

The addition of the 38 acres changed some of the design factors. A few of these are as follows:

- The additional total number of housing units increased from 225 units to 392 units
- The average daily flows increased 66,000 gallons per day (65 gpm to 112 gpm)
- The required pump output increased from 250 gallons per minute to 350 gallons per minute
- The diameter of the force main increased from 4 inches to 6 inches
- The total pumping head decreased from 69 feet to 47 feet (due to increased diameter of force main)
- The depth of the wet well increased to 20 feet (which includes 5 minutes of emergency storage)

The preliminary cost opinion for this selected option has been updated to reflect the requests of Council and staff. This is a preliminary opinion of cost and is subject to change based on owner preferences, equipment and materials pricing, installation pricing and site conditions.

The pricing for this option is shown below:

Selected Option: Full Service Area - Wet Well / Dry Well

Item	Description	Item Cost
1	2 Ea. Flygt 4" x 6" NT3153.185 w/ 465 hard iron impeller & insert ring. 15 HP 3/60/460V motor. FLS, FV, 50' power cable, discharge elbow & stand included.	
2	2 ea. Lifting chain and shackles, for each pump. 304 SS	
3	1 ea. Duplex control panel with mini-CAS and probe with probe relays. Three point latch and NEMA 4X stainless steel enclosure.	
4	1 ea. Standby 60 kW Generator & Transfer Switch	
5	1 ea. Start up and Training	
Pump Equipment sub-total =		\$ 78,469.00
6	6'-0 diameter MH wet well	\$ 5,500.00
7	2 ea. 8" pre-cast base and rock	\$ 4,000.00
8	6'-0 diameter MH dry well	\$ 5,500.00
9	Rings, Covers and Pedestals	\$ 450.00
10	Access Hatch	\$ 750.00
11	Piping and connections	\$ 4,250.00
12	100 LF of chainlink fence with 3 barb wire & gate	\$ 2,000.00
13	Generator Pad	\$ 500.00
14	Generator upgrade to propane	\$ 1,200.00
15	330 gallon Propane Tank, pad & connections	\$ 2,000.00
16	SCADA system	\$ 15,000.00
14	Misc Hardware	\$ 3,500.00
15	labor to install piping, stands, hangars, pedestals, etc.	\$ 3,000.00
16	Mobilization / Demobilization / SWPPP	\$ 14,000.00
Lift Station Misc. Items sub-total =		\$ 61,650.00
15% contingency =		\$ 21,017.85
Lift Station Total =		\$ 161,136.85

Option 2 Assumptions:

- Telemetry included will be compatible with existing system in use (per SKM staff)
- Standby generator powered by propane (included). Propane is recommended over diesel due to maintenance requirements and cold winter temperatures.
- Electricity provided to LS site by others.
- Force main and connection to destination manhole provided by others.
- 6'-0 diameter manhole accommodates both pumps

Please let me know if you need anything else. NLM