



Village of Lakewood

**SPECIAL MEETING
BEFORE THE BOARD OF TRUSTEES**

Tuesday, December 6, 2016
6:00 p.m.

AGENDA

1. Roll Call
2. Public Comments and discussion regarding the Lift Station and Control Panel Located at the Corner of Oxford Lane and Broadway Avenue.
3. Adjournment

Meeting Location:

RedTail Golf Club
7900 RedTail Drive
Village of Lakewood, IL 60014

CONTROL PANEL LANDSCAPE PLANNING MEETING

On October 25, 2016, the Village of Lakewood conducted an initial meeting to discuss concerns related to the control panel that was recently installed at the corner of Broadway Avenue and Oxford Lane as part of the East Sewer project. Feedback was collected during the meeting and the Village's engineer was tasked with researching alternatives and providing cost estimates for the items discussed. The results of their research are included in this packet and will be the subject of discussion at the next resident meeting scheduled for:

Tuesday, December 6, 2016
6:00pm
RedTail Golf Club
7900 Redtail Drive
Village of Lakewood, IL 60014

Residents of Lakewood and/or Crystal Lake are invited to attend this special meeting of the Board.



Action Items Status following Lakewood Resident Meeting

- It was a unanimous request to remove the alarm light. Verify with Matt (Strand) whether this is legal and if so, tell Jim (Merryman) to do it as soon as possible. If it's not we need to tell the Village ASAP.
 - The Alarm light has been disconnected. Matt has not been able to find any code that makes this illegal/unacceptable due to the telemetry attribute of our station.
 - Per Section 370.440 of Title 35 of the Illinois Administrative Code (Title 35: Environmental Protection, Subtitle C: Water Pollution, Chapter II: Environmental Protection Agency, Part 370 Illinois Recommended Standards for Sewage Works, Section 370.440 Alarm Systems), an alarm telemetry system is required for pumping stations, but an audio-visual alarm system with self-contained power supply may be acceptable in some cases in lieu of a telemetry system. Since the Village has a telemetry system that calls the operator, the alarm light may either be removed or left in place and disconnected. See the following link for full text of Section 370.440: <ftp://www.ilga.gov/JCAR/AdminCode/035/035003700D04400R.html>
- Take a look at the site grading and determine the feasibility to bring in more topsoil and grade up around the wet well and valve vault structures. This will be challenging along the street side of the structures, but we could use landscape boulders in this area. We would need to grade to allow drainage off the pavement. Develop a concept plan for this that we can review and then provide to Jim (Merryman) to get a cost for this work.
 - Merryman has quoted this work at a Total cost of **\$1,932.00** (11/17)
- Determine what and why that small engine (blower) has been on site.
 - Crystal Lake, Merryman, and Lakewood all do not know whose equipment this was. Jason MacNally (Crystal Lake) thinks it could have been there's, they have been doing Sewer cleaning along Broadway the last few weeks.
- Do some research into concrete staining and determine whether we can stain the wet well and valve vault green.
 - Merryman has quoted this work at a Total cost of **\$1,265.00** (11/17)
- Reach out to Merryman for a cost to Sandblast and repaint the control panel.
 - Merryman has quoted this work at a Total cost of **\$5,750.00** (11/17)

Action Items Status following Lakewood Resident Meeting

Less immediate items:

- Get a cost from Jim to provide curb (probably 6" barrier curb, no gutter) around the nose of the median. I am assuming the curb will extend east to just beyond the current control panel. You will have to look at grades in the area so we don't cause drainage problems in the roadway. We will probably have to depress the curb in locations to allow pavement drainage into the median and to provide a pull off for public works vehicles to the grass paver area.
 - Merryman has quoted this work at a Total cost of **\$6,325.00** (11/17)

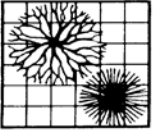
- Determine alternative control panel dimensions. This goes beyond the current cost we have for dropping the leg kit to 6 inches. This new request is to modify the dimensions of the panel itself, most likely with height being the primary dimension to reduce and how that would change the length (east to west) and the depth (north to south). We also need a cost, which I assume would include a new panel but with the existing panel internal components, labor, and temporary pumping while the panel is out of commission.
 - This plan has been submitted to Merryman for a cost proposal. (11/2)

- Determine the cost to relocate the current panel to the north side of Broadway on the round house property (assume at least 12 feet beyond the edge of pavement and generally in line east-west with the current panel location).
 - Merryman has quoted this work at a Total cost of **\$58,190.00** (11/17)

- The feasibility of relocating the control panel either across the street as noted above or a couple hundred feet further east within the median continues to come up as a question. Could you research the proximity codes and help educate me and Will? Could we exceed that limitation with disconnects on the wet well (like Channahon)? Although the disconnects are probably going to result in aesthetics complaints also.
 - Per Section 430.102 of the National Electrical Code (NEC), motor disconnects shall be located within sight of the motor. Currently, the motor disconnects at the control panel cover this requirement. However, moving the control panel either 100-200 feet further East or across the street would make the motors out of sight of the control panel for the following reasons:
 - Moving the control panel 100-200 feet further East:
 - A combination of the distance between wetwell and control panel, existing trees in the median, and grass growth would make it difficult to see the wetwell containing the motors from the control panel location.
 - Moving the control panel across the street:
 - In the event of an accident or traffic jam blocking the road, the wetwell would not be within line of sight of the control panel.
 - Depending on finished grade, a combination of the distance between wetwell and control panel and grass growth may make it difficult to see the wetwell containing the motors from the control panel location.

Action Items Status following Lakewood Resident Meeting

- In addition to the code requirements, disconnects would likely be necessary for either of these installations so that the existing conductors could be spliced to new conductors extending to the proposed control panel location.
- Depending on the distance from the proposed control panel to the wetwell, output reactors may be required downstream of the VFDs to mitigate harmonics. If it is decided to move the control panels, this would have to be discussed with the VFD and motor manufacturers.
- In the event that the Village decides to move the control panel, this move will have to be coordinated with both ComEd and AT&T so that the service locations can be moved. Depending on the availability of power in the proposed location this may be expensive.
- Determine with Matt (Strand) and ask the question through Jim to FlowTechnics whether the panel could be laid flat. We need to consider both code and operational feasibility issues related to this concept.
 - Flowtechnics stated that the control panel cannot be rotated “flat” or onto its back because the air conditioning unit on the side needs to be in a vertical position.
 - Section 110.26 of the NEC reads as follows, “Access and working space shall be provided and maintained about all electrical equipment to permit ready and safe operation and maintenance of such equipment”. Laying the control panel flat would not permit ready and safe operation and maintenance of such equipment for the following reasons:
 - Equipment in the center of the control panel (6’H x 9’-4”W x 1’-8”D) would not be easily or safely accessible. To operate and maintain this equipment, the operator would either need to reach up to 3’ into the control panel, or stand in the control panel. The back panel is not rated for a person to be standing on it, and it isn’t feasible for a person to reach 3’ into a control panel, the top of which would be 3’-2” above grade (the panel itself is 20” deep, and an 18” air gap is required).
 - In addition to the difficulty reaching equipment within the control panel, working within the control panel during inclement weather would present further safety concerns, as follows:
 - Snow and ice buildup on the panel could prevent the doors from being opened
 - Rain, hail, and snow would enter any panel door that is open during these weather conditions. Much of the equipment installed within the panel is not rated for contact with water, much less the subsequent submergence that would be possible after working on the panel for a prolonged time with the doors open.
 - After water has entered the panel, it will be difficult to remove and dry all components. Also, while the enclosure is stainless steel, the back panel is likely painted steel that may rust after being exposed to a significant amount of water.

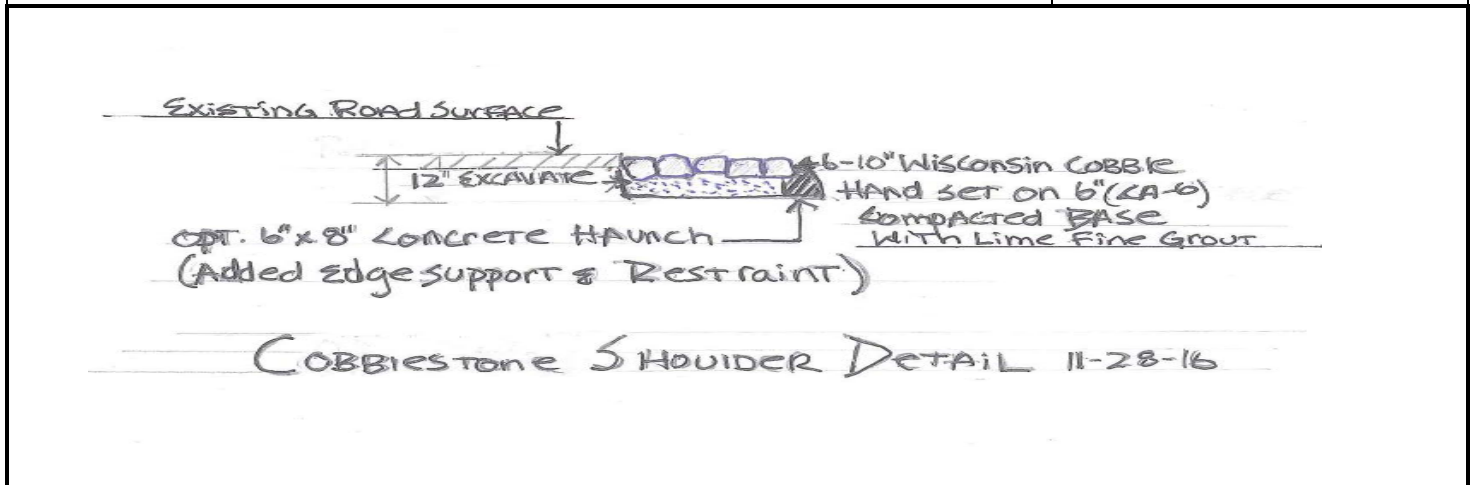


Monday, November 28, 2016
QUOTE GOOD FOR 30 DAYS

**VILLAGE OF LAKEWOOD/BROADWAY AVE
PROPOSED WISCONSIN GRANITE COBBLESTONE SHOULDER**

Code	Description	Size	Quantity	Unit	Unit Price	Total
	EXCAVATE SHOULDER TO 12" DEPTH					
	LOAD & HAUL SPOIL OFFSITE					
	F&P 6"CA-6 STONE BASE & COMPACT					
	HAND SET 6-8" WISCONSIN GRANITE COBBLESTONE					
	GROUT COBBLES WITH LIME FINES & POLYMERIC SAND					
			1,029.00	SF	\$ 36.00	\$ 37,044.00
	INCLUDES RESTORATION AS NECESSARY WITH PULVERIZED TOPSOIL, CLASS 1A SEED AND					
	EROSION CONTROL BLANKET.					
	OPTIONAL:					
	FURNISH AND INSTALL REINFORCED CONCRETE HAUNCH TO ACT AS ADDITIONAL EDGE RESTRAINT AND SUPPORT.		287.00	LF	\$ 34.50	\$ 9,901.50

SEE DETAIL BELOW



LOCAL DUMP LOCATION TO BE PROVIDED BY OWNER FOR EXCAVATED MATERIAL.



FLOW-TECHNICS, INC.

Proposal

Merryman Excavation
1501 Lamb Road
Woodstock, IL 60098
Jim Scharpf

December 1, 2016

RE: Lakewood Replacement Panel

We are pleased to offer for your consideration equipment as identified in **Section 16480 – Motor Controls**, as follows:

1 – Duplex Control Panel, submersible transducer series, PLC Pump Control Panel, UL 508 labeled, NEMA 4X Type 304SS Enclosure, for use with 240 Volt, 60 HZ, 1 phase, 2 wire service controlling 2 – 10 Hp , 27.4 FLA motors, VFD's sized accordingly. Enclosure size is **74" H x 72" W x 36" D with 6" SS floor stand kit.** Control to include at a minimum the following:

- AB Powerflex70 VFD's with HMI and 5% line reactors and current switch
- Main power/distrib block, 600V, 285A
- Surge Protector
- Power Surge block
- Circuit breakers
- Manual Transfer Switch
- Contactors, FVNR NEMA size 3
- Contact Blocks
- ISR Barrier
- Pilot Lights
- ETM's
- Alarm Bell
- Duplex Receptacles
- GFCI Class A
- Handy Box 2"x4"
- UPS
- 5000 BTU/ Hr Vertical extra slim A/C w/ DTC & Total Corrosive Pkg, TYPE 4X SS
- Verbatim VSS Auto Tele Dialer, 16 channel
- Generator receptacle, 200A

1 – Lot of startup services.

1 – Lot of freight to jobsite.

TOTAL PRICE: \$94,965.00

181 Ontario Street • Frankfort, IL 60423 • (815) 277-2600 • Fax (815) 534-5311
Indiana (574) 299-2600 • Indiana Fax (574) 656-4406
Website: www.flowtechnics.com • Email: info@flowtechnics.com

TERMS & CONDITIONS:

- Payment: Net 30 Days; no startup will be performed without 100% payment.
- Not dependent or contingent upon manner in which purchaser may receive payment from others.
 - Shipments in entirety, or partials thereof, due in net 30 days after date of shipment.
 - No retainage without written pre-accepted agreement.
- Prices: Valid for 30 days from date of this proposal.
- Taxes: Sales taxes are NOT included.
- F.O.B.: Factory – Freight allowed to jobsite.
- Notes:
- Offloading by others.
 - Installation IS NOT included.
- Cancellation: Shall be subject to applicable fees.
- Submittals: Approximately 2 to 4 weeks after receipt of acceptable purchase order.
- Delivery: Approximately 12 to 14 weeks after receipt of approved shop drawings and release to manufacturing.

If you should have any questions, please do not hesitate to contact me.

Respectfully submitted,
FLOW – TECHNICS, INC.

Michael E. Carney

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