



DIRECTOR OF ENGINEERING REPORT

March 22, 2023

District Engineering manages projects, consultants, contractors, and equipment suppliers. Consultant reports and Project Managers reports are included in this section along with details regarding the status of the associated study, design, or construction projects.

ACTIVE PROJECTS

20-07 Digester Complex Improvements:

SCOPE: The Digester #3 floating cover and the face brick on all four digester tanks is being replaced.						
Contractor: Christy-Foltz			R.E. Inspector: SDD/W Gray - Donohue			
Engineer: Donohue and Associates						
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Contract Completion
11/17/20	12/01/20	12/22/20	02/17/21	03/18/21	03/18/21	9/22/2022 Substantial 10/22/22 Final
Submittals Reviewed: 9 complete /0 open.						
Requests for Information (RFIs): 7 complete /0 open						
Owner Requests for Proposal/Change Order (RFPCO): 11 complete / 3 open						

Key Activities: Installation of the lid was completed this last period with the lid manufacturer arriving on site 03/14-03/16 to certify the installation. Punchlist of items needing completed is being developed. To test the cover, the digester tank was filled with water and then compressed air was inserted under the cover to attain the pressure necessary to “float” the cover. Pressure Vacuum Relief valves were tested to be consistent with adjacent digesters, and the cover welds were sprayed with soapy water to look for air leaks. Any leaks found were noted for repair.

Issues: The ground water reliefs in the bottom of the digester did not seal to prevent water from leaching from the tank into the underdrain (rock/sand fill) under the digester. This super saturated the soils in/around the complex. After the water is drained the reliefs will be inspected before sludge is returned to the digester.

Pending Changes:

1. Replacing manway hatch on Digester #4 (Unit cost). \$ 28,776.00 -FINAL CO
2. Delamination of coatings on Digester #3 is being addressed as contractor completes the installation of the cover. Contractor was directed to perform the work on a T&M basis. \$ T&M
3. Time Extension Request (received 2/16/23) TBD

20-01 Lake Shore Drive PS Replacement:

SCOPE: The lift station is being reconfigured with submersible pumps.						
Contractor: Christy-Foltz			R.E. Inspector: SDD/ C. Larimore- CDI			
Engineer: Clark Dietz Engineers, Inc						
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Contract Completion Dates
12/02/20	01/05/21	02/03/21	03/24/21	04/07/21	04/07/21	4/2/22 Substantial 5/2/22 Final

Key Activities: None

Issues: Staff met with counsel this last month regarding liquidated damage assessment and supporting data around the assessment.



DIRECTOR OF ENGINEERING REPORT

March 22, 2023

Pending Changes:

- | | |
|---|--------------|
| 1. Additional fencing added because of requested grading modifications and fence corner relocations | \$ 9,028.00 |
| 2. Additional OT hours caused by West Plant discharges. | \$23,388.76. |
| 3. Set-offs due to liquidated damages | \$TDB |
| 4. Generator installation modifications (combination of new requirements issued by State Fire Marshall and Owner Requested modifications) | \$9,947.17 |
| 5. Modifications to sidewalk, installation of concrete pad and bollard installation by diesel fill port. | \$7,769.29 |
| 6. Tree Removal (Ameren requirement for installation of power feed) | \$3,712.50 |
| 7. Additional grating in generator room | \$2,734.60 |

20ENG15 Water Tower Painting Project:

SCOPE: Power Wash, Surface preparation and overcoat of plant water tower. Included is a power wash of t wet interior for inspection, installation of the SDD logo on the tower and power wash of the gas sphere in front of the digester complex.						
Contractor: Neumann Company Contractors				Original Contract Price: \$197,200		
Engineer: Donohue and Associates						
R.E. Inspector: SDD						
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Contract Completion Dates
08/03/22	08/17/22	09/07/22	09/21/22	11/10/22	xx/xx/23	360 days-Substantial

Key Activities: Staff is waiting for a confirmation from the contractor on the expected mobilization date. We expect the contractor to begin work late May 2023. Staff has contacted Dixon Engineering to prepare a professional services agreement for water tower inspection activities associated with this project.

NON-CONSTRUCTION ACTIVITY

ADMINISTRATIVE OFFICE MASTER PLANNING:

Staff has now received and conducted interviews to the Request for Qualifications (RFQ) for the design a new 'Wastewater Reclamation Office Complex' (name to be determined later).

The 4 firms interviewed were (in alphabetic order):

Firm	Presentation Date / Time
Burns and McDonnell Engineering Co., Inc.	March 1, 2023 @ 1:00 PM
Crawford Murphy and Tilley Engineers	March 1, 2023 @ 2:30 PM
Dewberry Architects, Inc	March 2, 2023 @ 1:00 PM
HDR	March 2, 2023 @ 2:30 PM

The selection committee will be meeting on 03/21/22 to review notes from the interviews and prepare to make a recommendation to the trustees on which firm to proceed further into negotiations for a design professional services agreement.

21ENG04 Force Main Inspection

<<No Update>> Finley Creek FM (16") (5300 LF of ductile iron pipe) and the 8" Wyckles force main. Staff has received the final report from RJN and is currently reviewing the final draft.

UPCOMING PROJECTS:

22ENG44 – Grit Classifier and Conveyor Replacement

Bid specifications preparation continued this last period staff expects this to be advertised by the end of March. Staff received and reviewed the classifier submittal this last period it has been approved.

23ENG17 – Sewer Televising and Rating

As part of the ongoing Collection System asset management planning, staff annually engages a sewer rating company to provide condition assessments prior to any sewer cleaning work. This is part of the ongoing Capacity, Management, Operations, and Maintenance Plan (i.e. the CMOM plan). The CMOM is an NPDES requirement under Special Condition 18. Staff anticipates a professional services agreement to be presented for consideration at the April Trustee Meeting.

22ENG02&10 – Force Main Renewal (Lost Bridge and Country Club)

<<No Update>> The FM renewals in this project include replacement of cast iron segments of the Country Club interceptor and the Lost Bridge 10" interceptor that crosses underneath Lake Decatur. Scope of work has been agreed to with Clark Dietz Engineers (CDI) out of Champaign and a professional services agreement has been received. The anticipated overall cost of the project is higher than anticipated and the budget is being reviewed before proceeding.

22ENG08 – Roofing Replacement/Repairs Project

<<No Update>> Projected scope is **042 (Wood Shop) REPAIR; 017 (Oiler bldg) REPAIR; 044 (Ferrous Pump Room) Replacement; 200 (Emergency Bypass) Replace Shingle roof with metal; 043 Repairs; 059 Caulking Repairs; 077 PM touch up; 112 Vent Pipe left on roof that needs removed, apply protective coating on expansion joint; 113 Touch up repairs; 117 PM Repairs, loose wall flashing; 203 repairs, move to replace in 2024; 217 Misc repairs; 231 touch up repairs, 233 Repair in 2023; 334 Caulking repairs**

23ENG08 – Road Repairs

The district has an ongoing roadway maintenance program. Planning is complete for in plant maintenance and staff expects to have bids advertised the end of April.

21CMP04 - Frac Tank Pilot Project (Nutrient Removal)

The existing agreement with Black and Veatch includes costs associated with setting up pilot testing and analyzing the results. To move forward with the pilot, BV is recommending a pre-procurement of one positive displacement pump (\$38,272 + \$1,827 – Netzsch NEMO progressive cavity pump), one VFD for pump operation (\$12,062.91 - AB Powerflex 755), one compressed air mixing system (\$15,000 - Rental from EnviroMix), and frac tank rental (\$35,934.01 – Rental from Rain-for-Rent). The prices were obtained from quotes requested from Netzsch, Kirby Risk; both sole source suppliers, tank air mixing from 3 vendors with EnviroMix being the lowest cost alternative, and the



DIRECTOR OF ENGINEERING REPORT

March 22, 2023

frac tank – requests from 3 vendors with Rain-for-Rent being the only supplier willing to supply all the components requested in the quote.

Staff expects this project will be advertised by 3/24/23 with a recommended pre-bid meeting planned for 04/04/23.

Amendment #1 to Black and Veatch Agreement

The existing agreement with Black and Veatch (BV) for Nutrient Program Management includes costs associated with the first year of services for NARP utilizing Geosyntec as their partner in stream monitoring and watershed activities. The original agreement only included one year of engagement with Geosyntec for one year with how future years would be handled to be determined later. The existing arrangement with Geosyntec as a subcontractor to BV was determined to be the best for the District. Staff has negotiated an amendment to the agreement with BV to continue ongoing NARP services utilizing Geosyntec in lieu of contracting with Geosyntec directly. *The there is an amendment before the board for consideration for this scope of work.* The amount negotiated is \$227,200 for 2023 and \$68,600 for 2024 for a total amount of \$295,800.

INTERGOVERNMENTAL ACTIVITIES

The CITY has requested a written response on their plans to address basement backups caused by stormwater during rain events in Basin 5/6. This issue was addressed with the CITY at our standing quarterly meeting this last period. The response is being prepared.

If there are any questions, please contact me by telephone at 422-6931 ext 216, or by email at DonM@sddcleanwater.org.



PROJECT MANAGER REPORT

March 14th, 2023

District Engineering manages projects, consultants, contractors, and equipment suppliers. Consultant reports and Project Managers reports are included in this section along with details regarding the status of the associated study, design, or construction projects.

ACTIVE PROJECTS

21ADM50 Front Gate, Fence, and Road Repairs:

SCOPE: Replacement of the damaged front gate, plant fencing repairs, and localized cast in place concrete work in the plant are included in this project. There are two Divisions of work to be awarded separately: 1) General/Concrete; and 2) Fence and Gate						
Contractor: Christy-Foltz			Original Contract Price: \$632,047			
Engineer: SDD						
R.E. Inspector: SDD						
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Contract Completion Dates
08/11/22	08/30/22	10/04/22	10/26/22	11/16/22	11/15/22	Div 1 – 120 days Div 2 – 150 days

Key Activities: Traffic pattern switched. Demolition of exit lane in progress. Exit lane curbing and remainder of center section north of gate poured. Column work to plumb in progress. Entrance lane curbs, duct bank, and roadway poured. Front barrier 1 wall poured (28 day break pass), barrier 2 bollard, and barrier 3 wall pour completed (awaiting final break results). Sodium bisulfite tank pad pour and access piping complete. Dechlorination road patch complete.

22ENG45 Primary Clarifier #5 Replacement Project:

SCOPE: Removal and replacement of the existing primary clarifier. Work will include the procurement, installation and commissioning of a new circular primary clarifier and appurtenances. Painting of UV light exposed and submerged carbon steel components, and miscellaneous electrical adjustments to facilitate the removals and commissioning of the new process unit.						
Contractor: Plocher			R.E. Inspector: SDD			
Engineer: SDD						
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Contract Completion Dates
09/16/22	09/27/22	11/01/22	11/17/22	11/30/22	Mid June	330 days-Substantial 360 days - Final

Key Activities: Component delivery expected first full week in September 23'. Submittals continue to arrive and reviews are expected to complete by first part of March. Key dates are demolition starting 08/09/23, coating removal/reapplication start 08/23/23, clarifier install start 09/06/23, and cleanup/demobilization finish 10/12/23.

21ENG40 Replacement of Sludge Transfer Pump:

SCOPE: Remove and replace the existing Abel Sludge Transfer Pump (south) that has reached the end of its useful life.						
Contractor: Burdick Plumbing and Heating			Engineer: SDD			
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Contract Completion Dates
09/21/22	10/11/22	11/03/22	11/17/22	01/09/22	12/20/22	180 days-Substantial 210 days - Final



PROJECT MANAGER REPORT

March 14th, 2023

Key Activities: Initial product submittal review completed by owner. Pump released for production on 01/03/23 with expected completion date of manufacturing on 09/12/23. Installation expected to proceed delivery and require approximately 45 calendar days to complete. Change of dates for substantial and final completion will follow manufacturer's firm delivery date schedule.



Memorandum

Date: March 6, 2023
To: Donald B. Miller, P.E., Director of Engineering
From: Will Gray, P.E., Donohue & Associates

Re: **Project Status Report**
2020-07 Digester Improvements Project
Donohue Project No. 13782

Project Progress Items

- The contractual substantial completion date is Sept. 22, 2022. As of this letter's day, C-F is 165 days beyond substantial completion.
- Digester lid construction is complete. Ballasts have been installed within the lid, and all seal welding is complete.
- WesTech will be on site March 14-16 for digester startup and testing.
- Ovivo will be on site March 21 for mixer startup and testing.
- Roofing contractor scheduled for week of March 27, weather permitting.

Updated: 3-6-2023

	Open	Closed	Total
Submittals	0	10	10
RFI	1	9	10
Change Order Request	2	15	17
Change Orders	1	4	5

CHANGE ORDER LOG

- Change Order #1 has been executed, \$42,549.39.
- Change Order #2 has been executed, \$46,173.89.
- Change Order #3 has been executed, \$442,219.00. Add 193 days to contract.
- Change Order #4 has been executed, \$65,527.88.
- Change Order #5 has two items.