

# Director of Engineering Report

NOV 21, 2011

District staff manages projects, consultants, contractors and equipment suppliers. Consultant reports and Project Managers reports are included in this section and detail the status of the associated study, design, or construction projects.

## Active Projects

### **Oreana Collection System:**

- *Yard seeding completed this month; some final work around pump stations A & B remain – Will have final change order next month.*

### **Argenta Collection System:**

- Contractor is Dawn, Inc. – \$5,967,246.52
- *As of Oct 31, 344 days into a 453 day contract; 76% Elapsed time - Work is 84% complete*
- *Contractor requested retainage reduction to 5% for the second time this period; SDD rejected the request.*
- *SDD was contacted by Macon County concerned that a fill site contractor is using was in a flood plain. Upon investigation it was found the site had not been permitted to fill and if Army Corp of Engineers deems it is in a floodplain, there will need to be floodplain mitigation for the area filled. This is not a cost to SDD.*
- *Construction of PS in Argenta is ongoing; and weather permitting we expect the collection system installation to be completed by the end of the month.*

**2011 Stevens Creek South Interceptor Rehab:** This rehab project includes lining a total of 13,500 L.F of primarily 48" interceptor with 24 manholes requiring significant rehabilitation.

- *Contractor: Kenney Construction*
- *Work is complete; final quantities and contract days are being prepared for change order #1.*

**2011 Trestle Improvement Project:** This project includes Replacement of the North Stevens Creek trestles (reusing existing piers) and repair the New Main Interceptor trestle.

- *Contractor: ECI*
- *Notice to proceed issued Oct 14<sup>th</sup>, 2011 – Contract end date: July 20, 2012*
- *Contractor has not mobilized yet; submittals are being reviewed.*
- *Value Engineering Change Order #1 is before the board for consideration.*

**2011 Eastside Booster Pump Station Project:** This project includes relocating the electrical cabinets to a new location, eliminating confined space entry into the pump area of the station, and installation of hatches over the pumps.

- *Otto-Baum; Contract Award 8/17/11; Notice to Proceed was issued 9/26/11; Project Completion is 3/23/12 – 180 day contract.*
- *Contractor is pouring the concrete basement walls.*

**2011 LEVEE Improvement Project:** This project is considered maintenance by IEPA. The purpose of the project is to increase the elevation of the levee consistent with a 100 year Army Corps of Engineers certified levee.

- *Christy Foltz: Contract Award 7/14/11; Notice to Proceed 7/29/11; Completion Date 1/25/12*
- *There are no major construction issues to report.*

**2011 High Efficiency Blower Project:** District has received a \$400,000 grant from DCEO for this project. This project begins the districts movement to the higher efficiency, lower cost to operate blower scheme that current technology offers.

- o Blower Procurement Contract – Complete
- o 30% drawings have been submitted to IEPA for permit approval
  - SDD has a plan review meeting scheduled with Clark Dietz the designer again on Nov 21<sup>st</sup>; 9:00am.
- o Electrical switchgear and transformer procurement is being advertised currently.
  - We will open bids at 10:00am, Nov 28<sup>th</sup>.
  - These are long lead time items and are bid prior to the full blower installation contract to prevent issues with the May 15<sup>th</sup> grant date.

**2011 Nitrification Clarifier Painting Project:** As part of an ongoing Asset Management program for our clarifiers, the North Cluster of Nitrification Clarifiers is being painted this year.

- o Contractor: Odle Inc.: Contract Award 6/15/2011
- o Contractor has mobilized and has two crews sandblasting and painting the clarifiers.
- o Project is substantially complete; clarifiers can be brought on line at any time.
- o Final clean-up is underway
- o District is replacing the beach plates in clarifiers 2 and 4 before bringing them online.

**Primary Clarifier #1 & #2 Rehab:** This project includes the removal and replacement of the primary clarifiers #1 and #2 drive mechanisms; the replacement of the bridge; and replaces electrical conduit and controls.

- o Bids were opened Nov 11<sup>th</sup> 2011. District staff is reviewing the bids – apparant low bid is Joseph Henderson and Son out of Gurney, IL and is 16% lower than next lowest bid.

---

### **INTERGOVERNMENTAL ACTIVITIES**

**City of Decatur** - No activity outside project work this period.

### **Other Activities:**

**Secondary Clarifier #6:** This is the clarifier that the center column lifted and cracked the flooring and will require a significant portion of the floor slab to be replaced as the mechanism is rehabbed.

- o No work on this project during last period

**South Shores Drive Bridge Replacement:** Bridge is being raised 3 feet as it is being replaced. We have an interceptor at the current level of the bridge, subsequently to raise the bridge, we must raise the interceptor.

- o URS (engineering firm) and BGM are working with the CITY on final design.

---

### **PROPOSED BOARD ACTION**

For the Board's consideration from the Engineering Department this meeting:

1. **Argenta Collection System – Change Order #7**
2. **2011 Trestle Improvements – Change Order #1**

Further details can be found in the Summary of Motions.

If there are any questions, please contact me by telephone at 422-6931 ext 216, or by email at DonM@sdd.dst.il.us

**BAINBRIDGE**

November 8, 2011

**GEE** & Associates

**MILANSKI**

1670 South Taylorville Road, Decatur, Illinois 62521  
(217) 423-8600 FAX (217) 423-8677

---

## ENGINEERING STATUS REPORT

The following is a brief summary of the Projects involving Bainbridge, Gee, Milanski and Associates. Charles Hunsinger and Curt Cassidy will attend the meeting.

### **ARGENTA SANITARY SEWER CONSTRUCTION (08-076C)**

This project consists of the construction a sanitary sewer collection system for the entire Village of Argenta. The Contractor is Dawn Contractors, Inc. from Joliet, Illinois. Construction is expected to take until June 2012.

The contractor has five crews working. Three are working on the gravity sewer lines, one is installing service lines and one testing. They are preparing to pave the asphalt patches, pouring sidewalks and working on the pumping station. Unless the weather slows production, all the sewers and services should be done by Thanksgiving.

Payment Estimate No. 11 is before the Board for \$1,070,362.00. The project is 84% complete and 76% of the time has elapsed. Change Order 7 is before the Board for an increase of \$50,070.85. This change is for repairing 5 unknown utilities, moving one sewer service, adding one service by boring and removal of concrete excavated during the force main installation.

### **OREANA SANITARY SEWER CONSTRUCTION (07-073C)**

This is the construction phase of the Oreana sewer system.

The contractors are working on the punch list. The District, BGM and Contractors walked the job on October 12. Seeding of the yards is complete. Rain stopped some grading, but most of the punch list is done.

### **TRESTLE IMPROVEMENTS CONSTRUCTION (09-063)**

The project consists of replacing 4 concrete trestles on the North Stevens Creek Interceptor and repair to the 60" Main Interceptor trestle. It is intended for this project to be funded with an IEPA low interest loan.

The Contractor has been given a notice to proceed. Shop drawings are being reviewed. The Contractor is pushing to start work as soon as possible.

### **STEVENS CREEK SOUTH SEWER REHABILITATION CONSTRUCTION (09-093)**

This project consists of lining and joint repair of the 48" diameter Stevens Creek South Interceptor and two 60" interceptors between the old and new head works.

All work is complete. The Contractor must submit backup information for several field orders so they can be incorporated into a change order. We hope to close the project in December. Payment Estimate 3 is before the Board for \$427,648.17.

### **2011 LEVEE IMPROVEMENTS CONSTRUCTION (09-043)**

This project consists of raising the levees around the treatment plant. The levee along the river and Stevens Creek will be raised with a concrete wall.

Christy Foltz continues to work on the concrete wall. No problems to note. Payment Estimate 2 is before the Board for \$127,000.85. The project is 16% complete and 48% of the time has elapsed.

**Sanitary District Of Decatur**  
501 Dipper Lane \* Decatur, Illinois 62522 \* 217/ 422-6931

**MONTHLY ACTIVITY SUMMARY**

**Main Plant Facility Maintenance Division**

To: Don Miller  
Fr: Fred McKinney / Craig Jones

**Date: November 03, 2011**

**Work Orders:**

For the month of October, these are the totals of work orders completed.

WORK ORDER SUMMARY	Apr. 11	May 11	June 11	July 11	Aug 11	Sept 11	Oct 11	Nov 11	Dec 11
Total # Work-Orders Completed	729	659	903	628	679	958	807		
Total # PM Work Orders Completed	654	611	827	567	616	883	729		
COMPLETED BY TYPE									
Corrective	75	48	76	61	63	75	78		
Weekly PM's	504	546	698	540	531	721	586		
6 Month PM's	119	34	125	22	54	128	96		
Yearly PM's	31	31	4	5	31	34	47		

**Digester Complex:** Three new 4" gas lines from the header to heat exchangers have been installed. Patching of a 6" gas line and replacement of a 10" gas valve was completed by Burdick. Plant maintenance installed eight new gas valves at the same time.

**Nitrification Return Pump**

New check Valve and valve has been purchased. Installation will be in the near future.

**Secondary Clarifier #6:**

The bottom of Clarifier has been removed and contractors will be completely renovating as soon as contract is awarded.

**Effluent Building 325:**

Ceiling, plant water lines and strainers are being painted at this time.

**Nitrification Clarifiers:**

Bigger pumps have been installed in anticipation of painting tanks this year. Tanks #2, #3 & #4 are being cleaned for painting contractor; seals have also been removed and new will be installed when painting is completed. Tank #3 is completed and back on line. Two new beach plates have been ordered. They will be installed & painted in house.

CC. Monte Cherry  
Kent Newton

SANITARY DISTRICT OF DECATUR  
501 Dipper Lane Decatur, Illinois  
(217) 422-6931 Fax (217) 423-8171

MONTHLY REPORT  
October 2011

TO: Don Miller, Director of Engineering

FROM: Randy McEldowney, Outside Facilities Manager

- **CSO Events**

- We had 1 event due to excessive rainfall. We received over .6" of rainfall for the month.

- **St. Louis Bridge #1 Pump**

- Pulled pump & took to DIE for repair. Repair cost is \$14,454.18; new pump cost is \$27,363. Told DIE to repair pump.

- **Wyckles Pit Hog**

- The hydraulic valve assembly went bad. We have ordered another assembly, the pit hog is down until we receive the new one.

- **Lost Bridge #3 Pump**

- Pulled pump because of mechanical seal leak. Rebuilding pump & replacing seal. Pump has been rebuilt and is back in and running.

- **Larkdale Pump Station**

- Check valve flapper came loose. Pulled & fabricating bracket for arm. Fabricated bracket & pump is back running

- **East Side Separation Sewer**

- The city of Decatur found a sink hole at the intersection of Maffit & Whitmer. I called Tele-Scan to televise the section of pipe from Damon force mains gravity pipe to the East Side Separation sewer. There were two holes in the crown of the pipe where the Damon force main discharges. Barr & Robison repaired one of the holes and Tele-Scan installed a point repair patch in the other hole. The cost for repair was \$25,196.

CHANGE ORDER

Order No. 7

Date: November 21, 2011

Agreement Date: October 20, 2010

NAME OF PROJECT: ARGENTA SANITARY SEWER SYSTEM L17-2971

OWNER: SANITARY DISTRICT OF DECATUR

CONTRACTOR: DAWN COMPANITES, INC.

CHANGES:

The following changes are hereby made to the CONTRACT DOCUMENTS:

1. Replace an unknown 8 inch clay tile with 8 inch PVC SDR 26 from approximately Manhole 9, westward 240 ft. Said field tile runs parallel and is located 5 ft. south of the new 12 inch sanitary sewer as described in Field Order No. 19.  
Total: \$14,542.53
2. Replace an unknown 12 inch clay field tile with 12 inch PE Duo-Wall. The location of the replacement is from 158 ft. south to 313 ft. south of Manhole 13.2. The said field tile runs parallel and crosses the alignment of the new 8 inch sanitary sewer as described in Field Order 20.  
Total: \$9,728.03
3. Replace an unknown 12 inch concrete sewer with 12 inch PE Duo-Wall from approximately Manhole 13.2 east 110 ft. to the inlet. Said sewer ran parallel and 1-2 ft. off the alignment of the new sanitary sewer as described in Field Order 21.  
Total: \$3,040.03
4. Replace a 15 inch concrete storm sewer with 15 inch PE Duo-Wall from 230 ft. west to 10 ft. east of Manhole 13.2.1. The plans indicated the storm sewer was approximately 7 ft. north of the new sewer. Said sewer changed alignment and crossed the alignment of the new 8 inch sanitary sewer as described in Field Order 22.  
Total: \$14,090.04
5. Repair and connect an unknown 4 inch field tile to a 12 inch field tile. The unknown tile ran parallel to the new sanitary sewer service line at 207 East Walnut Street. The contractor was also instructed to repair two unknown 4 inch field tiles and connect them to an 8 inch field tile. The unknown field tiles ran parallel to the new sanitary sewer service line at 211 East Water Street. These repairs were made as described in Field Order 24.  
Total: \$1,870.00
6. Remove and dispose of concrete excavated from the force main installation as directed by Field Order 17. This work was done on a time and materials basis as described in Field

Order 25.

Total: \$601.46

7. Install a 2 inch PE service line from the southwest corner of building at 100 N. North Street to Manhole 13.5.1. This work will be completed as described in Field Order 27.

Total: \$3,033.00

8. Cap a 4 inch service wye previously installed at 160 E. Water Street. The service location was moved to the west side of the lot to allow joint installation of service to 180 E. Water Street, as there was no reasonable location for the service without installing it on adjacent property. The work was completed as described in Field Order 28.

Total: \$3,165.76

Total Changes: \$50,070.85

JUSTIFICATION:

1. An unknown 8 inch clay tile, and connected laterals were in direct conflict with the new sewer alignment. The clay tile along with laterals were replaced and reconnected as they were encountered.
2. An unknown 12 inch clay field tile ran parallel to and became in direct conflict with the new 8 inch sanitary sewer. The field tile needed to be replaced as the integrity of the pipe became compromised during excavation.
3. An unknown 12 inch concrete storm sewer was encountered while excavating for the new sanitary sewer. The alignment of the storm sewer was in direct conflict with the trench excavation. The storm sewer was realigned and connected to the inlet with 12 inch PE pipe.
4. The 15 inch concrete storm sewer was shown on the plans, however the location of the storm sewer was in direct conflict with the new 8 inch sanitary sewer instead of 7 ft. to the north as indicated in the plans.
5. An unknown 4 inch field tile was encountered while excavating the trench for the service line at 207 East Walnut Street. The 4 inch field tile was connected to an identified 12 inch field tile to allow for unrestricted drainage. Two unknown 4 inch field tiles were encountered while excavating the trench for the service line at 211 East Water Street. The two field tiles were connected to an identified 8 inch field tile to allow for unrestricted drainage.
6. Concrete was hauled off and disposed of that had been encountered while excavating for the force main as outlined in Field Order 17. This concrete was part of old foundations of grain silos along the railroad.
7. A 2 inch PE service line was installed to the building located at 100 North North Street. The building was not shown to have a service line installed on the plans.

8. A 4 inch service wye was installed for the service to 160 East Water Street; however the service location was obstructed by existing utilities to the properties. The only reasonable location to serve the property was through the adjacent property. The service location was moved to the west side of the lot to allow a joint installation with the service at 180 East Water Street. The Argenta Sanitary District approved the connection.

**CHANGE TO CONTRACT PRICE:**

Original CONTRACT PRICE: \$ 5,967,246.00

Current CONTRACT PRICE adjusted by previous CHANGE ORDERS: \$ 6,040,571.37

The CONTRACT PRICE due to this CHANGE ORDER will increase by: \$ 50,070.85

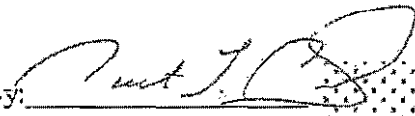
The new CONTRACT PRICE including this CHANGE ORDER will be: \$ 6,090,642.22

**CHANGE TO CONTRACT TIME:**

The CONTRACT TIME will be increased by 0 calendar days.

**APPROVALS REQUIRED:**

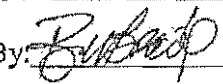
Recommended by: Bainbridge, Geo. Milanski & Assoc.

By: 

Approved by Owner: Sanitary District of Decatur

By: \_\_\_\_\_

Approved by Contractor: Dawn Company, Inc.

By: 



**CHANGE ORDER**

Order No. 1

Date: August 17, 2011

Agreement Date: November 21, 2011

NAME OF PROJECT: 2011 TRESTLE IMPROVEMENTS L17-2825

OWNER: SANITARY DISTRICT OF DECATUR

CONTRACTOR: ENGINEERING & CONSTRUCTION INNOVATIONS, INC.

**CHANGES:**

The following changes are hereby made to the CONTRACT DOCUMENTS:

The Contractor is allowed to substitute a temporary gravity by-pass system for the pumped by-pass specified in Section 1 of the Technical Specifications for construction of Trestles 1 through 4. All provisions of Section 1 and Addendum 2 shall remain in the Contract, except for the requirements pertaining specifically to the use of pumps for the by-pass flow. The site-specific spill response plan shall still be required.

Change Bid Items 3, 17, 31, and 45 from "By-Pass Pumping" to "Gravity By-Pass."

From Item 3 deduct	\$10,323.90
From Item 17 deduct	\$8,921.90
From Item 31 deduct	\$8,284.61
From Item 45 deduct	<u>\$8,284.61</u>
<b>TOTAL CHANGE</b>	<b>(\$35,815.02)</b>

**JUSTIFICATION:**

The Contractor approached the Owner with a tentative plan to value engineer the project after the conditional award was made to ECL. The Owner agreed to follow Article 104.07 the Illinois Department of Transportation Standard Specifications for Road and Bridge Construction, January 1, 2007 which give guidelines for value engineering a project. Those guide lines include a sharing of savings between the Owner and Contractor. The Contractor submitted a preliminary plan. The Owner accepted the plan and asked the Contractor to prepare a detailed proposal.

Engineering & Construction Innovations' Value Engineering proposal for using a gravity flow by-pass rather than by-pass pumping dated October 18, 2011 is hereby accepted. The total cumulative value of \$78,753.00 is greater than 2% of the awarded contract value. Article 104.07 (d) (2) b of the IDOT Standard Specification state for this project and for a value up to 2%, payment shall be made to the Contractor for 50% of the savings. For that portion of the savings over 2% of the awarded contract value, payment shall be made to the Contractor for 65% of the savings.

(Awarded Contract Amount) \$2,750,490.00 x 2% = \$55,009.80

\$55,009.80 x 50% = \$27,504.90

Greater than 2% = \$78,753.00 - \$55,009.80 = \$23,743.20

\$23,743.20 x 65% = \$15,433.08

Total Payment to Contractor = \$42,937.98

Reduction in Contract = \$78,753.00 - \$42,937.98 = \$35,815.02

Bid items 3, 17, 31 & 45 will be proportionally reduced by \$35,815.02.