

Iron Mountain/Kingsford Joint Sewage Authority

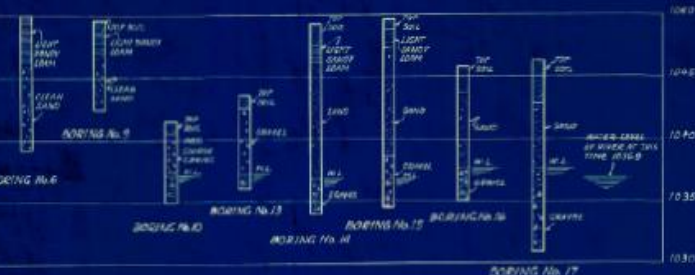
Wastewater Treatment Facility
Equipment Repair and Replacement Project

August, 2016 through October, 2020

Treatment Facility History

- Pre-1958: Sewer Creek to Menominee River
- Early 1950's: State of Michigan vs. Iron Mountain and Kingsford. Joint Sewage Board Formed.
- 1958: Construction of Primary Treatment Facility





LOG OF BORINGS
(SEE SHEET #1 FOR LOGS OF BORINGS #1 TO #5)
(FOR BORING #6, 7, 8, 11 AND 12)



REV. NOV. - 1968

SEWAGE TREATMENT PLANT
SITE PLAN
& DETAILS
IRON MOUNTAIN, MICH.
& KINGSFORD, MICH.

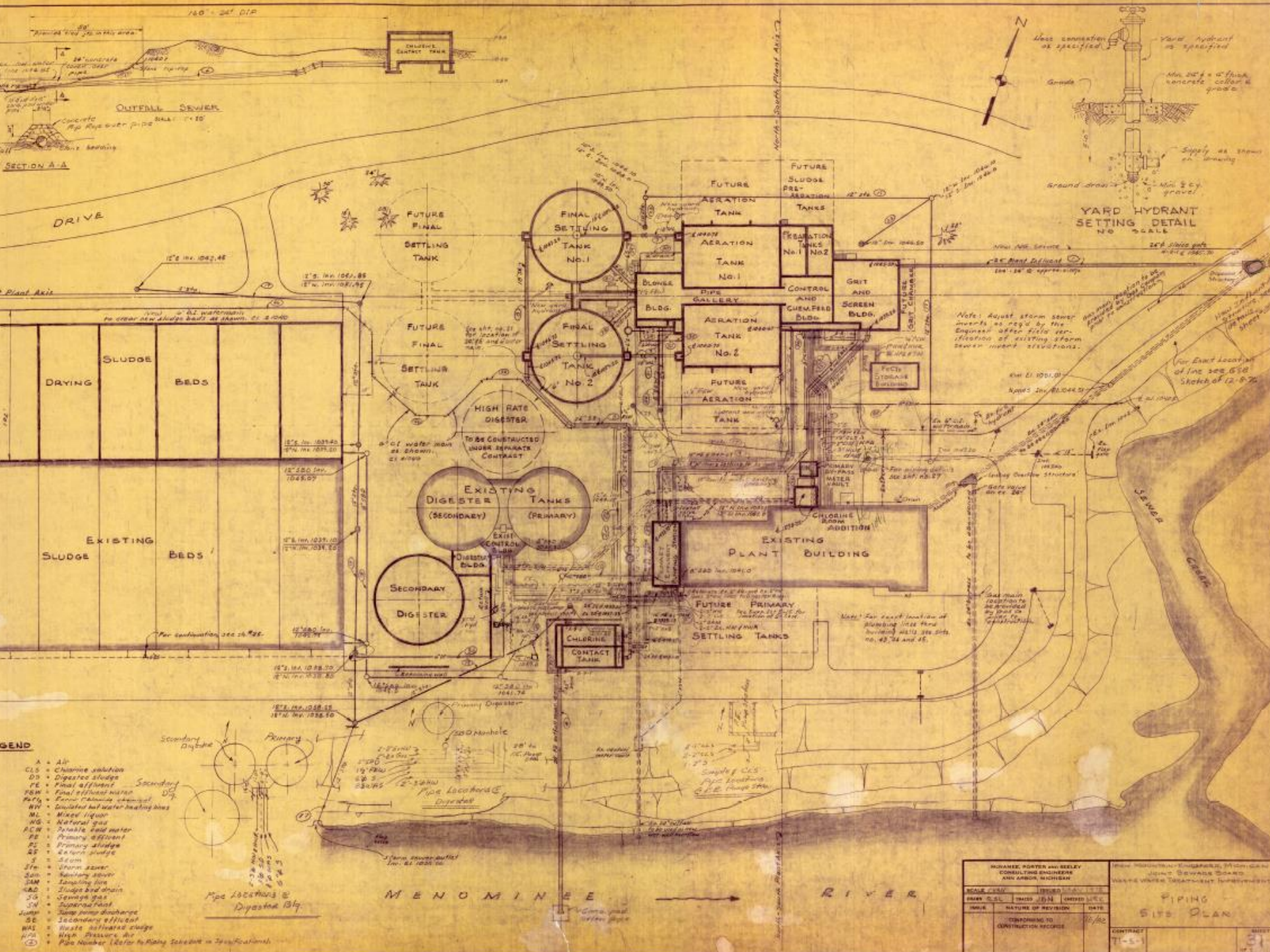
ALVORD, BURDICK & HOWES
ENGINEERS
CHICAGO

1956

Treatment Facility History

- 1972: Clean Water Act (USEPA Formed)
- 1975 – 1978: Secondary Treatment Facility Construction





LEGEND

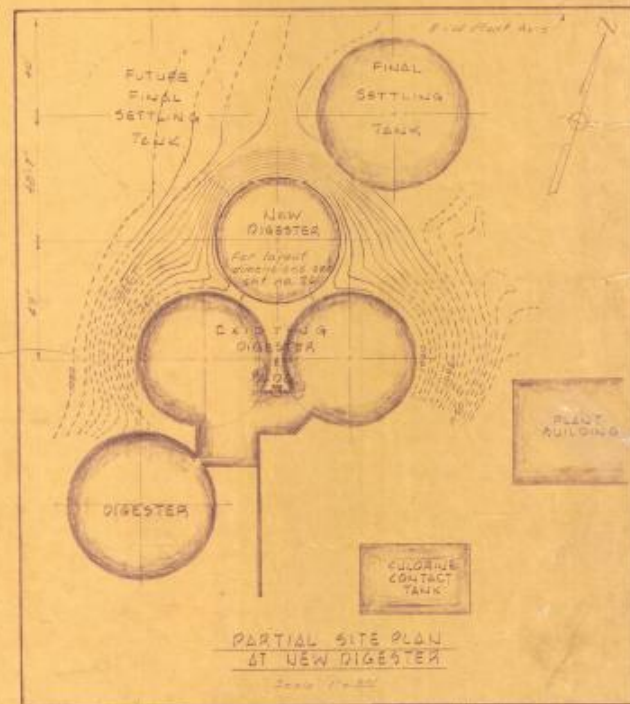
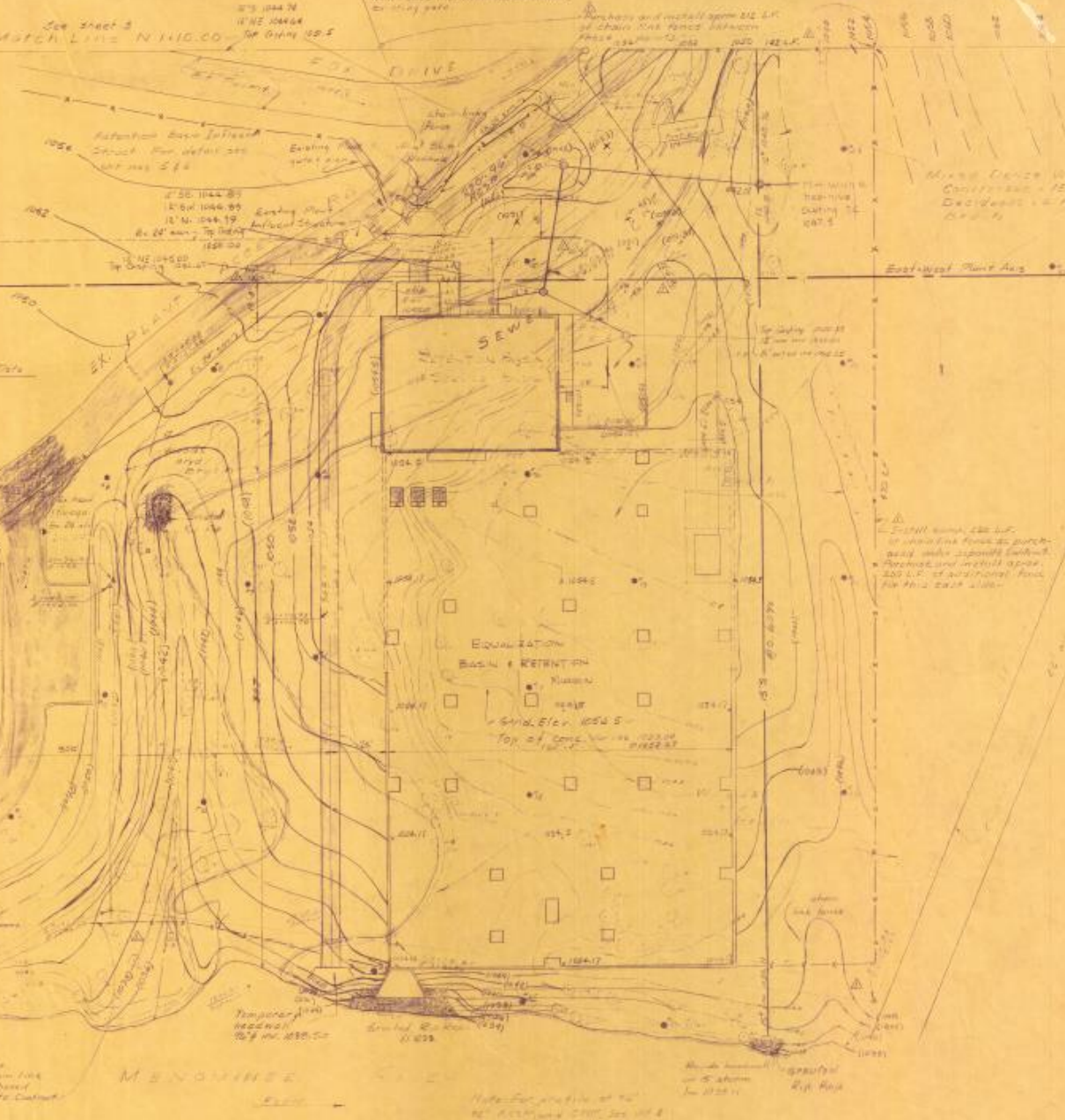
- A - Air
- CLS - Chlorine solution
- DS - Digester sludge
- FE - Final effluent
- FEM - Final effluent water
- FCC - Ferric chloride chemical
- HWT - Insulated hot water heating lines
- ML - Mixed liquor
- NG - Natural gas
- PCW - Potable cold water
- PE - Primary effluent
- PS - Primary sludge
- RS - Return sludge
- S - Sludge
- SZ - Sludge zone
- SS - Sanitary sewer
- SL - Standing line
- SD - Sludge and drain
- SG - Sewage gas
- SN - Supernatant
- PPD - Pump pump discharge
- SE - Secondary effluent
- WAS - Waste activated sludge
- HPS - High pressure air
- PN - Pipe Number (Refer to Piping Schedule in Specifications)

HUDAK, PORTER AND KELLEY CONSULTING ENGINEERS AND ARCHITECTS				NEW INDUSTRIAL ENGINEERS, P.C. JOINT BOARD OF WASTE WATER TREATMENT PLANT			
DATE	1960	DATE	1960	DATE	1960	DATE	1960
NO.	1	NO.	1	NO.	1	NO.	1
DRAWING TO CONSTRUCTION RECORD				DATE 11/60			
PIPING SITE PLAN				SHEET 1-1			

Treatment Facility History

- 1978 – 1979:
 - Combined Sewer Overflow Basin
 - New Primary Digester

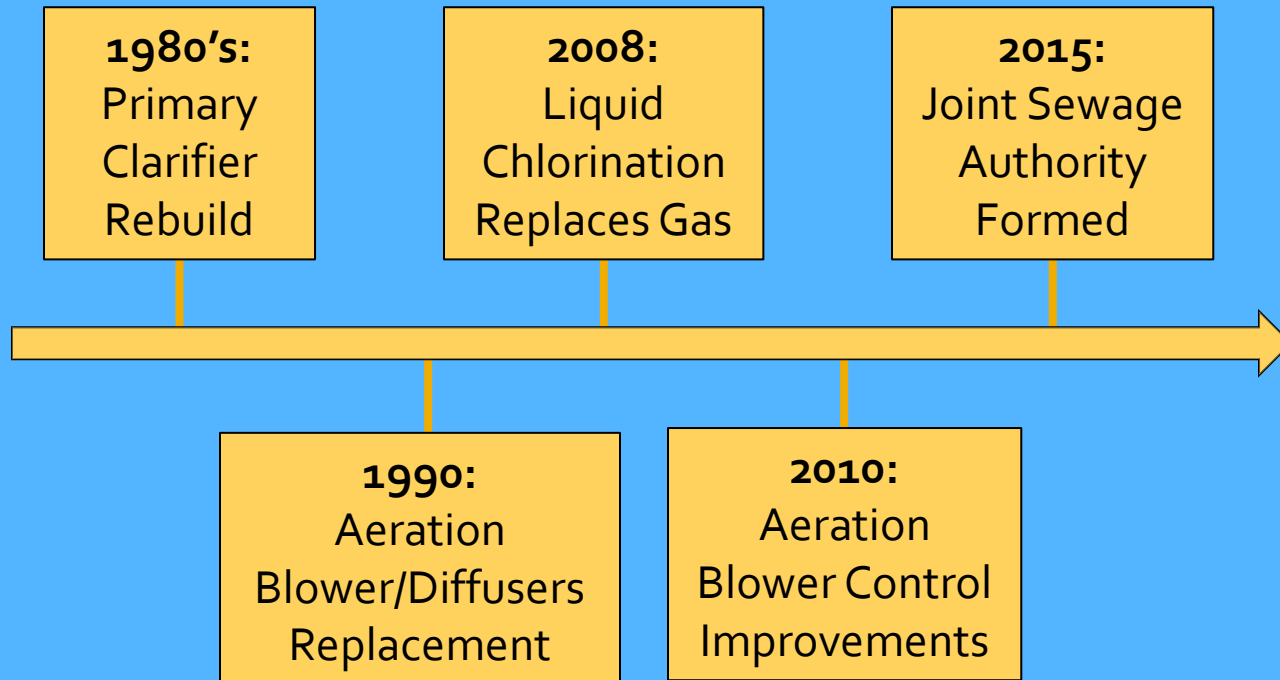
See sheet 3
MATCH LINE N 1410 CO - Sp. 6149 100 ft



PARTIAL SITE PLAN
AT NEW RIGSTER

HANCOCK, KYLE AND BELL CONSULTING ENGINEERS 405 WEST 10TH ST MINNEAPOLIS, MINN 55402		JOHN HANCOCK - ENGINEER JOINT STABLE POND INTERIOR DAM AND GABION IS.	
SCALE: 1" = 20' HORIZONTAL 1" = 10' VERTICAL	DATE: 1-2-78 DRAWN BY: J. HANCOCK CHECKED BY: J. HANCOCK	PARTIAL SITE PLAN SOUTH HALF	
TITLE: JOINT STABLE POND JOINT STABLE POND INTERIOR DAM AND GABION IS.		CONTRACT NO. 718-2	

Treatment Facility History



Improvements: Past 20 Years

In House

CSO Basin Bar Screens – partial rebuild
CSO Basin Grit Collector – partial rebuild
CSO Basin Grit Auger – rebuild
#1 Dewatering Pump – new
#3 Dewatering Pump – new
CSO Basin Stairway – safer access – new
CSO Basin Gate Valve – easier cleaning – new
Main Plant Bar Screen – rebuild (twice)
Secondary Building Sump Pump – new
RAS/WAS Flow Meters – new
(3) RAS Pumps with VFD's – new
Aeration Tank Dissolved Oxygen Meters – new
#1 #2 Final Clarifier Gear Box – partial new
#2 Digester Sealing Tubes – new
Two Digester Gas Lifters – new
Digester Building Sump Pump – new
Digester Gas System Water Traps – new
3 Primary Effluent Pumps – new
Primary Clarifier/Cross collector Drives – new
Laboratory Renovation/Lab Equipment
Pick Up – new
John Deere Lawn Mower – new
Disinfection Upgrade from Gas to Liquid Bleach – new
Sodium Bisulfite Feed System - new

Contracted

Dry Weather Flow Meter - new
Dry Weather Control Valve Actuator –new
CSO Basin Chlorine Pipe Relocated
Duct Work for Exhaust Fan - new
CSO Basin Building Boilers - new
CSO Basin Building Air Handlers - new
Grit Room Air Handlers - new
Secondary Building Boilers - new
Aeration Blower VFD's - new
Final Clarifier Sandblast and Paint
Main Plant Boilers – new (dual fuel)
Main Plant SCADA System - new
Plant Building Roofs- new
Miscellaneous Windows - new
Air Handlers/Heating System Primary Tanks
Asbestos Removal – plant wide
Parking Lot

**Previous repairs and
replacements were
funded without debt!**

Reasons for Project

- Equipment Beyond Life Expectancy
- Increased O&M Costs
- Emergency Repairs are Expensive
- Reliability
- Risk of Treatment Failure
- NPDES Permit Compliance

Modest Needs

- Electrical Service Switch Gear/Transformer (1978)
- CSO Basin Bar Screens and Handling (1979)
- CSO Basin Grit Collection and Handling (1979)
- Main Plant Screen and Handling (1978)
- Main Plant Grit Collection and Handling (1978)
- Primary Clarifier Rebuild (1958/1980's)
- Aeration Blowers and Diffusers (1978/1990)
- Final Clarifier Domes (1978)
- Ferrous Chloride Building (1978)
- Primary Digester Mixing and Heating Systems (1958/1978)
- Secondary Digester Covers and Mixing System (1958/1978)
- Roofing (2000+/-)
- Exterior Doors (1958/1978/1979)

Electric Switch Gear/Transformer



CSO Basin Bar Screen



CSO Basin Grit Collector



Main Plant Bar Screen



Main Plant Grit Collector



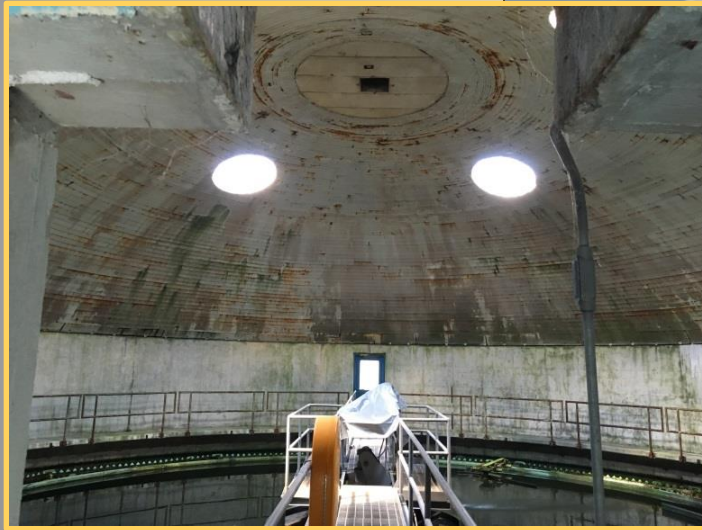
Primary Clarifier



Aeration Blowers



Final Clarifier Domes



Ferrous Chloride Building



Primary Digesters

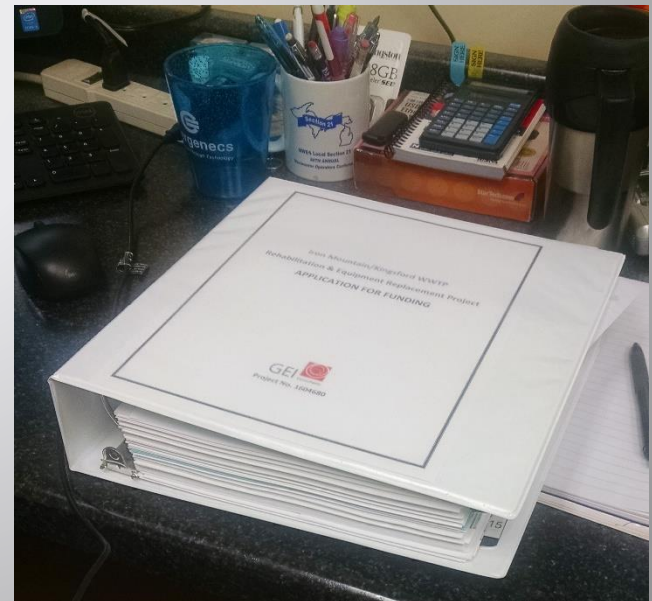


Secondary Digesters



Events Following Presentation to Councils on August 26, 2016

- September, 2016: Support of City Councils
- October, 2016: Authority proceeds with USDA funding application.



Events Following Presentation to Councils

- December 23, 2016: Funding Application Submitted to USDA
- February, 2017: USDA Letter of Obligation: Project Approved
- Loan terms:
 - Interest rate 2%
 - 40 years term



Items to Complete before closing the loan

■ April, 2017: Letter of Conditions and Checklist

MI Guide 5

*A - Authority
E - Engineer
Atty - Attorney*

WEP DOCKET CHECKLIST

Applicant: FMKISA Area Office: Gladstone
Contact: Mary Rosand Contact: Grude

	DOCUMENT OR ACTION	POS	FORM NO.	PROVIDED BY:	Date Received
1	Certify to the Number of Users	5-2	MI Guide 4, Attach 3	Applicant	
2	Commitment to Enforce Mandatory Hook-up Ordinance (sewer only)	5-2	MI Guide 4, Attach 3	Applicant	
3	Certify to Zoning	5-2	MI Guide 4, Attach 3	Applicant	
4	Water Users Agreement (Revenue Issues)	5-3	RUS Bulletin 1780-9	Attorney	
5	Preliminary Title Opinion or Title Insurance Commitment	5-3	MI 1927-9 (see Guide 4, Attach 1)	Attorney	
6	Copies of Deeds	5-3		Attorney	
7	Right-of-Way Easement (copy of a typical one)	5-3	Reference RD442-20	Attorney	
8	Color-coded Right-of-Way Map	5-3	N/O Guide 24	Applicant	
9	Right-of-Way Certificate	5-3	442-21	Applicant	
10	Opinion of Counsel Relative to the Rights-of-Way	5-3	442-22	Attorney	
11	Audit Engagement Letter (RUS S.I. 1780-4)	5-5	SI 1780-4 RUS Bulletin 1780-30	Applicant Auditor	
12	Copy of Commitment of other funds or cash	5-6		Applicant	
13	Copy of Water Purchase or Sewage Treatment Contract (must be reviewed/approved by RD & OGC)	5-7	Reference 442-30	Applicant Auditor	
14	Third-Party Management or Operating Agreements (Approved by RD)	5-7	RUS Bulletin 1780-8	Applicant	
15	Budget and Income Analysis	3-4	442-7 optional	Applicant	
16	Copy of Rate Resolution/Ordinance	3-4		Applicant	
17	User Verification	5-2		A/O	
18	Adequate Accounting System Verification	5-5	Memo	A/O	
19	Affirmative steps must be taken to utilize & procure services from small, minority & women's businesses		Letter of Conditions	Applicant	
20	Submit Plans & Specifications to RD	6-3	MI Guide 3	Applicant	
21	Bond Counsel Application filed with Treasury (or qualified status)			Applicant	
22	Plans and Specs reviewed by RD Engineer	6-2	Guide 6	RD Engineer	
23	Docket to S/O requesting closing instr from OGC	5-1		A/O & S/O	
24	Permit to Construct from MDEQ	6-5		Consulting Engineer	
25	Permit to Construct from Railroad	6-5		Consulting Engineer	
26	Permit to Construct from County or State Highway Dept.	6-5		Consulting Engineer	
27	NPDES-Discharge permit or Application for Permit	6-5		Consulting Engineer	
28	Authorization to bid issued by RD A/O The above	6-4		Consulting Engineer	
29	Affidavit of Publication of Bid Advertisement	6-4		Consulting Engineer	
30	Bid Tabulation - Complete set with Consulting Engineers recommendation for award	6-4		Consulting Engineer	
31	Copy of minutes Authorizing acceptance of bids and awarding of contracts	6-4		Applicant	
32	State RD Engineer concurrence in award	6-4		RD Engineer	
33	Revision Date 12/13/2011				
34	Engineering Agreement	6-1		Engineer	April 3, 2017
35	Legal Service Agreement	5-3		Attorney	

MI Guide 5

33	Loan Resolution (public body)	5-4	RUS Bulletin 1780-27	Applicant	
34	Water and Waste System Grant Agreement	2-3	RUS Bulletin 1780-32	A/O	
35	Insurance certificate on fire & extended coverage PL, PD, vehicular coverage, workers compensation	7-2		Applicant	
36	Flood Insurance (if applicable)	7-2		Applicant	
37	Fidelity Bond (Bond must remain in effect for the length of the loan)	7-1	440-24 (optional)	Applicant	
38	Final Determination of RUS loan/grant funds and deobligate if necessary	2-2	1940-10	A/O	
39	Environmental Mitigation Items	3-4	Letter of Conditions	Applicant	
40	Loan Closing Processing (S/O, PIC, Bond Counsel, Applicant)	6-4		A/O	Closing Date:
41	Process Electronic Funds Transfer (EFT)	2-2		A/O	
42	Resume of Project Inspector (Approved by RD)	6-4		Consulting Engineer	
43	Approval of Construction Contracts by RD Engineer		EJCDC-MI Guide 6A	RD Engineer	
44	Preconstruction Conference	1-4	1924-16 Construction File	Engineer	
45	Check CAIVRS system & document results	3-2	1940-M, Exhibit A	A/O	
46	Final Title Opinion or Insurance Policy	5-3	1927-10	Attorney	
47	Compliance Review	5-2	400-8	A/O	
48	Emergency Response Plan		Certification Letter	Applicant	
49	Vulnerability Assessment		Certification Letter	Applicant	
50	Check Debarment List	3-2	1940-M, Exhibit A	A/O	
51	Review of Bond Documents and Ordinance (certify there is not defeasance on loan)	3-1		A/O	
52	Statement of Deposits or Withdrawals	2-1	402-2 Construction File	A/O	
53	Send Position 5 of General File; Copy of Bond with Final Approving Opinion & Grant Agreement to S/O for Final Closing Opinion	5-1	Memo	A/O	
54	Final Approving Opinion from Bond Counsel			Bond Counsel	
55	Forward loan closing documents to Finance Office	5-1	Memo	A/O	
56	Final approving opinion from Bond Counsel	5-1 & BTF		RDM	
57	Authorization Agreement for Preauthorized Payments	Svc file	SF 5510	RDM/Applicant	

Revision Date 12/13/2011

List Items

- May, 2017: Authority Resolution for the Project (prepared by Bond Counsel)
- June, 2017: Resolution and Contract Approval.
- Public Notice Period: 45 Day Referendum.
- September 1, 2017, \$0.94/1000 rate increase approved. Total Rate = \$3.68/1000 gallons
- April 26, 2018 Project Bid
- June 26, 2018 CLOSE LOAN WITH USDA-RD

**IRON MOUNTAIN KINGSFORD JOINT SEWAGE AUTHORITY
IMKWWTP
OPINION OF PROBABLE COST (2-21-18)
GEI CONSULTANTS PROJECT #1604680**



General

<i>Item Description</i>	<i>Qty</i>	<i>Unit</i>		
Mobilization	1	LS	\$100,000.00	\$100,000.00
Permits	1	LS	\$10,000.00	\$10,000.00
Dumpsters	1	LS	\$10,000.00	\$10,000.00
General Conditions	1	LS	\$180,000.00	\$180,000.00
SUBTOTAL				\$300,000.00

Electrical Service

<i>Item Description</i>		<i>Unit</i>		
Topsoil (4 inch), Fertilizer, Seed and Mulch	200	SYD	\$9.00	\$1,800.00
Concrete Sidewalk & Pads	1	LS	\$15,000.00	\$15,000.00
Conduit & Conductors, Yard, Poles (2) to Transformer	400	FT	\$60.00	\$24,000.00
Transformer (13.8kV to 480V)	1	EA	\$9,000.00	\$9,000.00
Transocket Meter	1	EA	\$9,000.00	\$9,000.00
Transfer Switch, Exterior Main Disconnect, Main CBs, Generator CBs	1	EA	\$126,000.00	\$126,000.00
Generator, 400 kW	1	EA	\$242,000.00	\$242,000.00
Conduit & Conductors, Transformer to MCC	100	FT	\$140.00	\$14,000.00
Existing Transformer Removal & Disposal	1	LS	\$8,000.00	\$8,000.00
Power Switchover Coordination and Labor	1	LS	\$40,000.00	\$40,000.00
SUBTOTAL				\$488,800.00

CSO Basin Bar Screens

Item Description	Unit			
Drive Chain and Shafts, Bearings, Sprockets (Head, Idler & Boot)	3	Ea	\$39,100.00	\$117,300.00
Drive Assembly w/ Reducer & Ex Prf Motor	3	Ea	\$30,000.00	\$90,000.00
Foot Shaft & 9T Sprocket Assembly	6	Ea	\$3,000.00	\$18,000.00
Bucket Cleaning Rakes	12	Ea	\$2,000.00	\$24,000.00
Wiper Assembly (Screen 3 Only)	1	Ea	\$11,000.00	\$11,000.00
Automation / SCADA	1	Ea	\$69,000.00	\$69,000.00
SUBTOTAL				\$329,300.00

CSO Basin Grit Collector (in kind carbon steel)

Item Description	Unit			
Sets of Carbon Steel Buckets, Wear Shoes, Hardware	3	Ea	\$29,000.00	\$87,000.00
Drive Assembly w/ Reducer, Baseplate, Sprocket & Guard	3	Ea	\$21,000.00	\$63,000.00
Drive Chain, Shafts, Bearings, Sprockets, T-rails, Return Tracks	3	Ea	\$140,970.00	\$422,910.00
SUBTOTAL				\$572,910.00

CSO Basin Grit Augers, 9", Collection & Transfer

Item Description	Unit			
Removals & Prep Work	1	LS	\$12,000.00	\$12,000.00
Inclined Shaftless Screw Conveyor (collection)	1	Ea	\$85,000.00	\$85,000.00
Inclined Shaftless Screw Conveyor (transfer to truck)	1	Ea	\$77,000.00	\$77,000.00
Motor Controls	2	Ea	\$6,000.00	\$12,000.00
Disconnect, XP	2	Ea	\$1,000.00	\$2,000.00
Local Operator Station, XP	2	Ea	\$4,000.00	\$8,000.00
Conduit and Conductors	1	LS	\$6,000.00	\$6,000.00
Electrician Labor	1	LS	\$24,000.00	\$24,000.00
SUBTOTAL				\$226,000.00

CSO Basin Screenings Conveyors to Truck

Item Description	Unit			
Retrofit Existing Conveyor Belt (Shorten)	1	Ea	\$31,000.00	\$31,000.00
Belt Conveyor, Discharge to Truck	1	Ea	\$77,000.00	\$77,000.00
Motor Controls	1	Ea	\$15,000.00	\$15,000.00
Local Operator Station	1	Ea	\$4,000.00	\$4,000.00
Conduit and Conductors	1	LS	\$5,000.00	\$5,000.00
Electrician Labor	1	LS	\$12,000.00	\$12,000.00
SUBTOTAL				\$144,000.00

Primary Clarifier Rebuild

Item Description	Unit			
Mechanical Removals	1	LS	\$17,000.00	\$17,000.00
Longitudinal Chain & Flight Collectors (20'W x 85' L), Side rails, wear bars, sprockets, shafts	2	Ea	\$67,000.00	\$134,000.00
Cross Collector Chain & Flight Collectors (20'W x 85' L), Side rails, wear bars, sprockets, shafts	2	Ea	\$32,000.00	\$64,000.00
Pipe Skimmers (12" diameter x 20' L)	2	Ea	\$21,000.00	\$42,000.00
SUBTOTAL				\$257,000.00

Digester #3 Cover Replacement

Item Description	Unit			
Replace 50 ft dia. Steel Floating Cover In-kind	1	LS	\$400,000.00	\$400,000.00
Sandblast & recoat internal piping, pipe supports and ferrous surfaces (beyond covers)	1	Ea	\$15,000.00	\$15,000.00
SUBTOTAL				\$415,000.00

Digester #4 Sandblast and Paint

Item Description	Unit			
Sandblast & recoat internal piping, pipe supports and ferrous surfaces (beyond covers)	1	Ea	\$15,000.00	\$15,000.00
Restore in place 60 ft dia Floating Cover, Sandblast & Recoat	1	LS	\$90,000.00	\$90,000.00
SUBTOTAL				\$105,000.00

Main Plant Bar Screen

Item Description	Unit			
Front Cleaned Bar Screen & Controls	1	EA	\$231,000.00	\$231,000.00
Local Operator Station, XP	1	Ea	\$4,000.00	\$4,000.00
Disconnect, XP	1	Ea	\$1,000.00	\$1,000.00
Conduit & Conductors	1	LS	\$2,000.00	\$2,000.00
MCC Retrofit / Main Disconenct	1	Ea	\$3,000.00	\$3,000.00
Electrician Labor	1	LS	\$12,000.00	\$12,000.00
SUBTOTAL				\$253,000.00

Main Plant Grit Collector

Item Description	Unit			
Bucket & Chain Grit Collector & Controls	1	EA	\$315,000.00	\$315,000.00
Grit Screw Conveyor (9-inch)	1	EA	\$43,000.00	\$43,000.00
Disconnect, XP	3	Ea	\$1,000.00	\$3,000.00
Local Operator Stations, XP	3	Ea	\$4,000.00	\$12,000.00
Conduit & Conductors	1	LS	\$2,000.00	\$2,000.00
MCC Retrofit / Main Disconnect	3	Ea	\$3,000.00	\$9,000.00
Electrician Labor	1	LS	\$24,000.00	\$24,000.00
SUBTOTAL				\$408,000.00

Aeration Blowers

Item Description	Unit			
Blower Removal	2	EA	\$4,000.00	\$8,000.00
Direct Drive Blower Replacement	2	EA	\$85,000.00	\$170,000.00
Equipment Pads	2	EA	\$2,000.00	\$4,000.00
MCC Retrofit / Main Disconnect	2	Ea	\$7,000.00	\$14,000.00
Conduit & Conductors	1	LS	\$6,000.00	\$6,000.00
VFDs	2	EA	\$15,000.00	\$30,000.00
Electrician Labor	1	LS	\$29,000.00	\$29,000.00
SUBTOTAL				\$261,000.00

Ferrous Chloride Bldg Repairs

<i>Item Description</i>	<i>Unit</i>			
Bracing Structure	1	LS	\$6,000.00	\$6,000.00
Removal, Steel Siding & Studs	1	LS	\$2,400.00	\$2,400.00
Drilling & Epoxy Reinforcing Bar	42	Ea	\$43.33	\$1,800.00
Concrete, Reinforced (40 ft x 4 ft x 8-inch))	4	CYD	\$4,000.00	\$16,000.00
Base Plate, Anchors & Steel Stud Connection Plates	1	LS	\$4,600.00	\$4,600.00
Flashing & Z-strip	50	FT	\$90.00	\$4,500.00
SUBTOTAL				\$35,300.00

Final Clarifier Dome Covers (Clarifier No. 1 & 2)

<i>Item Description</i>	<i>Unit</i>			
Dome Skylight Removal	8	EA	\$500.00	\$4,000.00
Dome Skylight Replacement, 5 ft dia.	8	EA	\$3,000.00	\$24,000.00
Dome Equipment Hatch Removal (4 ft x 6 ft)	2	EA	\$500.00	\$1,000.00
Dome Equipment Hatch Replacement (4 ft x 6 ft)	2	EA	\$3,000.00	\$6,000.00
Dome Repairs - Remove Loose Material, Apply Mesh, Surface Prep, Recoat, & Seal	2	Sft	\$74,000.00	\$148,000.00
SUBTOTAL				\$183,000.00

Primary Digesters Coatings Rehabilitation

<i>Item Description</i>	<i>Unit</i>			
Sandblast & recoat internal piping, pipe supports and ferrous surfaces (beyond covers)	2	EA	\$15,000.00	\$30,000.00
SUBTOTAL				\$30,000.00

Alternate Add I: Primary Digesters Mixing & Heating System

Item Description		Unit		
Digester & Building Removals	1	LS	\$21,000.00	\$21,000.00
Digester No.1 Gaslifter Mixing Equipment (Eductor Tube and Heating Jacket) compressorwater jacket	1	EA	\$254,000.00	\$254,000.00
Digester No.2 Gaslifter Mixing Equipment (Eductor Tube and Heating Jacket) compressorwater jacket	1	EA	\$243,000.00	\$243,000.00
SUBTOTAL				\$518,000.00

Alternate Add II: Door Removal and Replacement

Item Description		Unit		
Exterior Steel Doors & Hardware - Single	24	EA	\$4,000.00	\$96,000.00
Exterior Steel Doors & Hardware - Single w/ Panic Bar	2	EA	\$4,500.00	\$9,000.00
Exterior Steel Doors & Hardware - Double	2	EA	\$5,000.00	\$10,000.00
SUBTOTAL				\$115,000.00

Alternate Add III: Roof Removal and Replacement

Item Description		Unit		
CSO Basin Roof	6100	Sft	\$4.00	\$24,400.00
CSO Basin Built Up Roof Removal & Prep	6100	Sft	\$5.00	\$30,500.00
Grit Building Roof	3100	Sft	\$4.00	\$12,400.00
Grit Building Built Up Roof Roof Removal & Prep	3100	Sft	\$5.00	\$15,500.00
Blower Building Roof	1100	Sft	\$4.00	\$4,400.00
Blower Building Built Up Roof Removal & Prep	1100	Sft	\$5.00	\$5,500.00
Main Plant Roof	9400	Sft	\$4.00	\$37,600.00
Main Plant Roof EPDM Removal & Prep	9400	Sft	\$3.00	\$28,200.00
Digester Building Roof	800	Sft	\$4.00	\$3,200.00
Digester Building EPDM Removal & Prep	800	Sft	\$3.00	\$2,400.00
SUBTOTAL				\$164,100.00

Subtotal Construction (Inclusive of Alternate Add I, II, & III)	\$ 4,805,410
Construction Contingency (10%)	\$ 480,541
Total Construction	\$ 5,285,951
Engineering: Basic Services	\$ 163,000
Engineering: Resident Project Observation	\$ 99,865
Legal / Attorney	\$ 8,000
Bond Counsel	\$ 33,700
Admin / Advertising	\$ 1,000
Other Project Planning / Investigation Expenses	\$ 2,053
Miscellaneous (Aeration Tank Diffuser Purchase for Installation by Staff)	\$ 43,000
Equipment (Tractor)	\$ 45,000
Total Project Cost Opinion	\$ 5,681,569
Total Project Budget	\$ 5,470,000

IRON MOUNTAIN / KINGSFORD JOINT SEWAGE AUTHORITY
VARIOUS REHABILITATION AND EQUIPMENT REPLACEMENT PROJECT
BID SUMMARY

Engineer's Cost Opinion

Bidder: Staab Construction

Bidder: Gundlach Champion, Inc.

BASE BID	BASE BID	BASE BID
BASE BID \$4,008,310.00	BASE BID \$4,130,000.00	BASE BID \$4,713,784.00
TOTAL \$4,008,310.00	TOTAL \$4,130,000.00	TOTAL \$4,713,784.00
BASE BID + ALT ADD 1	BASE BID + ALT ADD 1	BASE BID + ALT ADD 1
BASE BID \$4,008,310.00	BASE BID \$4,130,000.00	BASE BID \$4,713,784.00
ALT ADD I \$518,000.00	ALT ADD I \$395,000.00	ALT ADD I \$425,635.00
TOTAL \$4,526,310.00	TOTAL \$4,525,000.00	TOTAL \$5,139,419.00
BASE BID + ALT ADD 1 + ALT ADD 2	BASE BID + ALT ADD 1 + ALT ADD 2	BASE BID + ALT ADD 1 + ALT ADD 2
BASE BID \$4,008,310.00	BASE BID \$4,130,000.00	BASE BID \$4,713,784.00
ALT ADD I \$518,000.00	ALT ADD I \$395,000.00	ALT ADD I \$425,635.00
ALT ADD II \$115,000.00	ALT ADD II \$145,000.00	ALT ADD II \$95,106.00
TOTAL \$4,641,310.00	TOTAL \$4,670,000.00	TOTAL \$5,234,525.00
BASE BID + ALT ADD 1 + ALT ADD 2 + ALT ADD 3	BASE BID + ALT ADD 1 + ALT ADD 2 + ALT ADD 3	BASE BID + ALT ADD 1 + ALT ADD 2 + ALT ADD 3
BASE BID \$4,008,310.00	BASE BID \$4,130,000.00	BASE BID \$4,713,784.00
ALT ADD I \$518,000.00	ALT ADD I \$395,000.00	ALT ADD I \$425,635.00
ALT ADD II \$115,000.00	ALT ADD II \$145,000.00	ALT ADD II \$95,106.00
ALT ADD III \$164,100.00	ALT ADD III \$215,000.00	ALT ADD III \$178,823.00
TOTAL \$4,805,410.00	TOTAL \$4,885,000.00	TOTAL \$5,413,348.00

May 2018 – Contract Awarded to Staab Construction

Replacement/Rehabilitation Project to include

Electrical Service upgrade with Generator

CSO Basin Bar Screens Refurbished and New Handling System

CSO Basin Grit Collection Refurbished and New Handling System

Main Plant Bar Screen (New)

Main Plant Grit Collection (New)

Primary Clarifier Rebuild

Aeration Blower (New) and Diffuser Replacement

Final Clarifier Domes

Ferrous Chloride Building Repair

Primary Digester Mixing and Heating System

#3 Secondary Digester Cover (New)

#4 Secondary Digester Sandblast and Paint

Door replacement added – Summer 2019

Partial Roof Replacement added – Fall 2019

Ferrous Chloride Building August - Sept. 2018

Repair rusted section on Southwest corner
Replace Access door









#4 Digester Sandblast and Paint

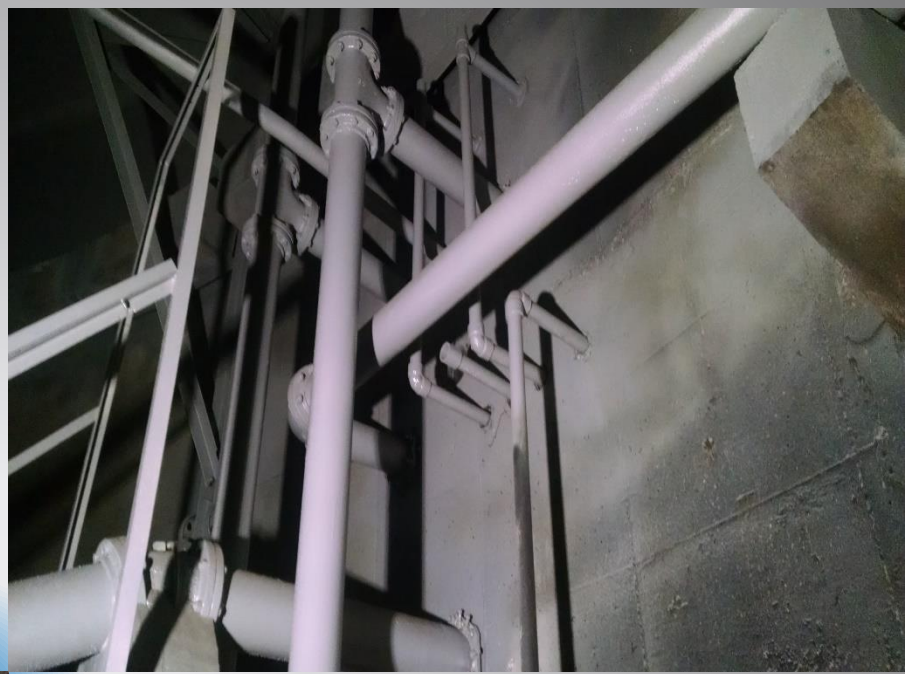
August – December 2018

Sandblast 60' diameter gas holder digester cover
Recoat 60' digester cover

Inspect and provide report on internal tank component
Repair internal components as needed, plant personnel or contractor









CSO Basin Bar Screens Rehabilitation

December 2018 – March 2019

Replace moving components on (3) 75 MGD Bar Screens
Install new conveyor to Truck to eliminate the use of hoppers









CSO Basin Grit Collector Rehabilitation

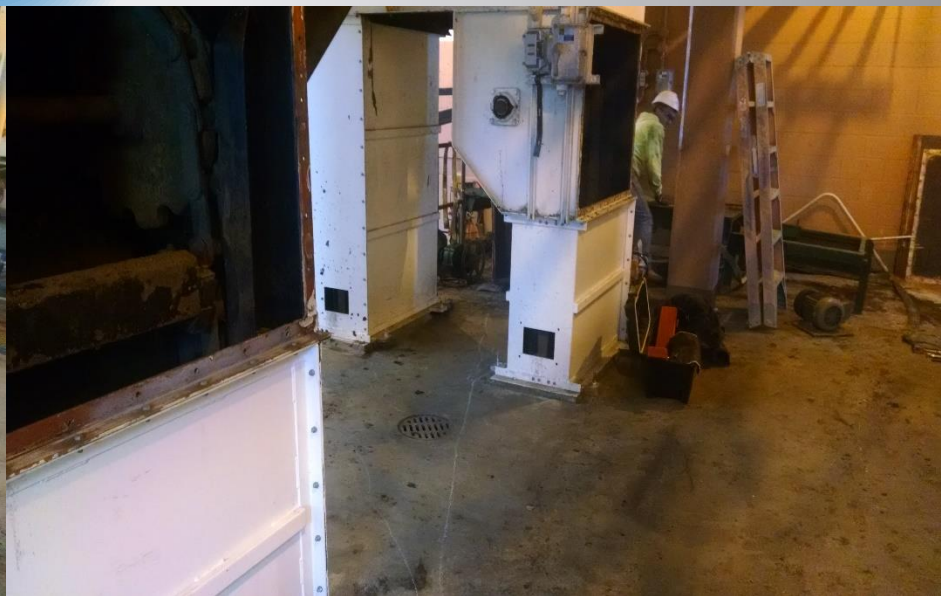
December – March 2019



Replace moving parts in (3) 75MGD Grit Collectors

Replace #1 Grit Auger

Install new Grit Auger to Truck to eliminate the use of hoppers







Main Plant Bar Screen Replacement

March - May 2019









Main Plant Grit Collector Replacement

March - May 2019













Primary Clarifier Flight and Cross Collector Replacement

April - August 2019

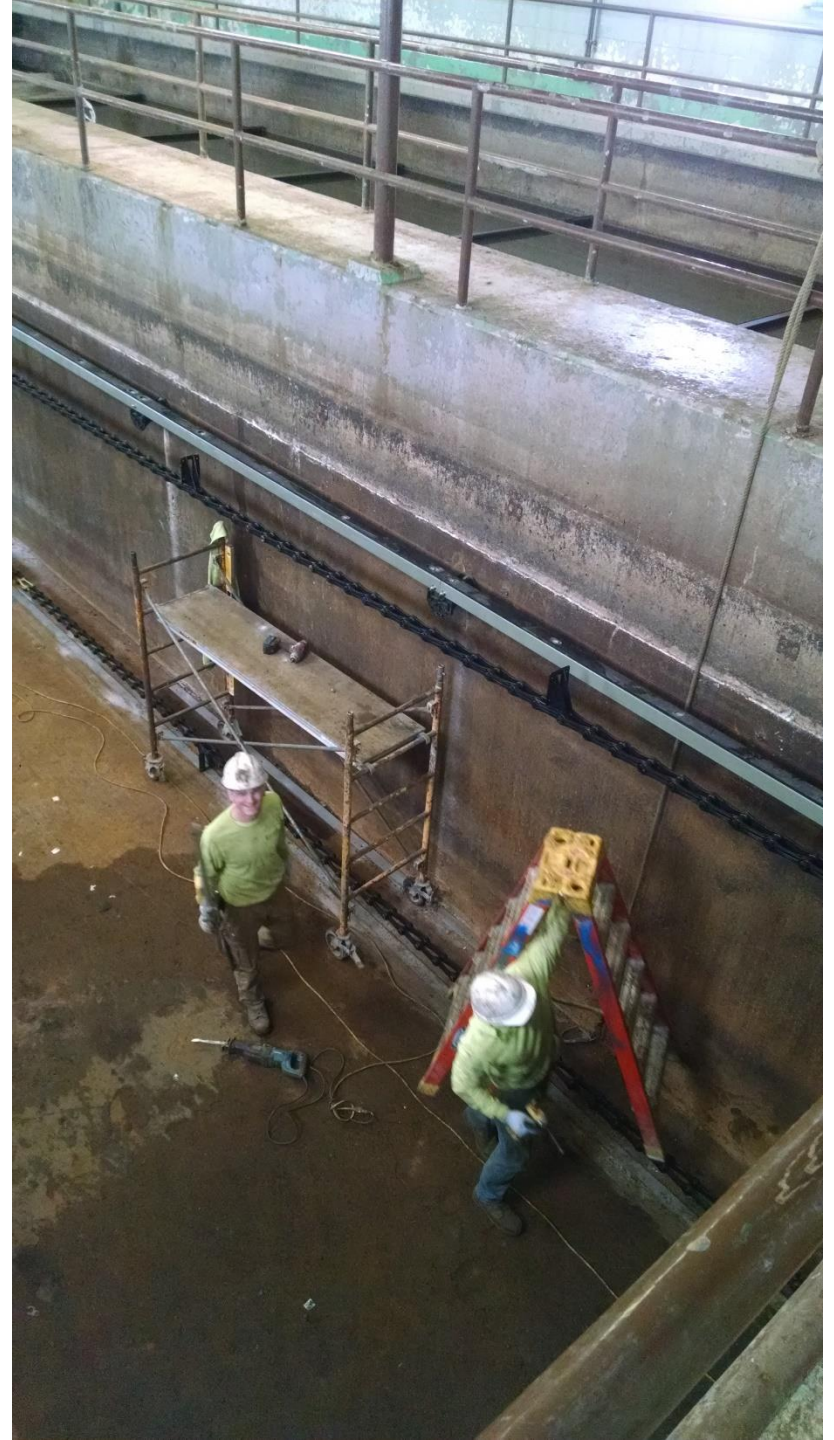
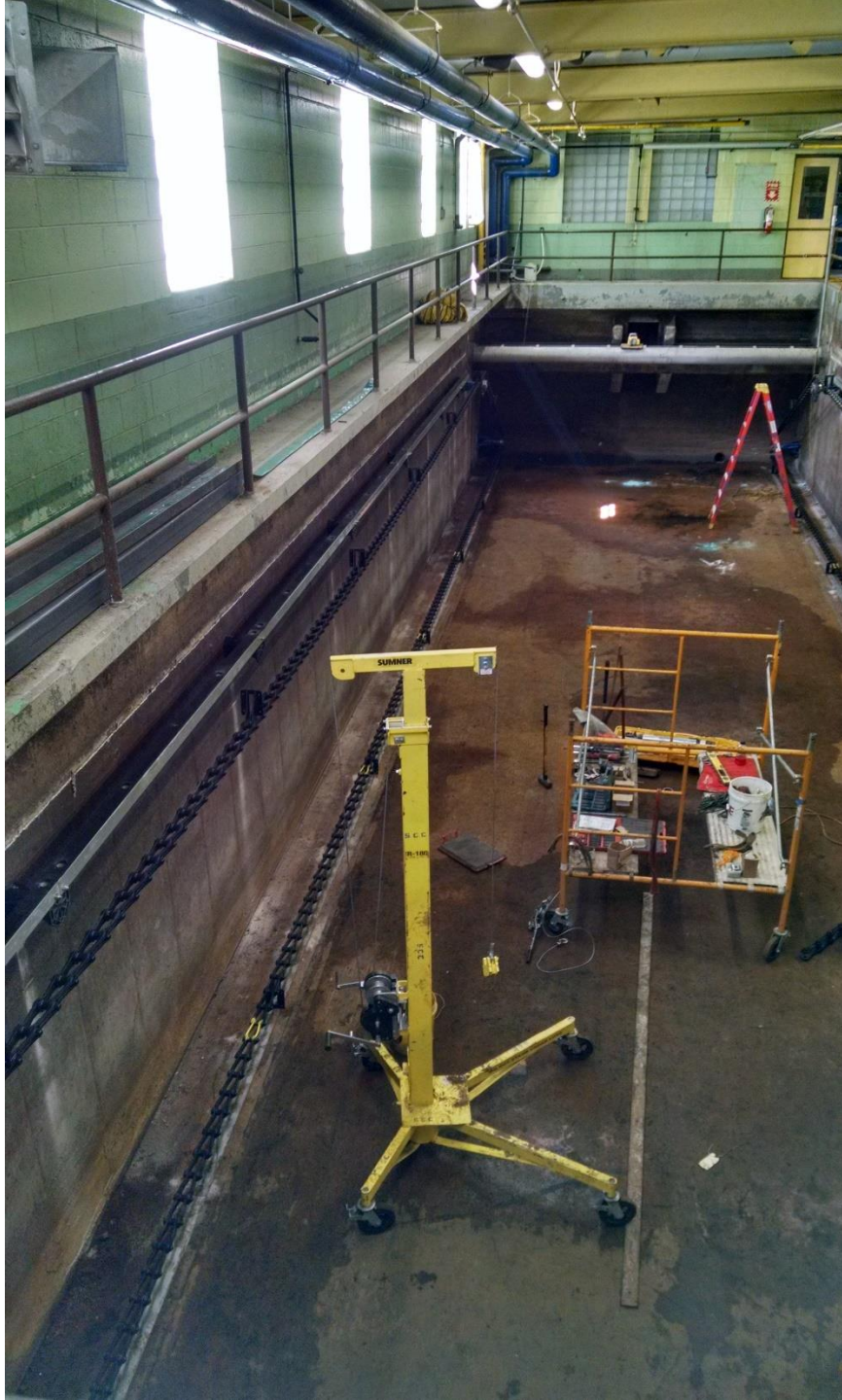


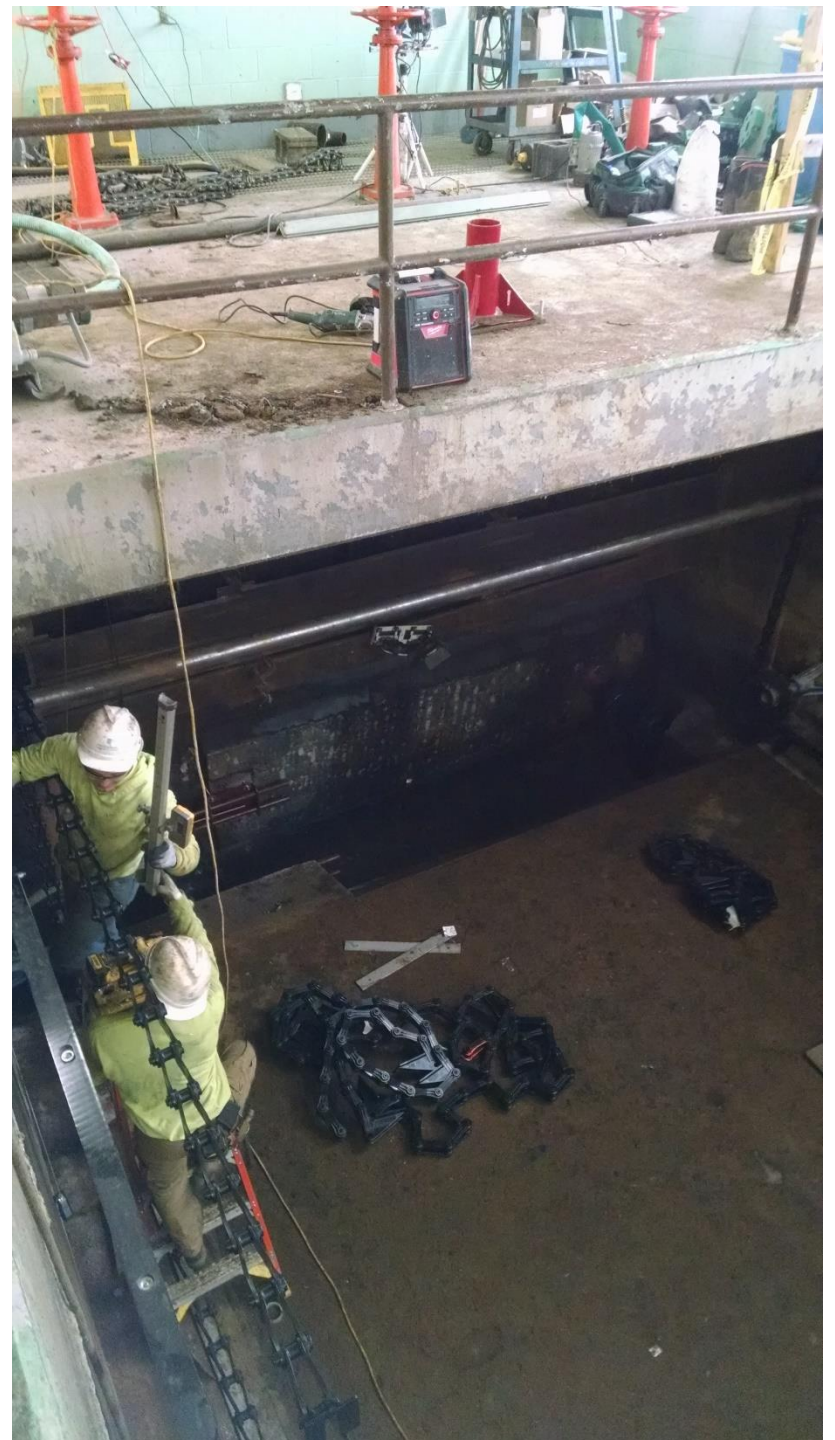












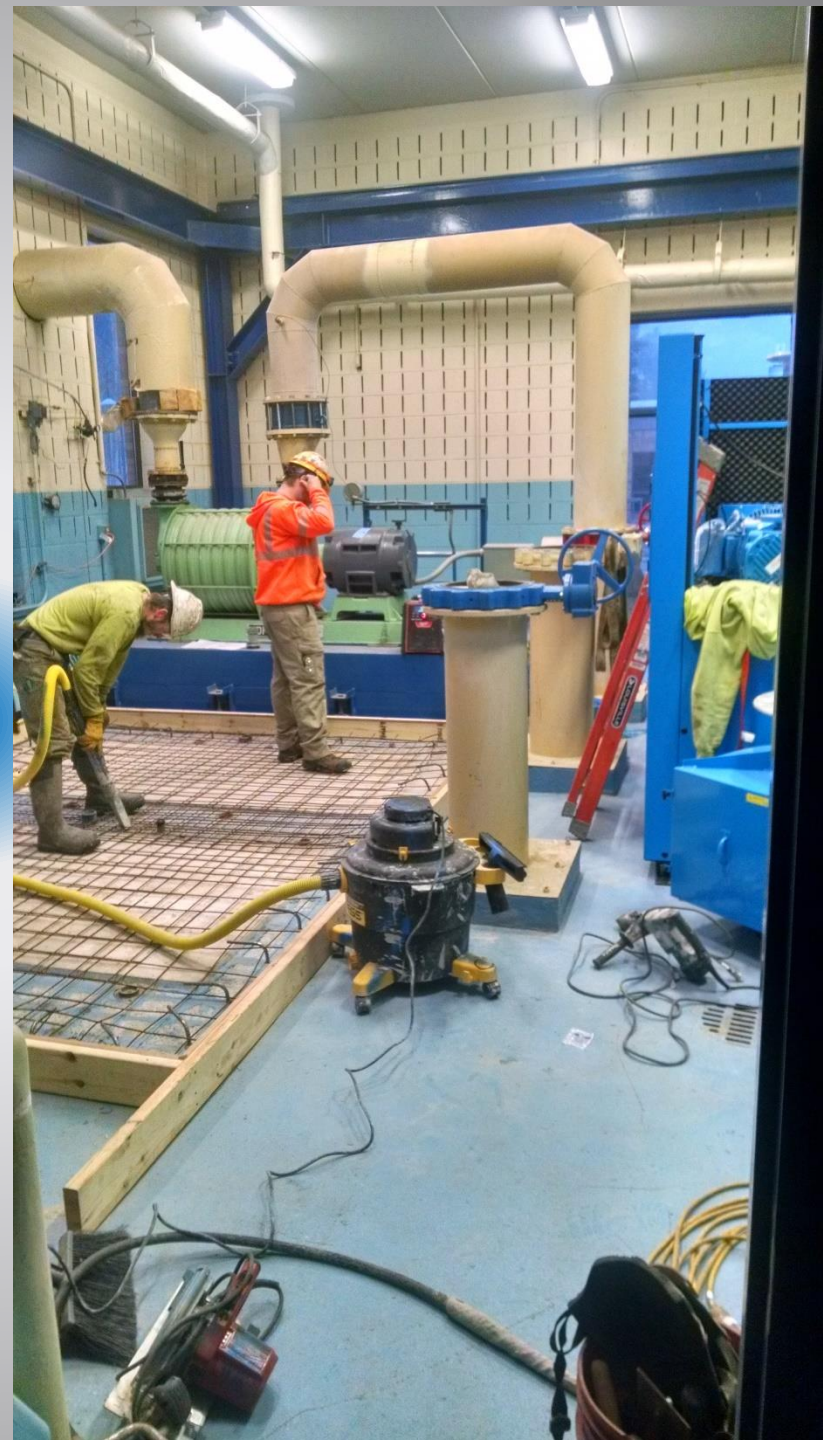
Aeration Blower Replacement

April - May 2019

















Final Clarifier Dome Replacement July – August 2019



























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#3 Digester Floating Cover Replacement June – August 2019







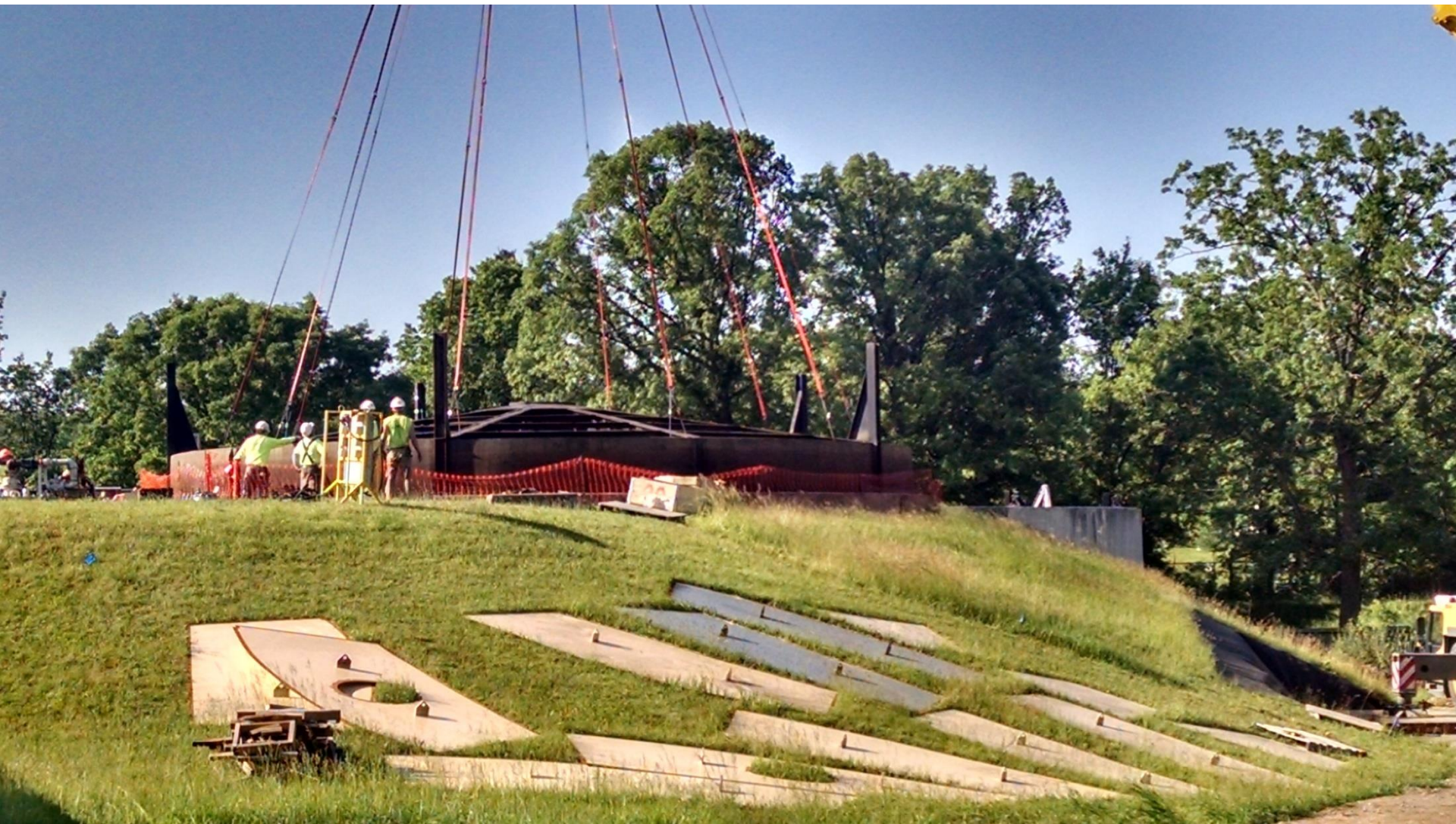












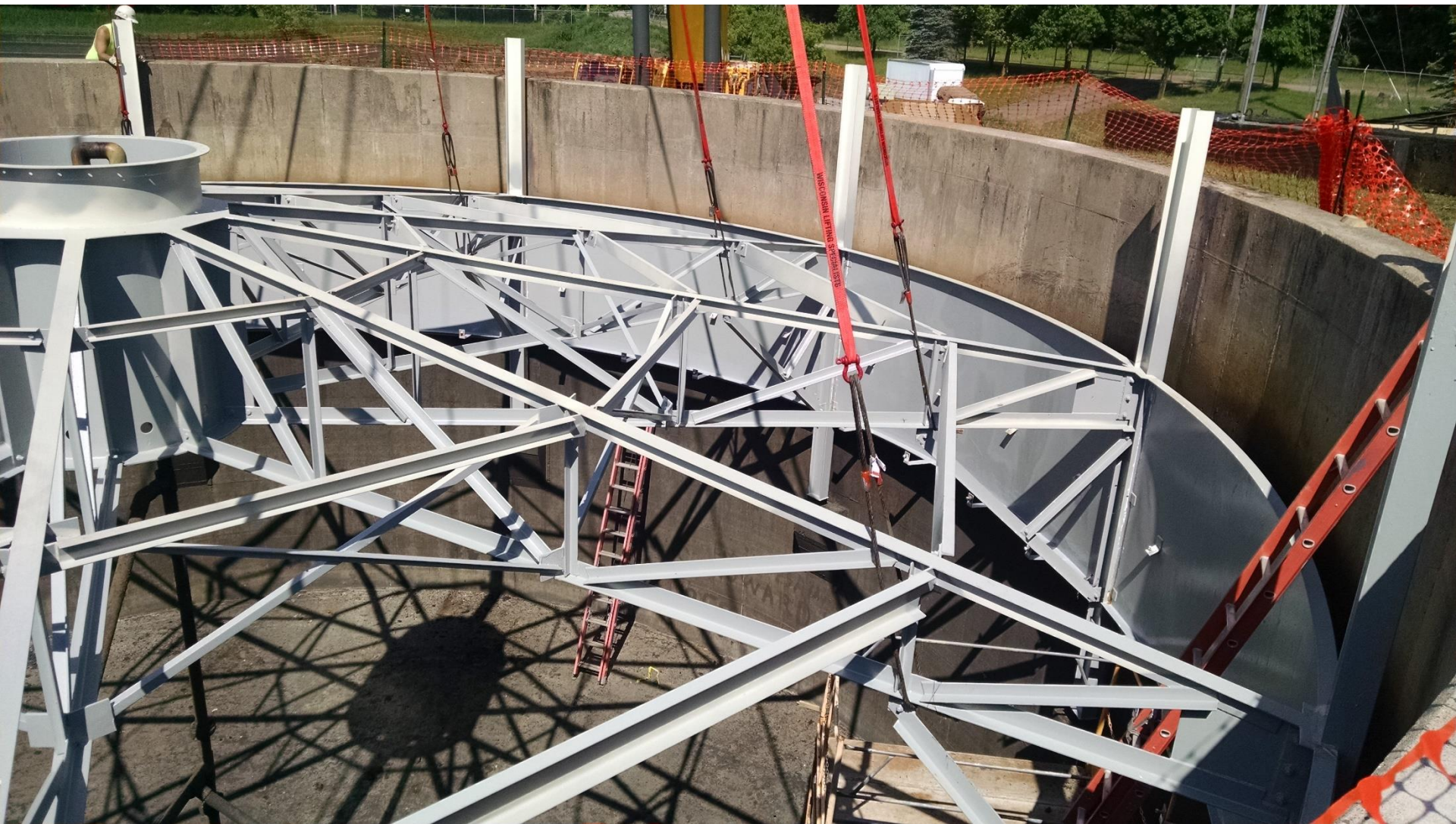
















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Primary Digesters – Heat Exchanger and Gas Lifter Replacement





09/18/2017 12:12



09/18/2017 12:12









Division of the
Water and Wastewater
Industry
Division of Public Utilities

DANGER
EXPLOSIVE GAS
NO SMOKING

08/14/2020 22:00



08/14/2020 22:01



08/14/2020 22:02



08/14/2020 22:02



08/14/2020 22:02

Electric Switch Gear/Transformer

September 2019 thru January 2020

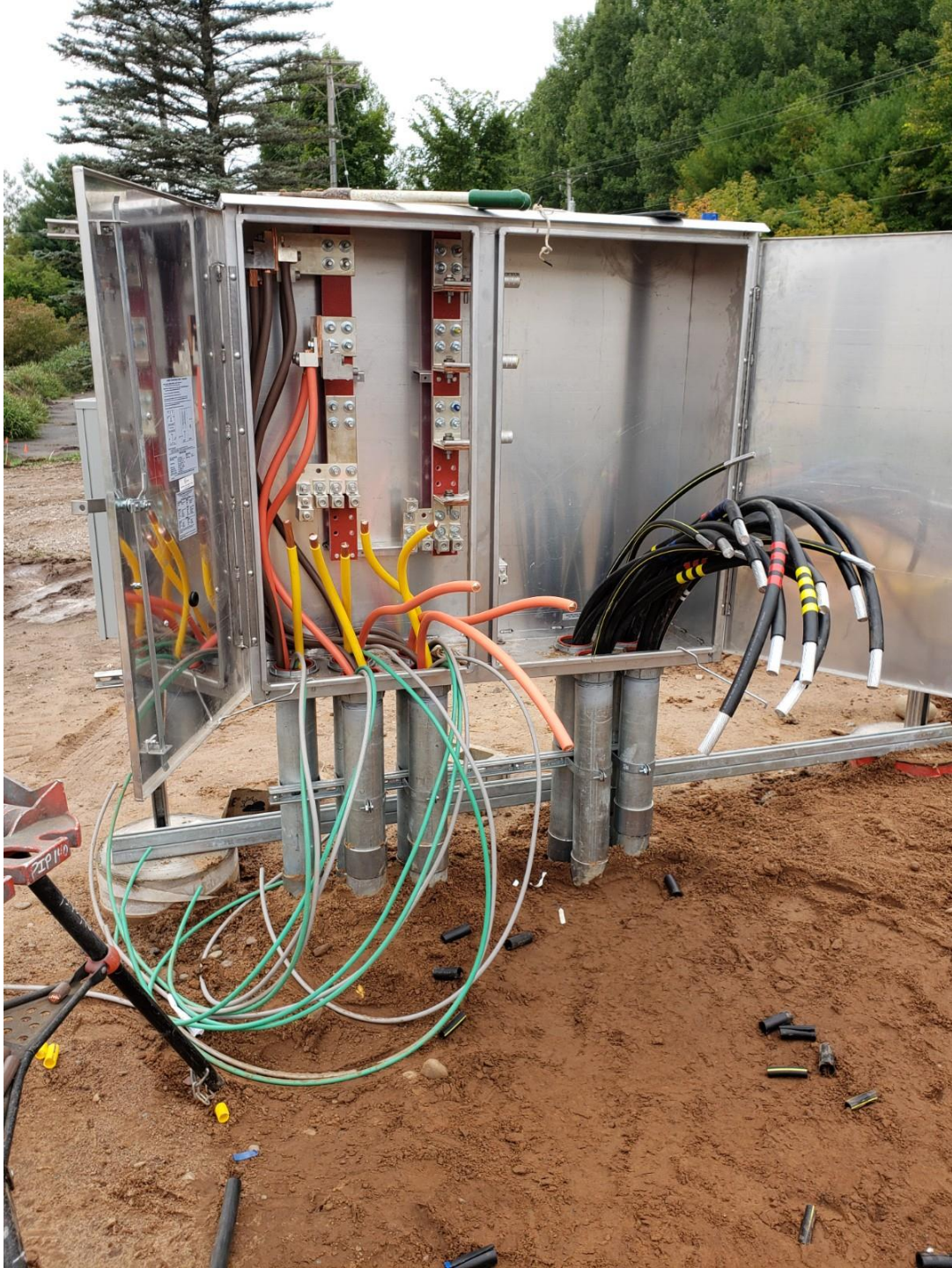






















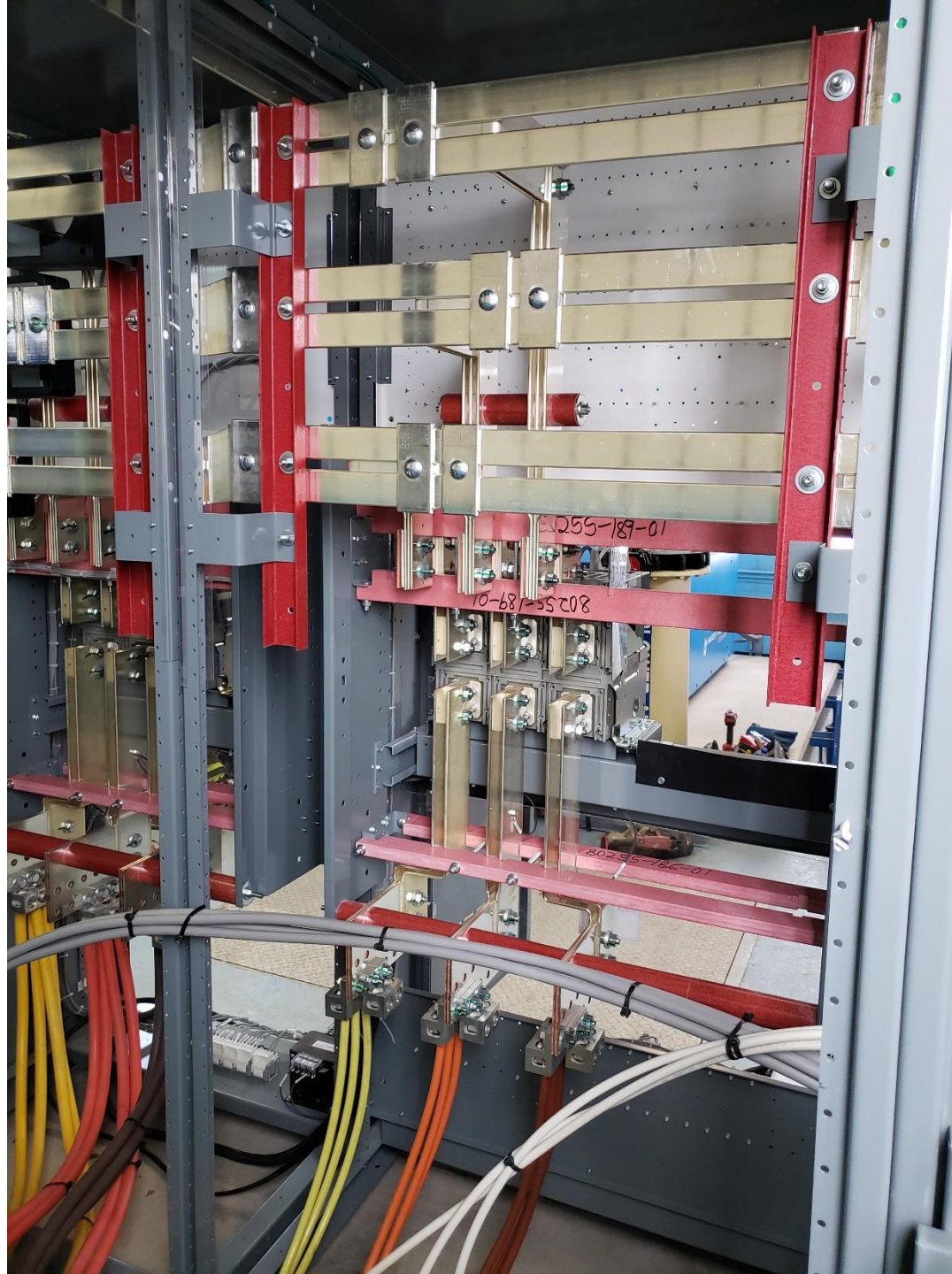








08/14/2020 22:04







SQUARE D COMPANY

TS-1
MCC-1

Central Room

TS-1
MCC-1

Power Room

Primary Pump Room

CSD Room

MCC-D



AUTO



MANUAL



AUTO FAIL



SOURCE 1
AVAILABLE



UPS/BAT
FAIL



SOURCE 2
AVAILABLE



EXERCISE
W/ LOAD

OFF ON



SOURCE
SYNC



TEST
TRANSFER
NORM
TTM1 TTM2



CLOSED
TRANSITION

OFF ON



GENERATOR
BREAKER

FAULT



MAIN 1
BREAKER

FAULT



OPEN



Push to
Open

CLOSED



Push to
Close

OPEN



Push to
Open

CLOSED



Push to
Close

SYSTEM
SETTINGS

PLC
I/O MAP

SEQUENCE
OF
OPERATION

ALARM
LOG

EVENT
LOG



GENERATOR
COOLDOWN



System Status:

Auto transfer system normal



SQUARE D

112 1/15/2020 5:33

MAIN 1 SOURCE DELAYS

SOURCE STABILIZATION 5 MINUTE(s)

1 SECOND(s)

SOURCE LOSS 10 SECOND(s)



GENERATOR SOURCE DELAYS

SOURCE STABILIZATION 0 MINUTE(s)

10 SECOND(s)

SOURCE LOSS 3 SECOND(s)



TRANSITION TIMERS

TRANSFER TIMER 2 SECOND(s)

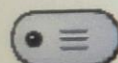


SECURITY TIMER

PASSWORD TIMEOUT 3 MINUTE(s)



GENERATOR SETTINGS



EXERCISER DISABLED

Sunday

CHOOSE EXERCISE DAY

EXERCISE INTERVAL: EVERY 1 WEEK(S)

EXERCISE DURATION 30 MINUTE(S)

EXERCISE START HOUR 13

(24 HOUR CLOCK)

EXERCISE START MINUTE 00

COOLDOWN 5 MINUTE(S)



1/15/2020 5:33

MAIN PAGE

CONFIGURE
SYSTEM

TIME
SET

DATE
SET

CHANGE
PASSWORD 1

CHANGE
PASSWORD 2

Door replacement added – Summer 2019



**RESTRICTED
AREA**
DO NOT ENTER
AUTHORIZED
PERSONNEL ONLY



08/14/2020 21:21

Partial Roof Replacement added – Fall 2019





08/14/2020 21:56



08/14/2020 21:56



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Project Complete October 2020

All items from original project list were completed with the exception of 2 roofs. The final clarifier domes were slated for repair but based on available contingency funds we replaced them instead. We were also able to add some repairs to #4 digester that were discovered during the project.

Engineer – GEI Consultants

General Contractor – Staab Construction, Marshfield Wis.