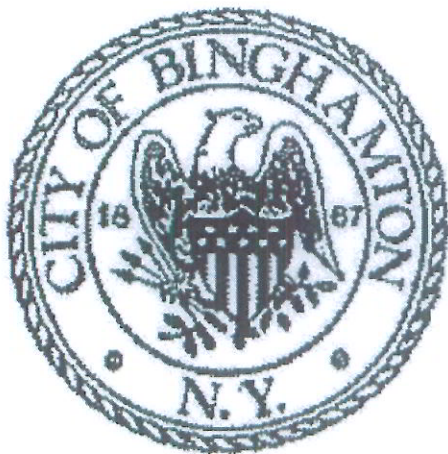


**Binghamton-Johnson City Joint Sewage
Treatment Plant Restoration and
Rehabilitation Project**

2018 Quarter 3 Report

*City of Binghamton
Village of Johnson City
Joint Sewage Board*



October 2018

2018 QUARTER 3 REPORT

BINGHAMTON-JOHNSON CITY JOINT SEWAGE TREATMENT PLANT RESTORATION AND REHABILITATION PROJECT CASE NO: R7-20110628-59

In accordance with Paragraph A-1c. of the Second Modification Consent Order (Case No. 8720110628-59) between the City of Binghamton, Village of Johnson City, the Joint Sewage Board, and the State of New York, the City submits this 2018 Quarter 3 Report. The report summarizes the status and progress of the projects and programs required by the Consent Order from July through September 2018.

SECTION 1— FACILITY OPERATIONS

We continue to operate in CEPT mode. Settling Tanks 7, 8, 9 and 10 have been taken off-line in preparation for work to be completed. Flow has been reduced to receive a maximum of 35 MGD. The Binghamton grit system is off-line. The temporary disinfection is in service in chlorine contact tank #3, and flow is being discharged through parallel temporary discharge lines to the permanent 72" outfall pipe.

See Attachment A for the plant performance during this Quarter.

Background

The Binghamton - Johnson City Joint Sewage Treatment Plant (BJCJSTP) processes 18 million gallons per day with the capability of processing up to 60 million gallons per day (MGD) of wet weather flow. This plant is jointly owned by the City of Binghamton and the Village of Johnson City and managed by the Binghamton-Johnson City Joint Sewage Board (BJCJSB).

The BJCJSTP has suffered several catastrophic events since 2006. In 2006, the BJCJSTP was flooded by a 500 year flood that affected many of the processes in operation. In May of 2011, a concrete structure suffered structural failure, and in September 2011, the BJCJSTP suffered another 500 year flood that critically damaged equipment and rendered the secondary treatment fundamentally inoperable. The secondary process system is still largely inoperable today. A Consent Order was negotiated between the City of Binghamton, the Village of Johnson City, the BJCJSB and the NYSDEC to develop a plan to restore treatment operations at the BJCJSTP. The Consent Order requires the BJCJSTP to restore secondary treatment functionality and be able to fully treat 35 MGD of wet weather flow by December 31, 2018. To achieve this level of treatment, the reconstruction and testing of the Secondary Treatment Process must be completed as necessary to achieve treatment of 35 MGD. To comply with the Consent Order, the Sewage Treatment Plant must then be fully operable by September 30, 2019, including the remainder of the secondary treatment process. There are also several interim milestones included in the Consent Order.

The project is being constructed in accordance with Wicks Law, which requires the project be bid as multiple prime contracts. More specifically, Wicks Law requires that the bulk of the construction work, consisting of the secondary treatment (BAF), be divided into a General Civil Construction Contract, an Electrical Contract, an HVAC Contract and a Plumbing Contract.

The following projects are either nearing completion, in construction, or complete.

Contract No.	Description	Status
Contract No. 1	Compost Facility Demolition	Complete
Contract No. 2	FEMA Mechanical	Complete.
Contract No. 3	BAF Facility Demolition	Complete.
Contract No. 4	MCC HH Emergency Replacement	Complete
Contract No. 5	BAF Restoration and Rehabilitation Civil Contract	Notice to Proceed (NTP) issued May 27, 2016.
Contract No. 6	BAF Electrical	NTP issued May 27, 2016
Contract No. 7	BAF HVAC	NTP issued May 27, 2016
Contract No. 8	BAF Plumbing	NTP issued May 27, 2016
Contract No. 9	Secant Pile Contract	Complete
Contract No. 10	Solids Handling Renovation Civil	NTP Issued July 20, 2017
Contract No. 11	Solids Handling Renovation Electrical	NTP Issued July 20, 2017
Contract No. 12	Solids Handling Renovation HVAC	NTP Issued July 20, 2017
Contract No. 13	Solids Handling Renovation Plumbing	NTP Issued July 20, 2017
Floodwall	Floodwall and New Diversion Structure	Anticipated completion date 3 rd Quarter.

Contract Descriptions

Contract No. 1 - Compost Facility Demolition

Demolition of the upper portion of the compost facility was performed to accommodate the construction of the new Administration Building to house the plant staff as well as provide the new control room to operate the new facilities. Demolition of the lower portion of the Compost Building clears the way for the construction of a new maintenance facility.

Contract Status: 100% Complete

Contract No. 2 - FEMA Mechanical

The FEMA Mechanical Project replaces valves, equipment and other miscellaneous items damaged in the 2011 flood. It includes equipment in both the East and West Primary Sludge Pumping Stations, valves and equipment located in the Head House, and equipment associated with Sludge Thickener Pumping Station Nos. 1 and 2. Work associated with this contract is being reimbursed by FEMA due to the flood of 2011.

Status: During this quarter, Blue Heron performed very little work. We have negotiated with Blue Heron to delete some of the valve replacements and equipment installations that GHD has determined should no longer be performed under this contract.

Three Month Look Ahead: Contractor has completed all remaining work and the Notice of Final Completion has been executed.

Contract Status: 100% Complete

Contract No. 3 - BAF Facility Demolition

The BAF Demolition Contract removed existing structures and utilities that conflict with the new construction work included in the BAF Restoration Project. Demolition efforts include selective demolition in the existing process tanks (C-Filters, N-Filters, and DN-Filters) and buildings and mechanical equipment and piping to ready the site for new construction.

Status: The scope of work for the contract was increased with five Change Orders. Change Order One modified the contract to demolish and remove the existing Blower Building to improve construction on Contracts 5-8 at the C-N cells 1-8. Change Order Two demolished the known concrete in the C cell area inside the secant pile area below the elevation 825 (the original limit of demolition indicated on the contract documents). Change Order Three removed the additional concrete pile caps and steel H piles not originally included in the contract documents and also backfilled from elevation 825 to 831. The Fourth Change Order compensated the contractor for demolition of approximately 3600 CY of additional concrete within the secant pile area not known to exist. The removal of the additional concrete eliminated a delay in excess of four months on the overall project, and reduced the cost to avoid having a future contractor remove the concrete. The Fifth Change Order compensated LeChase for repairing defective rebar from the original construction while LeChase was repairing the rebar that they overcut at their own expense. The final change was to repair the existing rebar that was cut during the original construction of the C cells.

Contract Status: 100% Complete

Contract No. 4 - MCC - HH Emergency Replacement

Contract 4 replaces the original existing Motor Control Center (MCC) in the Head House. The MCC is 50 years old, and is identified as MCC-HH. The contract was bid as an emergency contract because the electrical system in the Head House is both critical to keeping the BJCJSTP in service, and because the original MCC is extremely unreliable due to the age and condition of the gear. MCC HH Emergency Replacement also replaces the existing raw sewage pump drives of the existing 50 year old equipment including new electrical feeders from the HH to the Johnson City Grit House No. 1, a new feeder from the HH to the Thickened Sludge Pump Station No. 1, and various other panel boards. The emergency work also includes replacement of the existing raw sewage variable frequency drives that were located in the existing MCC HH. The new drives will be more reliable, more efficient, and will provide better performance of the existing raw sewage pumps.

Status: The new VFD's and MCC HH have been installed in the Head House. All work on the MCC HH project has been completed including the removal of the existing MCC, and project closeout items. We have received the final reports on testing, and the final trip settings on MCC HH from the manufacturer based on actual loadings measured in the field. Paper work is being processed for Final Completion.

Contract Status: 100% Complete

Contract No. 5 - BAF Restoration and Rehabilitation Civil Contract

When combined with the other BAF contracts (Nos. 6, 7 & 8), Contract No. 5, the General Civil contract, is intended to provide a functioning automated plant using a BIOSTYR system that can be modified to fit current plant configurations. It is also intended to provide functioning automated headworks and primary clarification processes upstream of the BIOSTYR system and solid handling processes downstream of the BIOSTYR system.

Major components of the work under Contract No. 5 include new coarse screens and ancillary equipment, new piping and valves for the influent pumps, new metering equipment, new fine screens and grit removal with ancillary equipment, a new primary distribution box, new mechanical equipment for primary clarifiers 1-10, new chemical equipment for primary treatment, modification of the primary clarifier structural components to replace the aged and deteriorated mechanical equipment, new secondary influent pumps and rehabilitation of existing pump stations for the new BAF system, a new BAF backwash tank, new CN-BAF and DN-BAF facilities, a new methanol system that will feed the DN-BAF cells, new Ultra Violet Light disinfection system to replace the existing chlorine disinfection system, new sludge thickening equipment and systems, a new administration building, new odor control equipment, two new 2MW electric generators, and a new plant outfall to the river.

Status: The NTP for Contract No. 5 was issued on May 27, 2016, which complied with milestone requirements in the revised Consent Order. During this quarter, the concrete work for the new Headworks and BAF Backwash Treatment Facility was completed. Block work and roof panels were completed on BAF Backwash Treatment Facility. Mechanical and electrical components are being installed in the building. Block work for the Headworks building is now complete. Mechanical and electrical work are scheduled to be completed in the BAF Treatment Facility next quarter, and the headworks is scheduled to complete during the first quarter of 2019.

Block work and the roof structure are complete for the coarse screen building. The first coarse screen has been installed and are operating. The compactor continues to have an issue plugging. The manufacturer is preparing to modify the screen to eliminate the plugging issue at no additional cost to the City. The final roof and finishes for the building are scheduled to complete next quarter.

Concrete work for the new Primary Distribution Box #1 is nearing completion. Leak testing of the Primary Distribution Box 1 has been completed, and they are nearing completion of the interior walls and gate installations. The Headworks progressed this quarter with the completion of the concrete slabs at grade, and the masonry walls for the concrete roof planks. PC decided to pull the masons from the block work for the Headworks to focus on the block work for the Blower Building. While this improved the schedule for the Blower Building, it sacrificed production at Headworks. We anticipate the Headworks being on the critical path because the downstream systems cannot be started up until the fine screens and grit removal are operational.

The concrete work and the interior concrete wall coatings are complete for the primary clarifiers 7-10. The contractor completed installing the equipment in primary clarifiers 7-10 last quarter. They need to complete the expansion joint replacement in the individual PST's, fix the coatings on the walls for the PST's and Matco needs to install the power and controls for the chain and flygths in the tanks.

Both the north and south half wall are complete in CN Cells 1-8, and the plenum boxes and buttressed walls are also completed. PC has completed rotating the valve actuators for the 30" valves for CN cells

1-8. The structural steel and grating is now complete, and the stainless steel backwash pipe and air pipe are still being installed. Installation of the nozzle decks in CN Cells 1-8 continued this quarter. PC has completed the work for the nozzle decks on the south half and resumed extension of the walls above the concrete decks. PC finally began installing the nozzle decks in the north half of CN Cells 1-8. PC's subcontractor, Welliver, has stated that they intend to have all structural concrete in the CN Cells 1-8 completed by the end of November 2018.

The lower level of the Administration Building is now occupied by STP staff. The airflow balance and several relatively minor issues are being completed by PC and the other multi primes next month. We continue to work with STP staff and the contractors to identify the source of the water leaks into the building, and anticipate having the remaining leaks corrected next quarter. PC began removing and installing the vapor barrier under the roof membrane as required by contract. The new green roof for the Administration Building should also be completed next quarter. The new Chemical Building's mechanical and electrical systems are nearly complete, and should be complete this quarter.

The shotcrete subcontractor completed installing the shotcrete for the walls in the BAF Backwash Tank and for CN Cells 9-14 long ago, and now need to complete the fillets at the base of the walls in the BAF Backwash Tank. There appears to be some minor cracking in the shotcrete that needs to be repaired. This was to be expected. The Engineer is evaluating the extent of cracking to give direction on what sections need to be repaired by the Contractor. The wash down piping is nearing completion in the tanks, and work to install the backwash tank pumps has begun.

Concrete work in CN Cells continued and is scheduled to be completed in late 2018. The Master Schedule was updated to show the status of the work through the quarter and it reflects PC completing Phase 1 in April 2019. The latest draft also shows the Phase 2 Milestone is scheduled to complete in late 2019. Most of the Kruger supplied equipment and concrete elements have been delivered and are in storage locally. The nozzle deck installation continued this quarter with the installation of nozzle decks in CN Cells. PC continued installing the stainless steel BAF Backwash Line and the stainless steel air piping. Electrical and mechanical work resumed in the pipe gallery this quarter. The electrician is working where possible, but they are also waiting on PC so they can complete the electrical work in the gallery. PC completed the plenum boxes and buttress walls in the pipe gallery, and finally resumed concrete work throughout the structure. The concrete work focused on the SIPS during the quarter, and this will allow the other multi primes to begin their work in the SIPS next quarter. SIPS must be complete before the flow can be sent to the CN Cells 1-8.

Concrete work for the new methanol containment area is complete, and the structural steel canopy for the methanol storage area is nearing completion. Both tanks and the structural steel were installed the previous quarter and PC is beginning to install the roof deck for the structure this quarter. Work in the new Methanol Control Building is progressing with all trades able to work in the building.

PC completed the block work and precast hollow cast concrete roof planks this quarter for the new Blower Building. PC continued installing the south flood wall this quarter. They were able to get the storm drain installed past the leaning pole this quarter, and intend to complete the storm drain installation to the parking lot south of the new Administration Building next quarter. PC is preparing to complete the parking lot before the end of November. PC set the blowers in the Blower Building last quarter.

PC failed to achieve the Flood Protection Milestone specified and is being held accountable for all costs incurred by the City due to their failure to meet the November 18, 2017 milestone requirement.

PC continued installing the yard piping throughout the site. Their focus was installing the Primary Influent Lines to the PST's 1-6 as well as installing the 54" Primary Influent between Distribution Box #1 and #2.

PC resumed concrete work at the DN Cells this quarter. They anticipate completing the concrete work for the DN Cells next quarter. They hit an unanticipated piece of steel that has delayed the drilling of the dowels for the plenum boxes in the DN cells. PC continued pipe work, structural steel and ancillary systems in the DN gallery this quarter. PC also completed block work for the DN Cell Blower Building and has installed the precast concrete roof planks on the building. PC also continued work in the UV and Plant Water Pump Stations this quarter. Installation of the UV reactors and pumps are nearly complete. They will be waiting on the electrical power for testing.

3 Month Look Ahead: PC Construction will complete work on equipment installation and dry testing of equipment in primary clarifiers 7-10. PC will perform the official leak test after they complete leak repairs in the basins. The Chemical Storage Building and East Scrubber Building will be completed next quarter. The lower level of the Administration Building will be completed next quarter. Concrete work will continue on the CN Cells 9-14, CN Cells 1-8, and the DN Cells. PC will continue mechanical and architectural work for the CN Blower Building, the SIPS, the Headworks, and the BAF Backwash Treatment Facility this quarter. Concrete work for the south floodwall and the concrete apron outside the structures on the west and north side of the facility should be completed this quarter.

Electrical and mechanical work for the new methanol system, UV, and Plant Water Pump Station should be completed next quarter. PC will continue installing yard piping throughout the site. We anticipate the contractor making a major push to complete the bulk of the concrete work in the next quarter.

The contractor is now ten months behind schedule for meeting Phase I and II milestones. We continue to work with them to improve their schedule. NYSDEC had revised several intermediate milestones in a previous modification to the Consent Order, as requested by the City, and they share our concern that PC has been unable to meet the production requirements necessary to meet the milestones, as requested by the City.

Contract Status: 76% Complete through September 2018

Contract No. 6 - BAF Electrical

The BAF Electrical contract supports the BAF General Civil Contract and includes all electrical and instrumentation associated with the BAF contracts. The components include installation of the new UV disinfection system, installation of the new generators, installation of the electrical feed throughout the plant, as well as installation of the instrumentation and SCADA System throughout the plant.

Status: Contract No. 6 was bid and awarded in compliance with the May 27, 2016 milestone for issuing the NTP in the Consent Order.

This quarter, the contractor moved into the BAF Backwash Treatment Facility, the lower level of the Headworks, and the Blower Building. Matco has made a major push to install the courtyard switchgear this quarter, and are nearing completion of this equipment installation. We anticipate energizing the courtyard switchgear in November. The two new 2MW generators are nearing completion. PC is holding the work with their failure to complete the west end restoration of the generator building and

by failing to get the louvers installed in the Generator Building.

Matco continues to work in the UV disinfection area, the Plant Water Building, the DN cells, the CN Cells 1-8, East Odor Control, the Methanol Building, and the West Sludge Pump Station. MATCO is providing input for the Project CPM baseline schedule. They completed the electrical work in the Administration Building, and are nearing completion in the Maintenance Building. The East Scrubber Building has been partially operational since the end of April, but some additional work items are being resolved to allow us to turn the facility over to the STP staff for operation. In the interim, PC remains responsible for the temporary operation of the facility.

Equipment and material shop drawings are being submitted for review and approval. We continue to maintain a temporary diesel generator at the site that is capable of running the critical loads in the event of another electrical outage from NYSEG.

3 Month Look Ahead: MATCO will continue to install overhead duct work for the various structures, and interior conduit and cable trays in buildings and structures as they are constructed. For example, the Chemical Feed Building, Generator Building, Headworks and Administration Buildings, and the East Scrubber Building are all nearing completion and will complete next quarter. They have received a considerable amount of materials and equipment which are being stored locally. They anticipate completing the installation of the new 2MW generators and ancillary electrical equipment in the new Generator Building and the courtyard gear during the next month. MATCO will continue installing electrical systems in the BAF Backwash Treatment Facility, the Headworks, the CN Cells 1-8, the SIPS area, the new Blower Building, the DN Cells, the UV Building, and the Methanol Building next quarter.

Contract Status: 70% Complete through September 2018

Contract No. 7 - BAF HVAC

The BAF HVAC contract supports the BAF General Civil Contract and includes installation of all HVAC Systems in all STP Facilities as well as revisions to the odor control systems throughout the plant. The odor control improvements are intended to alleviate the odors that have been prevalent in the past in and around the plant.

Status: Contract No. 7 Notice to Proceed was issued on May 27, 2016 in compliance with the DEC milestones in the Consent Order. The contractor continued submitting material submittals for the HVAC equipment for the project this quarter. They continue to provide supporting information for the development of the CPM schedule, and have acknowledged they can meet the required milestones of the Consent Order. They completed start up and testing for the HVAC system in the new Maintenance and Administration Building. They are working on the HVAC systems for both the new Chemical Building, East Odor Control Building, Northwest Electrical Building, West Sludge Pump Station, UV, Plant Water Pump Station, new Generator Building, and the Headhouse.

3 Month Look Ahead: J & K Plumbing will complete the startup and testing of the HVAC systems for the East Odor Control Building and Chemical Storage Buildings this quarter. They should also complete the HVAC installation at the new Generator Building, West Primary Sludge Pump Station, UV Disinfection, Plant Water Pump Station and DN Cells next quarter. They will begin installing the HVAC Equipment in the Mechanical Room for SIPS, and continue installing the systems in the Methanol Building, the West Sludge Pump Station, the CN Cells 1-8, and the DN Cells this quarter.

They have received a considerable amount of material and equipment and these are in storage and ready to be installed.

Contract Status: 75% Complete through September 2018

Contract No. 8 - BAF Plumbing

The BAF Plumbing contract supports the BAF General Civil Contract and includes installing plumbing systems for the new and existing facilities included in Contract No. 5.

Status: Contract No. 8 Notice to Proceed was issued in compliance with the May 27, 2016 milestone for issuing the NTP in the Consent Order. The contractor has continued providing the supporting information for the overall CPM schedule this quarter, and they have confirmed that they can meet the required milestones of the Consent Order.

This quarter they completed the installation of the plumbing in the new Maintenance and Administration Building, and continued installing plumbing in the East Scrubber Building, and the new Generator Building.

3 Month Look Ahead: JW Danforth will continue with the installation of the plumbing system as the structures and facilities are built. They also continue to work on the plant water supply system.

Contract Status: 78% Complete through September 2018

Contract No. 9 - Secant Pile Contract

The Secant Pile contract includes installation of the secant piles that support the excavation for the new BAF Backwash tank as well as supporting the new CN Cells 9-14. Construction also includes excavation to the final grade for the BAF Backwash tank. This project was bid separately from Contracts 5-8. In doing so, a minimum of four months on the critical path schedule was saved.

Status: The punch list for items to repair was prepared for the Contractor and they have completed the punch list work. They completed repairs of the latent defects discovered in the installation of the rebar couplings that the contractor installed in the wales and struts that support the C-N Cells above the BAF Backwash Tank.

Contract Status: 100% Complete

Contract No. 10 - Solids Handling Renovation - Civil

Contract No. 10 is intended to renovate and improve the solids handling systems including the existing Digester Control Building, existing digesters, solids dewatering systems, and all ancillary equipment.

Status: Bids for all of the Solids Handling Contracts were received on March 16, 2017. Additional funding has been secured for these contracts. The Notice to Proceed was issued on July 20, 2017. The Contractor completed the concrete coating work for the Sludge Blend Tanks and the concrete work for the new Solids Handling Building. Masonry block work is complete on the Solids Handling Building, and the brick work began this quarter. Mechanical equipment has been installed in the Solids Handling Building and pipe and other trades are actively working the structure to complete the Phase 2 work.

Quandel began work in the Thickener Pump Stations this quarter.

Quandel is protesting that the rehabilitation of the gas conditioning and gas safety equipment are included in their contract. Because of their delays in executing this work, the City has contracted direct with the equipment suppliers for the gas conditioning and safety equipment as well as the digester mixing equipment. The digester mixing equipment and the digester gas safety equipment has the potential to delay startup of the rehabilitated digesters into the first quarter of 2019.

We are actively working to clean the existing sludge from the sludge lines in the Digester Control Building and will also be cleaning the digester gas piping within the building. They are also protesting the work for the cementitious coating inside the new concrete tanks but have proceeded with the work under protest.

We are preparing for the Disputes Review Board to review the dispute and get a final decision on these two items. Quandel continued installing the new equipment in the Digester Control Building this quarter.

3 Month Look Ahead: After Quandel completes concrete masonry work for the new Solids Handling Building walls, the area around the building can be backfilled. When the east side is backfilled, PC can complete the storm drain and parking lot work for the new Administration Building. Quandel will continue installing the piping and equipment in the new Solids Handling Building. Quandel has stated that they do not believe they will complete the Milestone 1 or 2 until the second quarter of 2019 due to issues they have encountered with the gas processing equipment.

Contract Status: 72% Complete through September 2018

Contract No. 11 - Solids Handling Renovation - Electrical

Contract No. 11 is intended to renovate and improve the components of the Solids Handlings Systems including the existing Digester Control Building, existing digesters, solids dewatering systems, and all ancillary equipment. The contract is intended to support Contract No. 10 in the construction and renovation of the new Solids Handling System. The contract will follow the schedule of Contract No. 10.

Status: MATCO continued installing conduit and cable tray in the Digester Complex and Solids Handling Building this quarter.

3 Month Look Ahead: They are shooting for completion of the electrical equipment for the 4th quarter of 2018. MATCO will continue electrical work in the Solids Handling Building, Digester Control Building and will continue installing the new electrical conduit, wire, and equipment in the building in an effort to support completion of Milestone 1 and 2.

Contract Status: 27% Complete Through September 2018

Contract No. 12 - Solids Handling Renovation – HVAC

Contract No. 12 is intended to renovate and improve the HVAC components of the Solids Handlings Systems including the existing Digester Control Building, existing digesters, solids dewatering systems, and all ancillary equipment. The contract is intended to support Contract No. 10 in the construction and renovation of the new Solids Handling System. The contract will follow the schedule of Contract No. 10.

Status: J&K completed setting the boilers and installing the piping for the boiler system in the Digester Control Building. They began installing the HVAC equipment in the Solids Handling Building.

3 Month Look Ahead: J&K should complete installing the HVAC equipment in the Digester Complex as well as the Solids Handling Building next quarter. They will continue HVAC work in the Sludge Thickener Buildings this quarter.

Contract Status: 66% Complete through September 2018

Contract No. 13 - Solids Handling Renovation – Plumbing

Contract No. 13 is intended to renovate and improve the plumbing components solids handling systems including the existing Digester Control Building, existing digesters, solids dewatering systems, and all ancillary equipment. The contract is intended to support Contract No. 10 in the construction and renovation of the new Solids Handling System. The contract will follow the schedule of Contract No. 10.

Danforth continued work on the interior piping in the Solids Handling Building, Digester Complex, and Sludge Thickener Buildings this quarter.

3 Month Look Ahead: Danforth will continue the work in the Digester Control Building, Solids Handling Building and Sludge Thickener Buildings to support the effort for compliance with Milestone 1 and 2.

Contract Status: 58% Complete through September 2018

Floodwall

The new floodwall being constructed at the STP is intended to protect the plant to an elevation 1.5 feet above the 2011 flood level. The floodwall includes concrete walls on the east and north side of the STP. The project also includes two new pump stations to pump rainwater out of the plant during the storm events that might overwhelm the existing storm drain system. The new flood wall system works in conjunction with new flood wall features included in Contract No. 5 BAF General Civil Construction. The flood wall systems are being funded by a FEMA recovery grant.

Status: Streeter was able to get the 54-inch gate installed in MH 3 this quarter. They have begun the work to install the 54-inch gate in the Sampling Shed. When Streeter began demolition, a significant differing condition was discovered at the Sampling Shed lower level that required a special transition piece to be cast on top of the existing lower structure.

Streeter began installing the bridge from the floodwall to MH 3. We anticipate deleting the removal of the heavy stone that will be used as the haul road for the WQIP Project from Streeter's contract, and we also anticipate having the WQIP contractor remove the stone and complete the storm drain installations adjacent to storm drain pump stations 1 and 2.

The work for the selective removal of the existing coatings in Digesters No. 1 and No. 2 is complete. Significantly, more coatings came off in Digesters No. 1 and No. 2, and a repair coating will be performed via a change order to Streeter's contract.

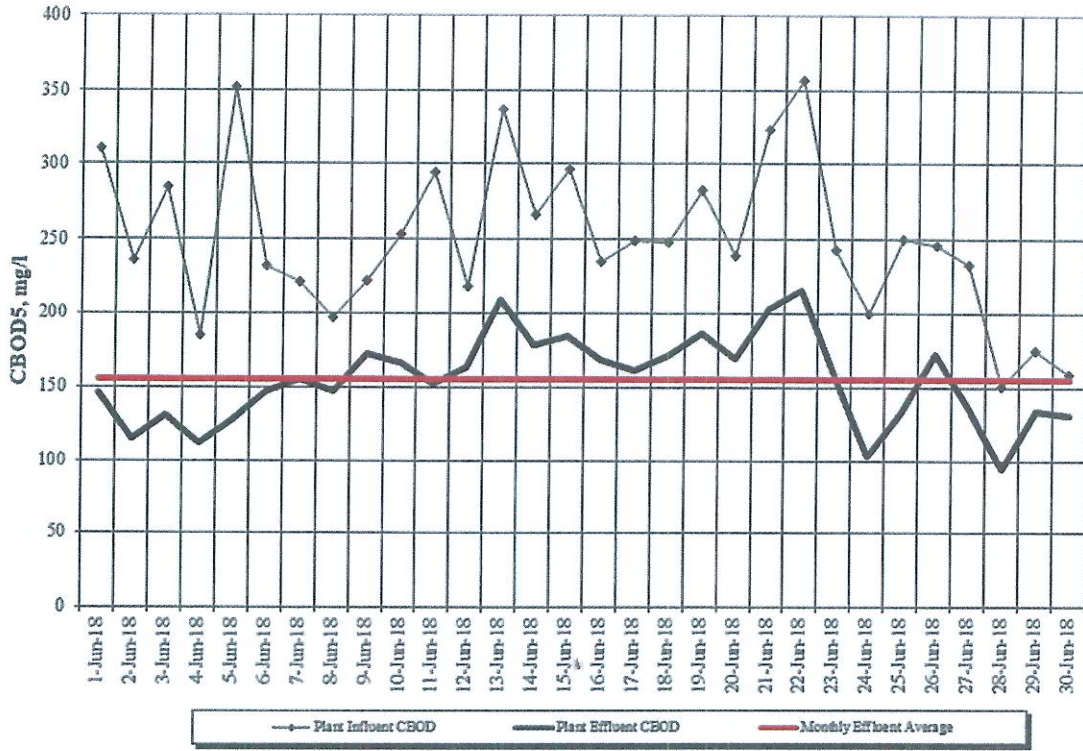
3 Month Look Ahead: Streeter will complete installing the 30" Binghamton University line into

Manhole #3 and install the 54-inch gate at the Sampling Shed this quarter. They will also complete installing the precast structures at both MH 3 and the Sampling Shed next quarter. We should be able to get substantial completion for the Floodwall contract by the end of 2018, with the exception of the work that will be removed from the contract and the coating repairs to Digesters No. 1 and No .2.

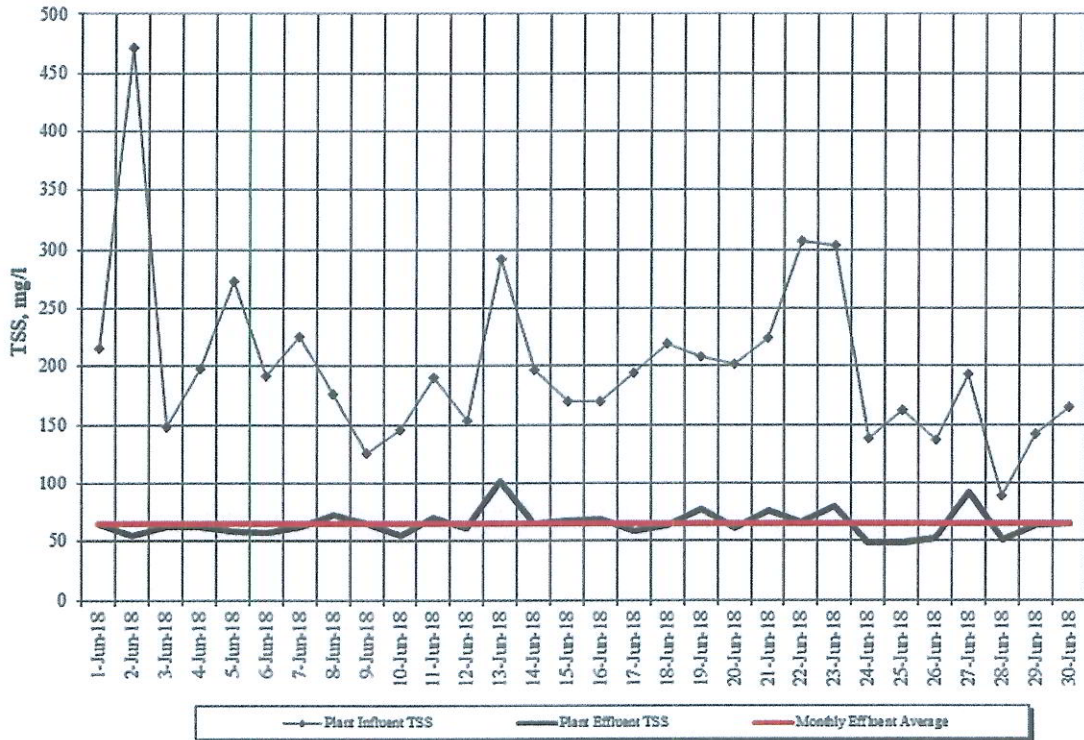
Contract Status: 94% Complete through September 2018

ATTACHMENT A
Facility Operations

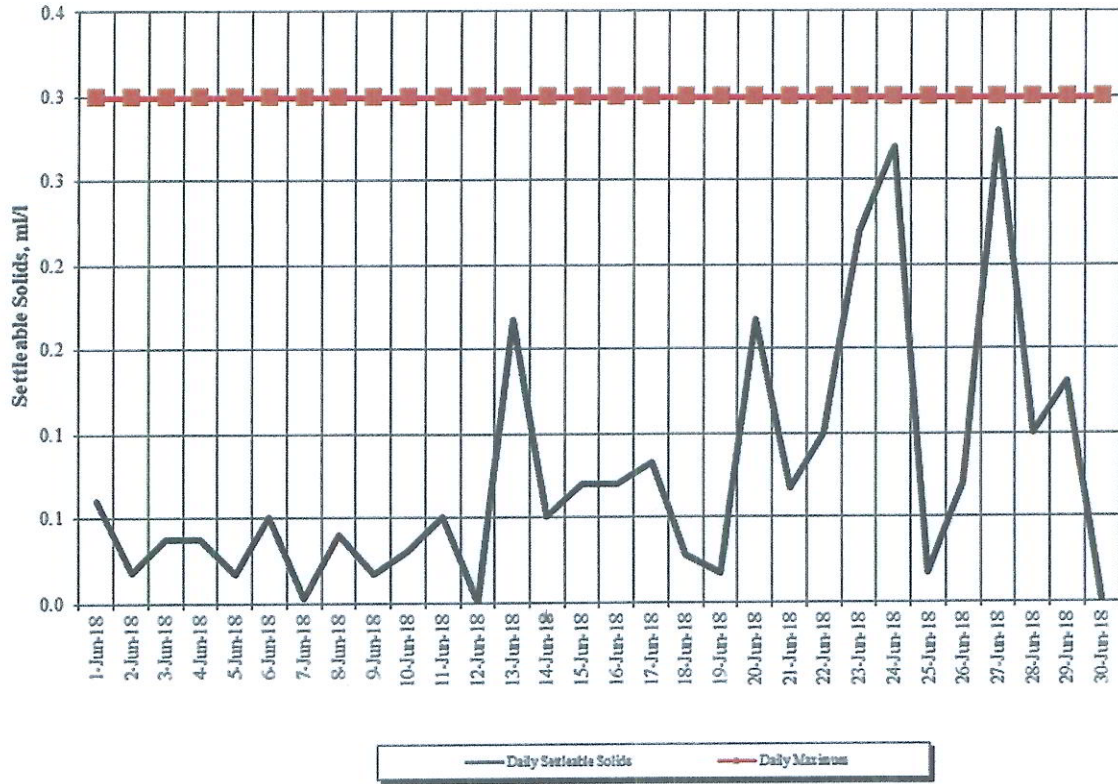
CBOD5 Concentrations
Binghamton - Johnson City JSTP



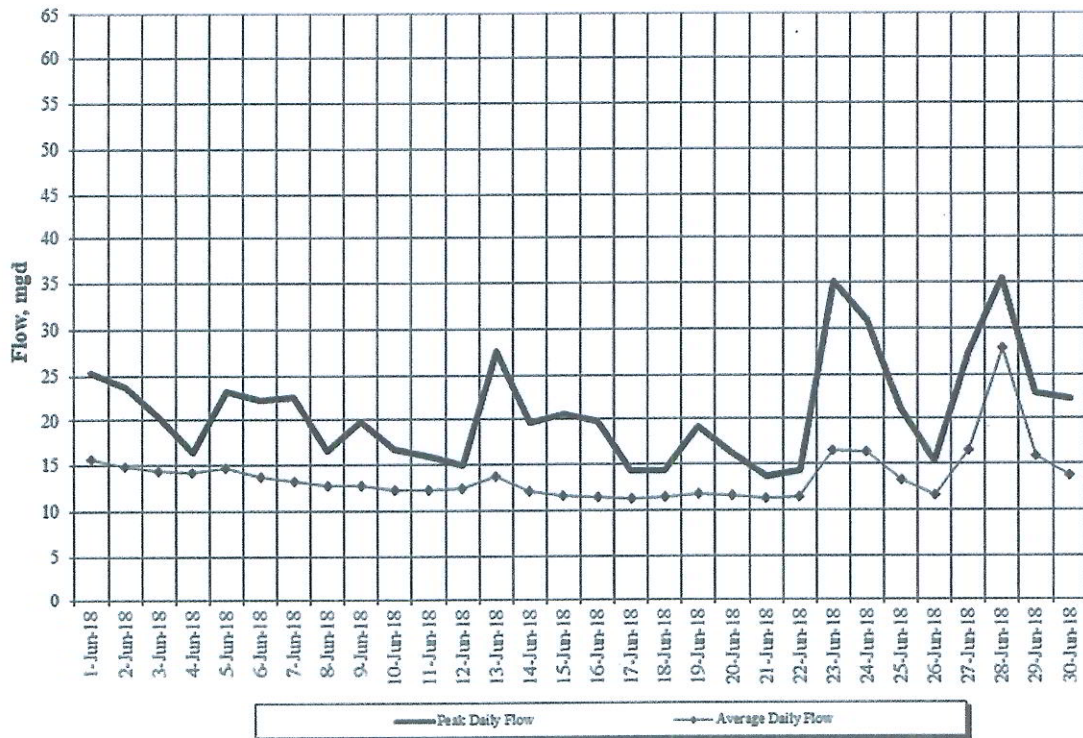
TSS Concentrations
Binghamton - Johnson City JSTP



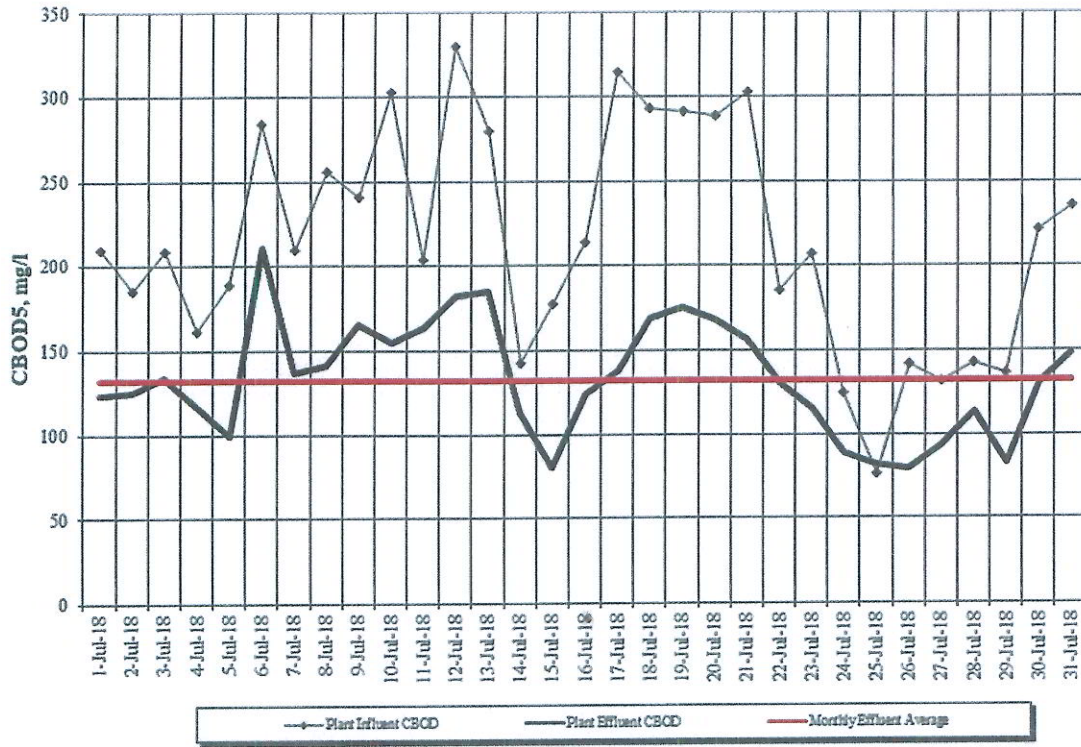
Settleable Solids
Binghamton - Johnson City JSTP



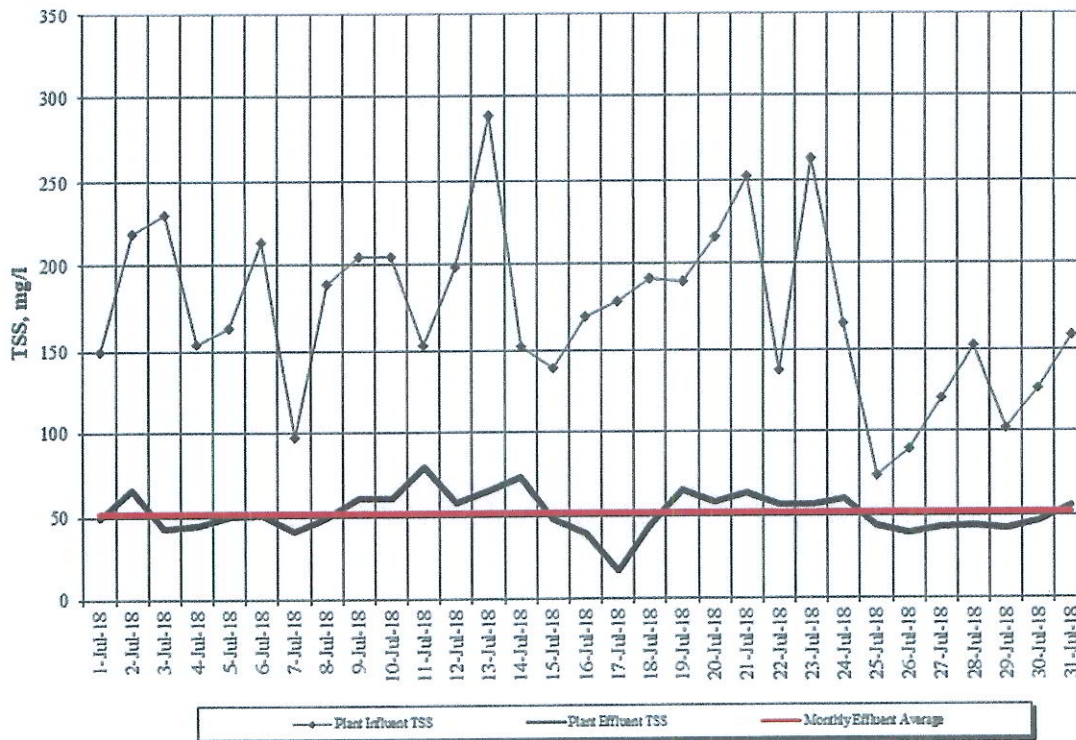
Daily Flows
Binghamton - Johnson City JSTP



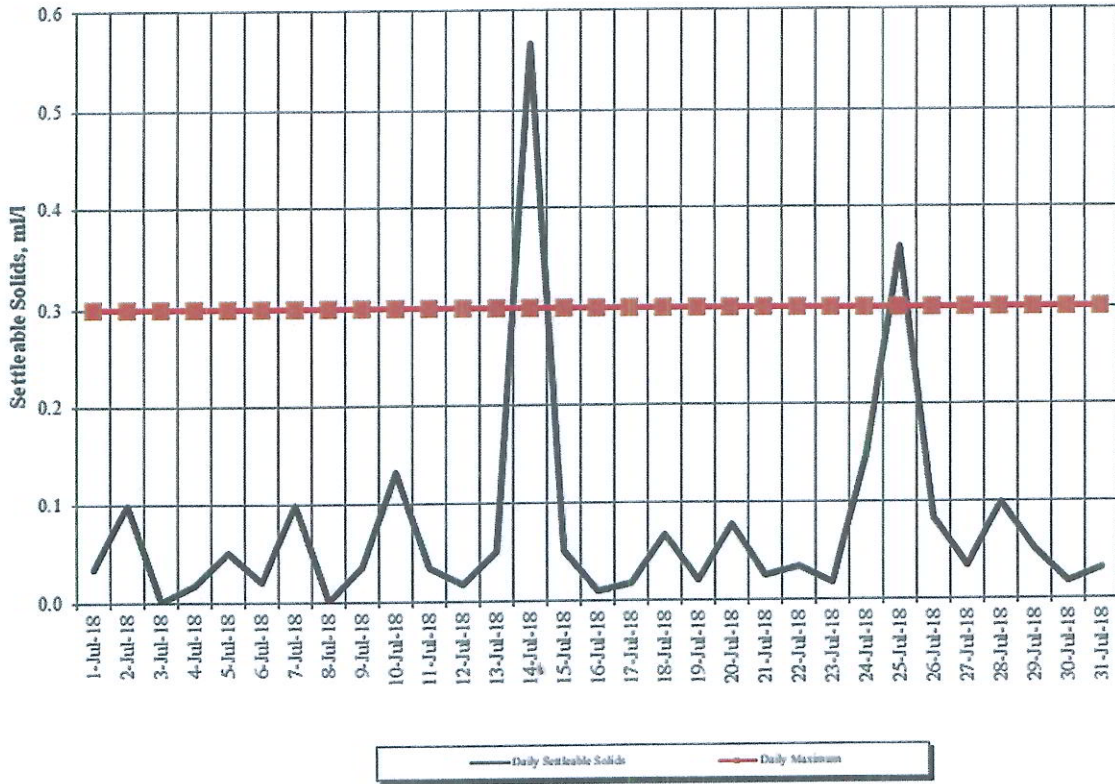
CBOD5 Concentrations
Binghamton - Johnson City JSTP



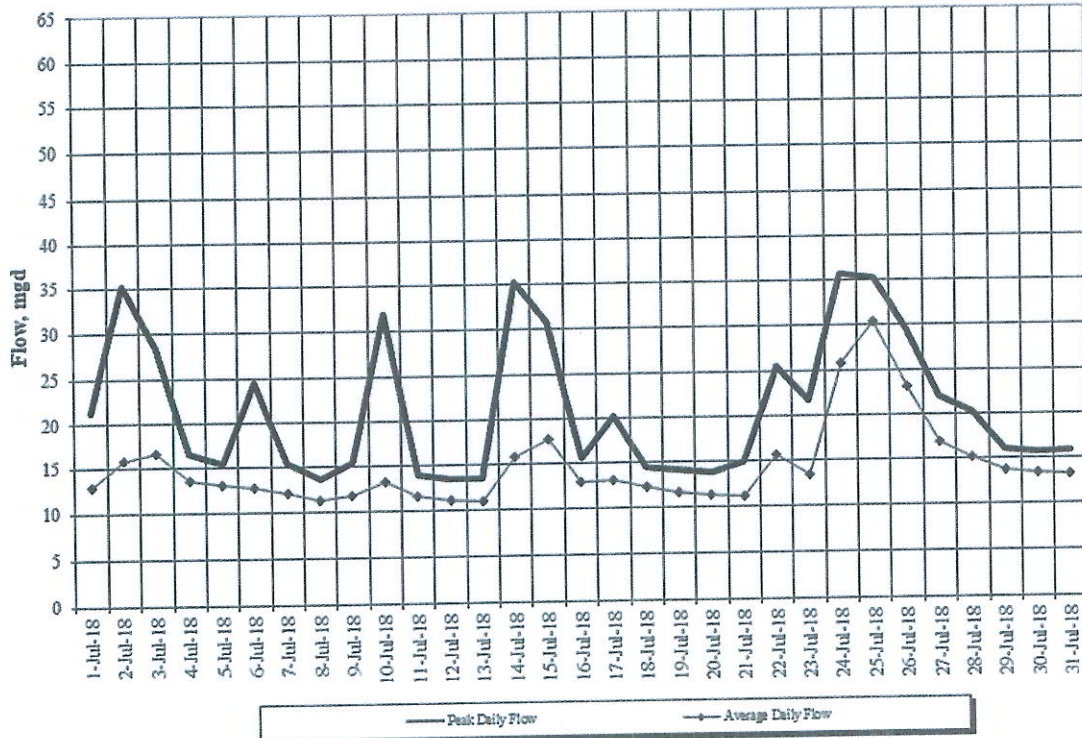
TSS Concentrations
Binghamton - Johnson City JSTP



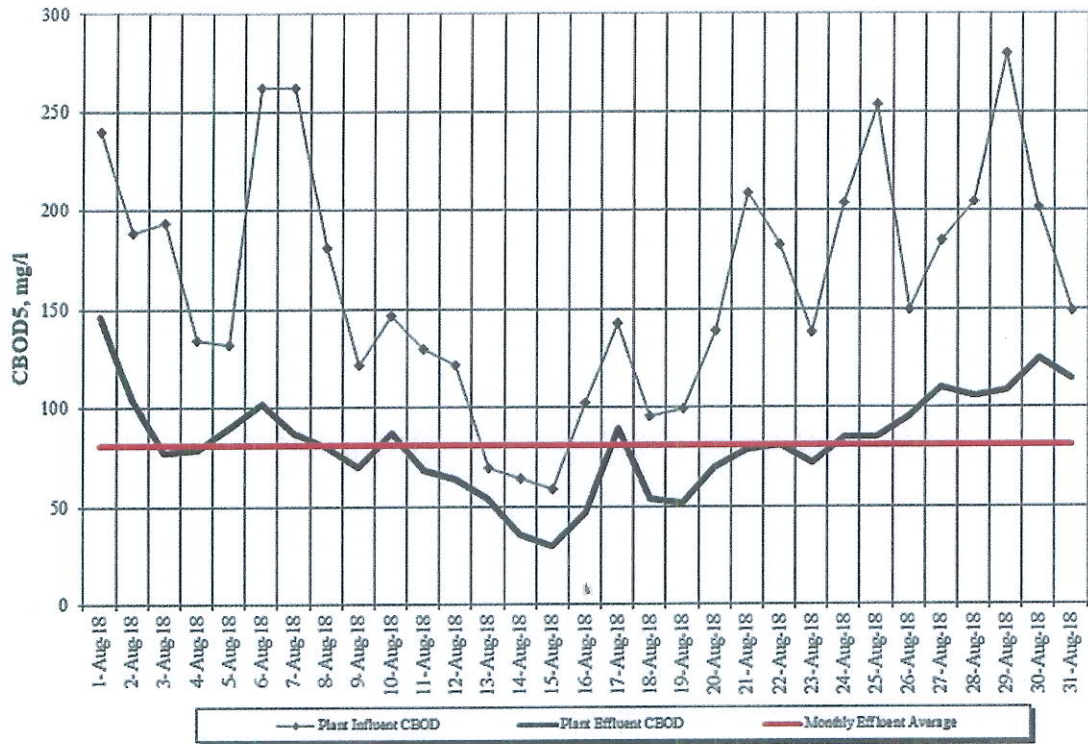
Settleable Solids
Binghamton - Johnson City JSTP



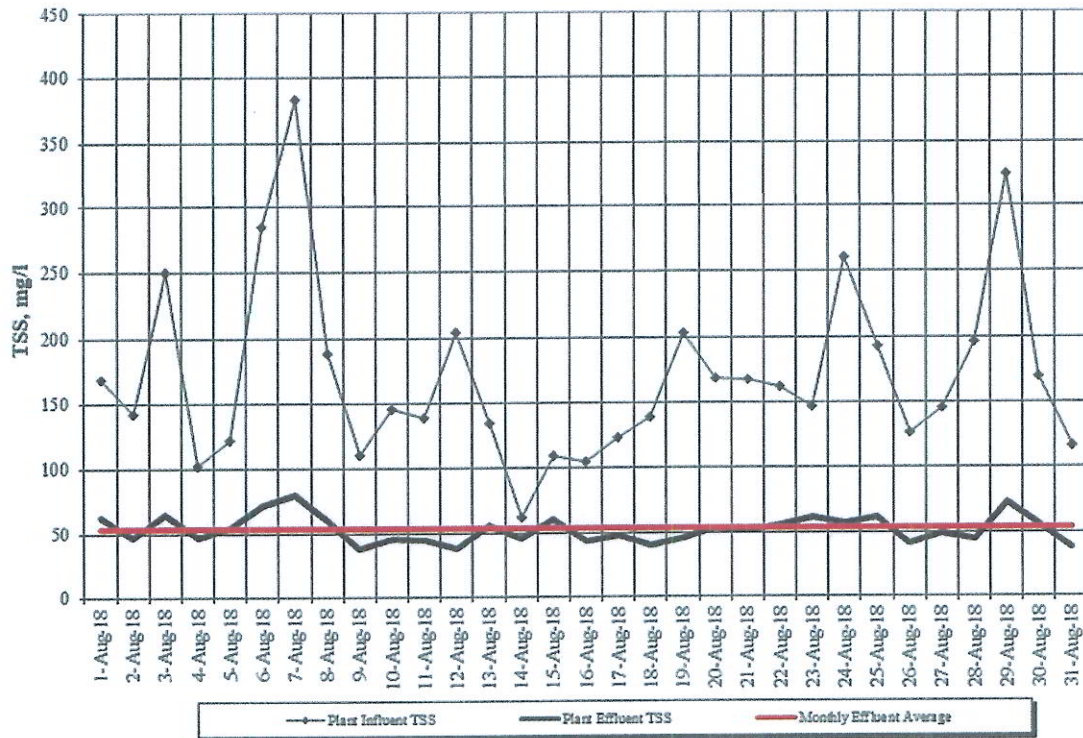
Daily Flows
Binghamton - Johnson City JSTP



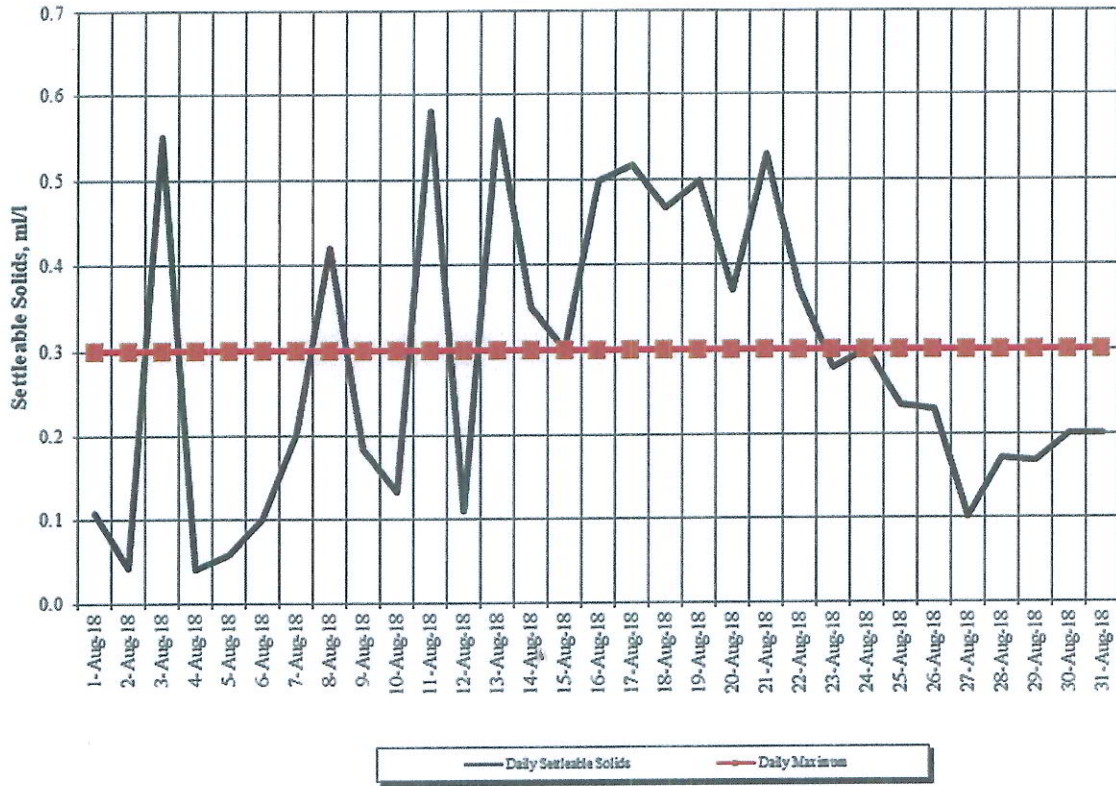
CBOD5 Concentrations
Binghamton - Johnson City JSTP



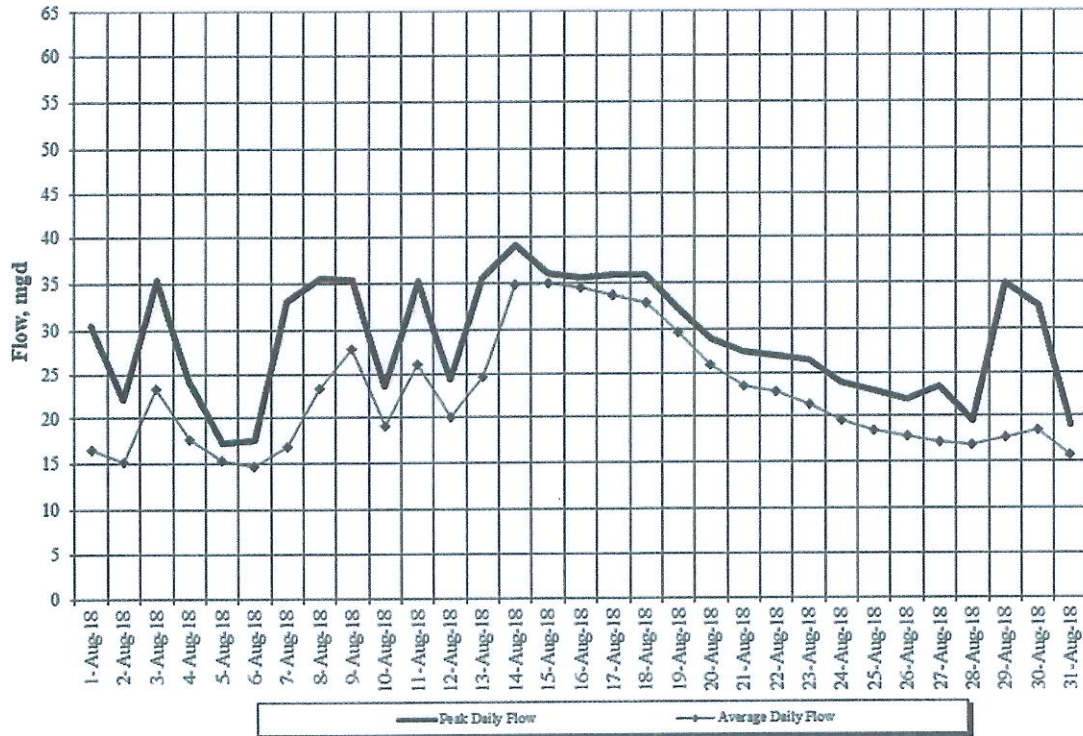
TSS Concentrations
Binghamton - Johnson City JSTP



Settleable Solids
Binghamton - Johnson City JSTP



Daily Flows
Binghamton - Johnson City JSTP



DATE	TOTAL	Final Eff	FW	Final Eff	FW	CL 2	Fecal	Eff.	FW	Eff. Total	Daily	Iron (Fe)
	FLOW	Amm. Avg	Amm. Avg	TKN	TKN	AVG	Coli mg/l	Phos.	Phos. Avg	Iron	Total Q	lbs/day
1-Jun-18	15.75			20.5	28.0	1.01	578					0
2-Jun-18	14.89			16.7	20.1	1.52	36					0
3-Jun-18	14.35			19.1	19.8	1.26	106					0
4-Jun-18	14.24			19.1	20.1	1.49	1800					0
5-Jun-18	14.69	14.5	12.7	21.5	27.5	1.54	840	2.6	3.5	1.36	14.69	167
6-Jun-18	13.78			18.7	22.6	1.5	487					0
7-Jun-18	13.32			19.1	19.0	1.66	1000			1.53	13.32	170
8-Jun-18	12.81			20	18.8	1.37	4					0
9-Jun-18	12.79			18.4	16.4	1.49	2					0
10-Jun-18	12.35			18	20.9	1.6	2					0
11-Jun-18	12.36			19.6	22.9	1.72	11.5					0
12-Jun-18	12.51	15.5	16.0	19.4	25.7	1.54	11.5	3.2	3.2	0.667	12.51	70
13-Jun-18	13.82			24.6	28.3	1.33	23					0
14-Jun-18	12.13			24.2	26.3	1.43	7			0.832	12.13	84
15-Jun-18	11.58			26.1	26.4	1.27	4					0
16-Jun-18	11.43			24	25.8	1.42	2					0
17-Jun-18	11.30			22.5	26.4	1.34	2					0
18-Jun-18	11.54			21.3	25.7	1.44	11.5					0
19-Jun-18	11.86	16.7	16.1	24.7	26.2	1.36	15.4	3	3.2	0.809	11.86	80
20-Jun-18	11.69			18.4	23.6	1.43	27					0
21-Jun-18	11.37			20.8	22.2	1.46	4			1.13	11.37	107
22-Jun-18	11.41			21.7	27.3	1.33	4					0
23-Jun-18	16.50			15.1	21.6	1.33	2					0
24-Jun-18	16.41			12.9	16.2	1.33	2					0
25-Jun-18	13.28			17.6	20.4	1.12	5					0
26-Jun-18	11.70	15.7	14.6	25.6	21.6	1.09	7.7	3	2.9	1.38	11.70	135
27-Jun-18	16.47			17.6	20.9	1.25	16					0
28-Jun-18	27.95			12.4	14.3	1.34	740			2.43	27.95	566
29-Jun-18	15.92			16.4	18.8	1.28	8					0
30-Jun-18	13.78			15.9	17.9	1.17	2					0
	13.80	15.60	14.9	19.73	22.4	1.72	18.0	2.95	3.22	1.27	14.44	153
	TOTAL	Final Eff.	FW	Final Eff	FW	CL 2	30 Day	EFF.	FW	Eff. Total	Daily	Mthly Avg
	FLOW	Avg as N mg/l	Avg as N mg/l	TKN	TKN	Max	MEAN	PHOS	PHOS.	Iron	Total Q	Iron lbs/day

6,765	
LBS/day	

0	
15 Day Mean	41.98

DATE	TOTAL	Final Eff	FW	Final Eff	FW	CL 2	Fecal	Eff.	FW	Eff. Total	Daily	Iron (Fe)
	FLOW	Amm. Avg	Amm. Avg	TKN	TKN	AVG	Coli mg/l	Phos.	Phos. Avg	Iron	Total Q	lbs/day
1-Jul-18	12.89			19	20.3	1.21	2					
2-Jul-18	15.84	11.5	11.9	14.5	20.6	1.65	110	2.6	3.1	2.28	15.84	301
3-Jul-18	16.72			19.5	18.3	0.84	5					
4-Jul-18	13.53			17.2	19.7	1.33	2					
5-Jul-18	13.06			16.8	21.8	1.28	60			0.731	13.06	80
6-Jul-18	12.70			20.2	25.6	1.34	20					
7-Jul-18	12.14			15.8	16.5	1.54	2					
8-Jul-18	11.26			17.9	19.1	1.21	2					
9-Jul-18	11.87			26.6	24.1	1.15	5					
10-Jul-18	13.26	14.7	14.4	20.3	26.3	1.11	5	3.3	3.5	1.69	13.26	187
11-Jul-18	11.57			24.1	26.6	1.05	4					
12-Jul-18	11.19			24.7	30.4	1.35	4					
13-Jul-18	10.96			25.2	27.1	1.13	4			1.38	10.96	126
14-Jul-18	15.89			17.2	16.0	1.48	2					
15-Jul-18	17.76			15.4	18.8	1.04	2					
16-Jul-18	12.94			19.5	254.2	1.28	23					
17-Jul-18	13.14	14	14.6	23.2	28.1	1.25	115	2.4	2.9	0.884	13.14	97
18-Jul-18	12.31			18.7	23.7	1.16	4					
19-Jul-18	11.63			25.1	24.7	1.59	4			0.829	11.63	80
20-Jul-18	11.26			22.5	23.7	1.35	8					
21-Jul-18	11.17			19.5	24.2	1.23	2					
22-Jul-18	15.75			14.7	16.4	1.33	2					
23-Jul-18	13.37			17.6	20.2	1.28	5					
24-Jul-18	25.69	6.4	4.8	10.4	11.5	1.45	272	1.4	1.7	2.47	25.69	529
25-Jul-18	30.26			9.6	11.8	1.44	44					
26-Jul-18	23.24			12.2	12.0	1.4	4			1.47	23.24	285
27-Jul-18	17.00			16.6	17.0	1.26	4					
28-Jul-18	15.25			14.5	18.9	1.23	2					
29-Jul-18	13.82			18.4	20.5	1.12	2					
30-Jul-18	13.47			14.3	17.0	1.24	5					
31-Jul-18	13.27	13.9	12.6	11.9	14.1	1.45	5	2.8	2.8	1.52	13.27	168
	14.65	12.10	11.7	18.16	28.0	1.65	6.38	2.50	2.79	1.47	15.57	191
TOTAL		Final Eff	FW	Final Eff	FW	CL 2	30 Day	EFF.	FW	Eff. Total	Daily	Mthly Avg
FLOW		Avg as N mg/l	Avg as N mg/l	TKN	TKN	Max	MEAN	PHOS	PHOS.	Iron	Total Q	Iron lbs/day
		1,479				0						
		LBS/day				15 Day Mean	5.27					

DATE	TOTAL	Final Eff	FW	Final Eff	FW	CL 2	Fecal	Eff.	FW	Eff. Total	Daily	Iron (Fe)
	FLOW	Amm. Avg	Amm. Avg	TKN	TKN	AVG	Coli mg/l	Phos.	Phos. Avg	Iron	Total Q	lbs/day
1-Aug-18	16.44			18.4	18.1	1.29	4					0
2-Aug-18	15.21			5.3	6.7	1.16	134			6.66	15.21	845
3-Aug-18	23.38			11.7	5.8	1.48	270					0
4-Aug-18	17.61			5.6	9.4	1.46	2					0
5-Aug-18	15.31			5.5	8.1	1.31	2					0
6-Aug-18	14.70			3.6	7.7	1.07	5					0
7-Aug-18	16.91	9.6	8.1	7.2	10.8	1.35	5	2.2	3.9	5.17	16.91	729
8-Aug-18	23.27			9.8	9.5	1.39	4					0
9-Aug-18	27.80			10.4	12.2	1.33	12			5.04	27.80	1169
10-Aug-18	19.04			8.2	14.0	1.2	4					0
11-Aug-18	26.03			7.7	10.7	1.26	61					0
12-Aug-18	20.00			8.2	9.3	1.18	38					0
13-Aug-18	24.69			3.6	7.8	1.58	5					0
14-Aug-18	34.90	1.2	1.3	5.2	3.9	1.3	5	0.34	0.4	4.52	34.90	1316
15-Aug-18	35.03			4.9	3.8	1.12	4					0
16-Aug-18	34.51			7.4	7.9	1.39	40			3.4	34.51	979
17-Aug-18	33.72			7.1	9.0	1.44	204					0
18-Aug-18	32.98			7.3	8.9	1.49	30					0
19-Aug-18	29.61			8.2	9.6	1.33	74					0
20-Aug-18	25.92			15.3	12.9	1.36	1180					0
21-Aug-18	23.56	6.9	8.2	12.6	15.4	1.6	8	1.3	1.7	4.38	23.56	861
22-Aug-18	22.92			12.4	16.0	1.51	188					0
23-Aug-18	21.45			16.4	15.8	1.63	140			5.27	21.45	943
24-Aug-18	19.59			15.3	19.8	1.41	80					0
25-Aug-18	18.41			13.4	17.2	1.47	2					0
26-Aug-18	17.80			14.5	16.3	1.39	13					0
27-Aug-18	17.15			15.9	18.2	1.37	5					0
28-Aug-18	16.87	6.5	7.7	17.8	24.3	1.28	5	2	2.8	3.12	16.87	439
29-Aug-18	17.61			13.5	19.1	1.17	24					0
30-Aug-18	18.44			10.7	15.7	1.45	4			4.06	18.44	624
31-Aug-18	15.76			15.1	9.4	1.4	4					0
	22.47	6.05	6.3	10.26	12.0	1.63	16.53	1.46	2.18	4.62	23.29	898
	TOTAL	Final Eff.	FW	Final Eff	FW	CL 2	30 Day	EFF.	FW	Eff. Total	Daily	Mthly Avg
	FLOW	Avg as N	Avg as N	TKN	TKN	Max	MEAN	PHOS	PHOS.	Iron	Total Q	Iron
		mg/l	mg/l					.				lbs/day
		1,134					0					
		LBS/day					15 Day Mean					9.71

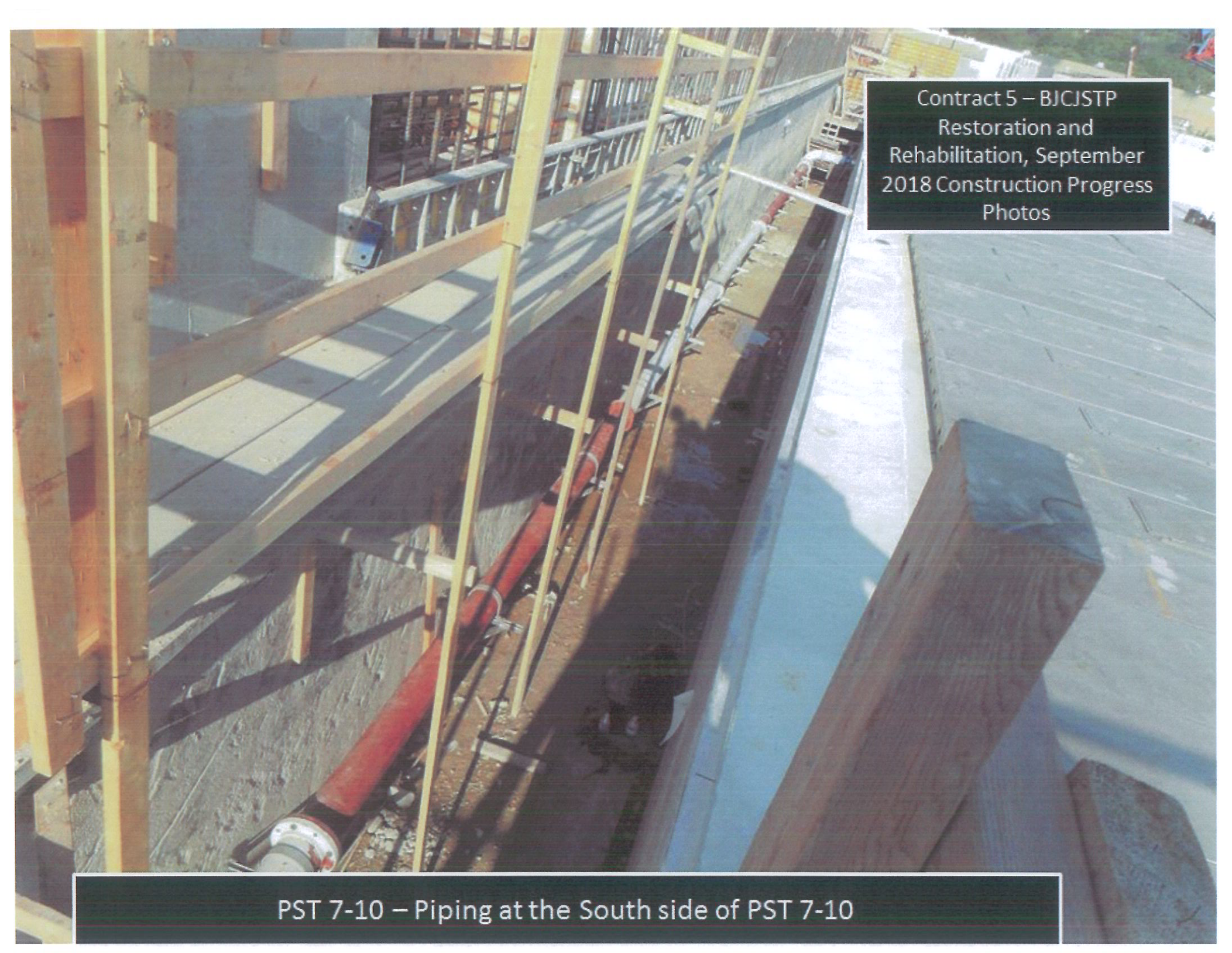
ATTACHMENT B

Photos

Contract 5 – BICJSTP
Restoration and
Rehabilitation, September
2018 Construction Progress
Photos

09.14.2018 13:32

CN 1-8 – Cell 5 Bonding Agent Prior to Concrete Placement for Sloped Benching

A high-angle photograph of a construction site. A long, narrow concrete channel is under construction. On the left side, a complex wooden formwork structure is in place, supported by vertical posts. A large red pipe is being installed within this formwork, held in place by wooden bracing. The right side of the channel is a smooth, light-colored concrete wall. The ground around the channel is dirt and construction debris. In the background, other parts of the construction site are visible under a clear sky.

Contract 5 – BICJSTP
Restoration and
Rehabilitation, September
2018 Construction Progress
Photos

PST 7-10 – Piping at the South side of PST 7-10

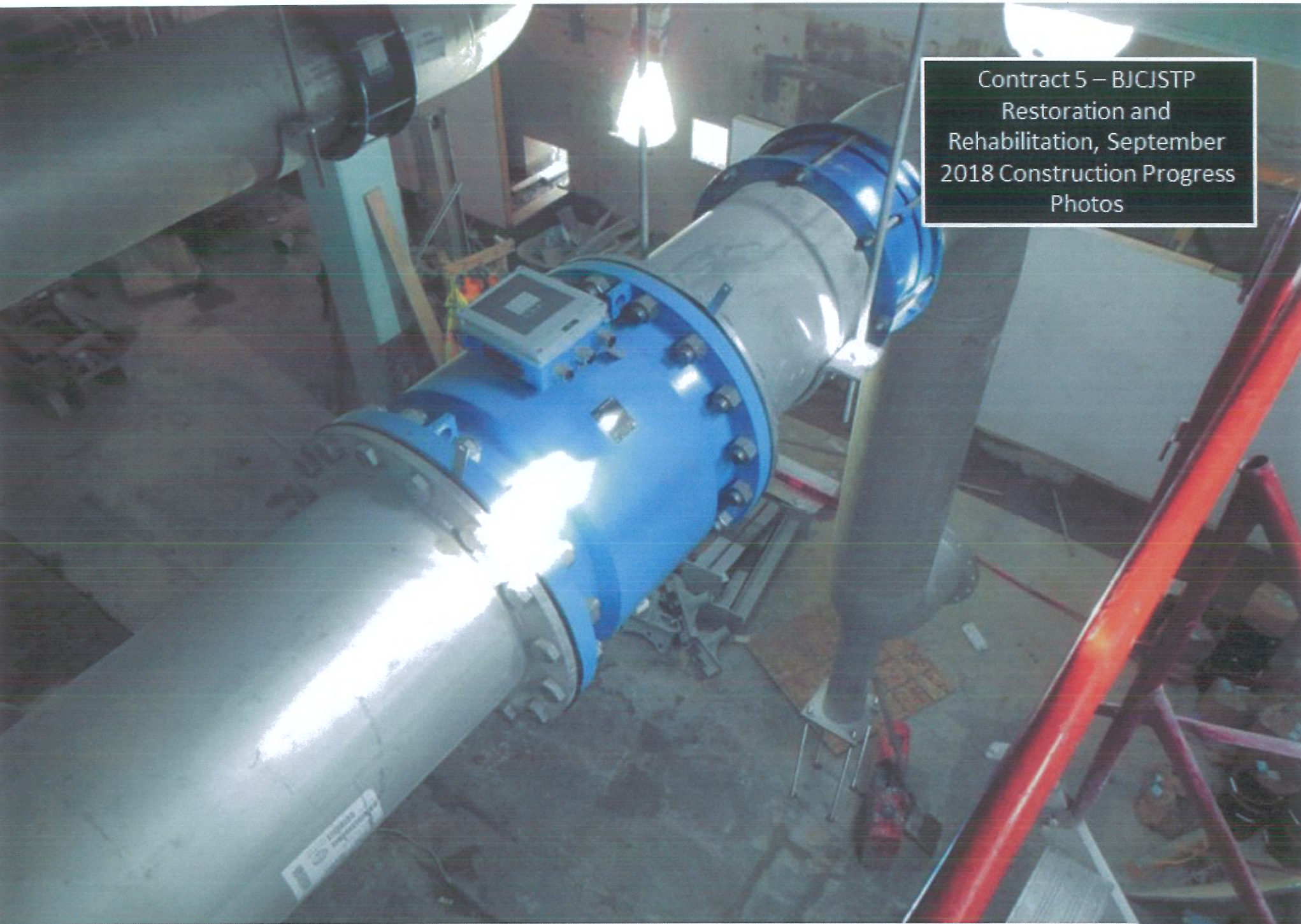
Contract 5 – BICJSTP
Restoration and
Rehabilitation, September
2018 Construction Progress
Photos

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CN 9-14 – Looking North from the Influent Level of CN 1-8



Contract 5 – BJCJSTP
Restoration and
Rehabilitation, September
2018 Construction Progress
Photos

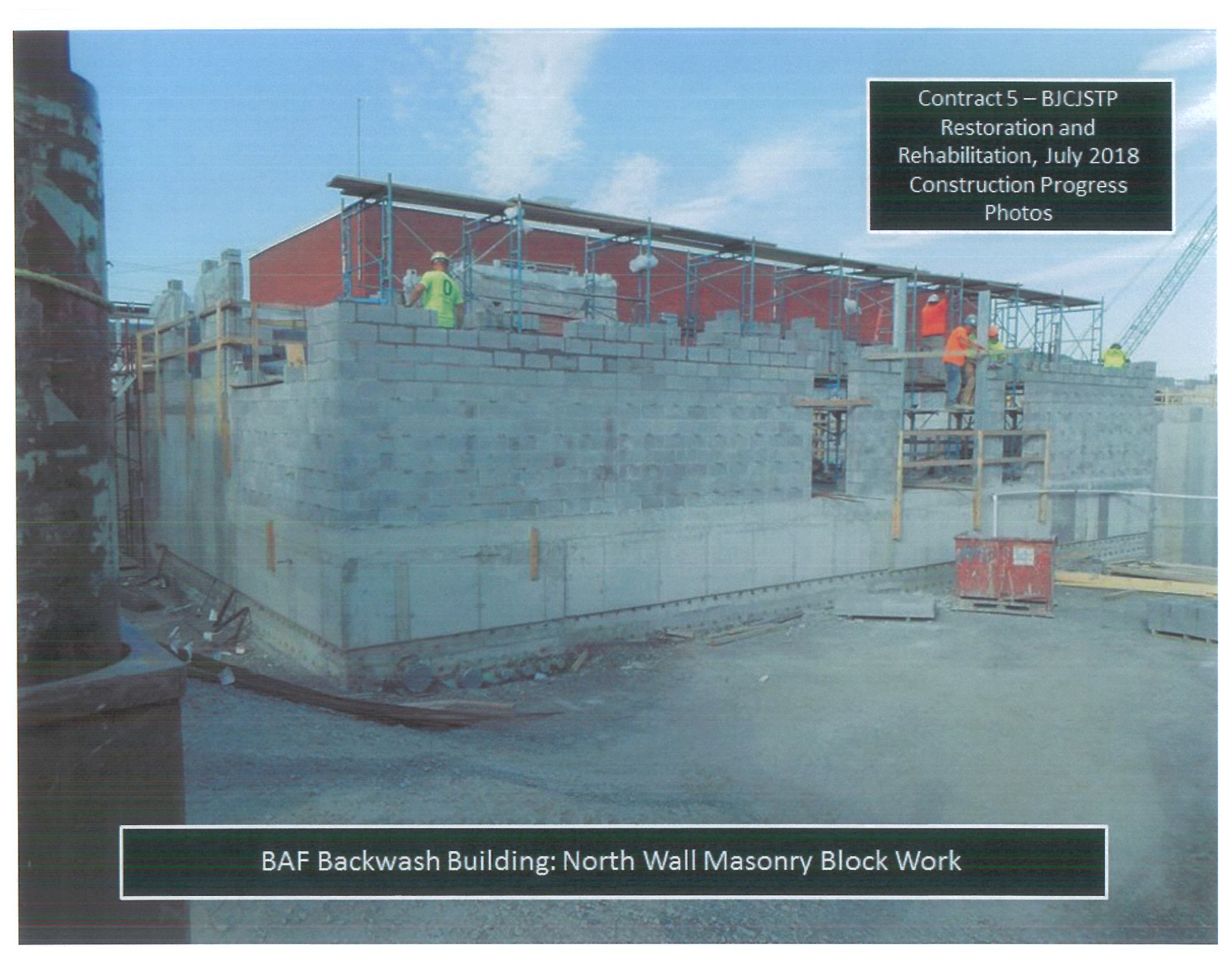


DN Filter Complex – Lower Level Overhead Pipe Installation

A photograph of a construction site showing a long, narrow concrete formwork structure. Inside the formwork, a dense grid of reinforcing steel (rebar) is laid out. The rebar is held in place by orange plastic chairs. The structure is supported by wooden formwork on the right side. The background shows a concrete wall and some construction equipment.


Contract 5 – BJCJSTP
Restoration and
Rehabilitation, August 2018
Construction Progress
Photos

CN 9-14 – South Struts Reinforcing Steel Between Grid Line 1 and 3



Contract 5 – BJCJSTP
Restoration and
Rehabilitation, July 2018
Construction Progress
Photos

BAF Backwash Building: North Wall Masonry Block Work



Contract 6 – BICJSTP
Restoration and
Rehabilitation, August 2018
Construction Progress
Photos

Courtyard Duct Bank Reinforcing Steel

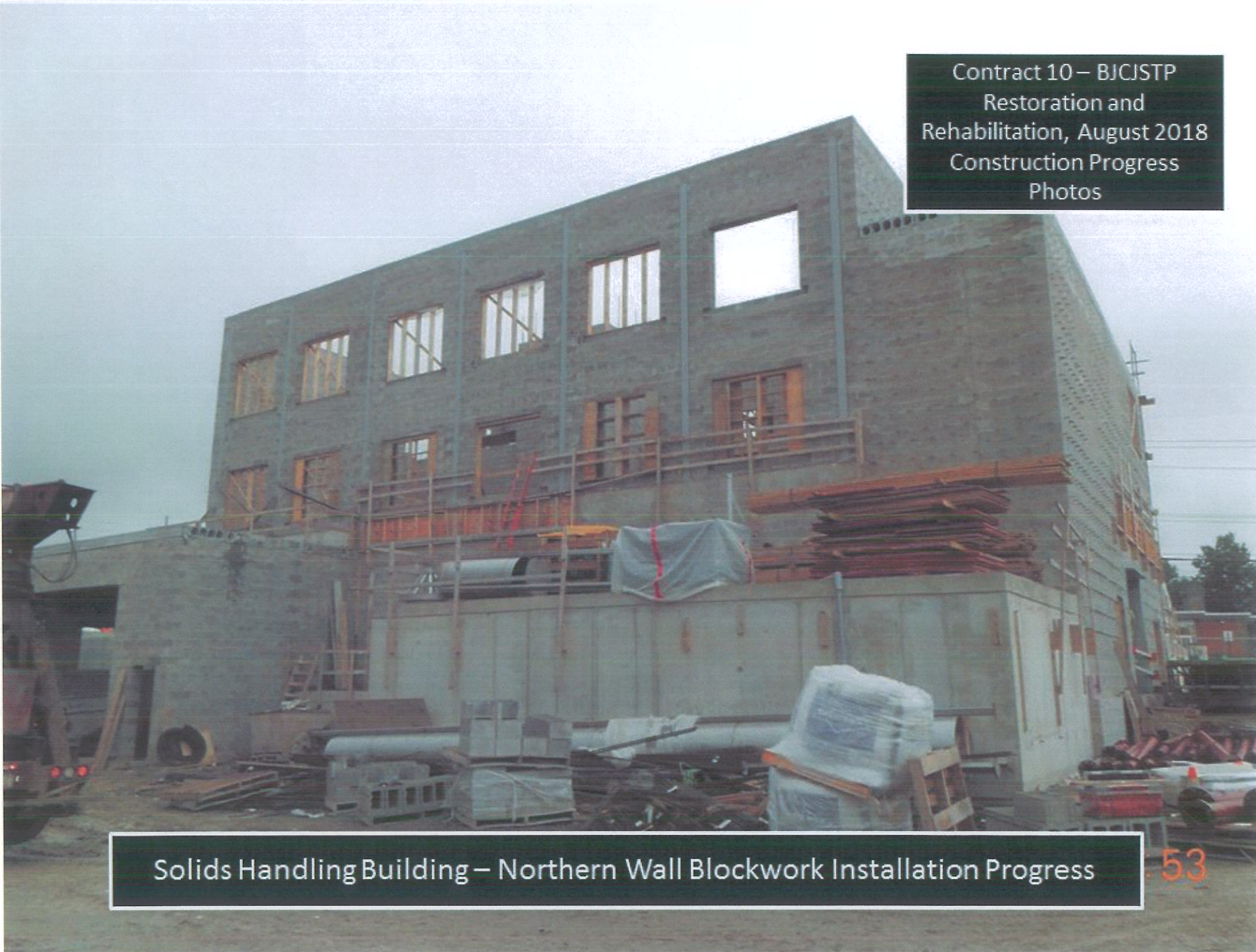
Contract 10 – BJCJSTP
Restoration and
Rehabilitation, September
2018 Construction Progress
Photos



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Solids Handling Building – South Brickwork Progress

Contract 10 – BJCJSTP
Restoration and
Rehabilitation, August 2018
Construction Progress
Photos



Solids Handling Building – Northern Wall Blockwork Installation Progress

Contract 10 – BJCJSTP
Restoration and
Rehabilitation, August 2018
Construction Progress
Photos



Solids Handling Building – South Wall Vapor Barrier Application

Contract 13 – BJCJSTP
Restoration and
Rehabilitation, September
2018 Construction Progress
Photos

Solids Handling Building – Sludge Processing Piping

