September 2018 Monthly Report

BJCJSTP Rehabilitation and Restoration Project

The following projects are either nearing completion, in construction, or in the planning stage.

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	Complete
	Replacement	
Contract No. 5	BAF Restoration and	Projected Phase 1 Substantial
	Rehabilitation Civil Contract	Completion April 2019. Projected Phase
		2 Substantial Completion August 2019.
Contract No. 6	BAF Electrical	Projected Phase 1 Substantial
		Completion April 2019. Projected Phase
		2 Substantial Completion August 2019.
Contract No. 7	BAF HVAC	Projected Phase 1 Substantial
		Completion April 2019. Projected Phase
		2 Substantial Completion August 2019.
Contract No. 8	BAF Plumbing	Projected Phase 1 Substantial
	STOCKE ST	Completion April 2019. Projected Phase
		2 Substantial Completion August 2019.
Contract No. 9	Secant Pile Contract	Complete
Contract No. 10	Solids Handling Renovation	Substantial Completion #1 – February
	Civil Contract	2019; Substantial Completion #2 -
		February 2019; Substantial Completion
		#3 - February 20, 2019; Final
		Completion - July 10, 2019.
Contract No. 11	Solids Handling Electrical	See Contract #10 Completion Dates
Contract No. 12	Solids Handling HVAC	See Contract #10 Completion Dates
Contract No. 13	Solids Handling Plumbing	See Contract #10 Completion Dates
Floodwall	Floodwall and New Diversion	Currently in Construction. Anticipated
	Structure	Completion Date January 2019.

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 cleared the way for the construction of a new maintenance facility.

Contract Status: 100% Complete - Contract Closed

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. The cost of the work associated with this contract is being reimbursed by FEMA due to the flood of 2011.

Status: Blue Heron has completed all of the work not deleted by change. The elutriate pumps were deleted from the scope of work and will be performed under Contract #5.

Contract Status: 100% Complete - Contract Closed

Contract No. 3 - BAF Facility Demolition

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

Contract Status: 100% Complete - Contract Closed

Contract No. 4 - MCC - HH Emergency Replacement

Contract No. 4 replaced the original existing Motor Control Center (MCC) in the Head House (HH). 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 was both critical to keeping the BJCJSTP in service, and because the original MCC was extremely unreliable due to the age and deteriorated condition of the gear. MCC HH Emergency replacement also replaced 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 included replacement of the existing raw sewage variable frequency drives that were located in the existing MCC HH. The new drives installed are more reliable, more efficient, and will provide better performance of the existing raw sewage pumps.

Status: All work on the MCC- HH project has been completed.

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, new chemical storage building, modification of the primary clarifier structural components to replace the aged and deteriorated mechanical equipment, new secondary influent pumps 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: In September, PC only placed about 1200 CY of concrete. Their progress was impacted by several days of inclement weather. They completed the concrete work for the trench slabs between Headworks and the Primary Distribution Box No. 1. PC finally resumed work on the masonry work for the Headworks. They had pulled the crew from the Headworks to work on the masonry work at the Blower Building. PC Completed the concrete beams and masonry work in the southwest corner, and can now set the precast hollow core roof planks on October 10th. Process equipment installation is ongoing in the lower level of the Headworks.

Masonry work for the BAF Backwash Treatment Facility is complete and the precast concrete roof panels are set. PC has completed the parapet wall and has installed the roof membrane and has dried the facility in. Matco and others are installing equipment and conduit in the BAF Backwash Treatment Facility.

PC continued dowel placement for the interior walls at Primary Distribution Box #1 to accommodate the wider walls required for the primary distribution box slide gates. The dowels had to be placed to accommodate the wider wall for the gates. PC agreed to do the dowel and wider walls at no additional cost to the Owner if the Owner would allow PC to salvage the slab for the Primary Distribution Box #1. PC continued installing the Primary Influent Pipes to the PST's. PC failed to strictly comply with the requirements for the deflection joints on the primary influent pipes. The contract specifically required two deflection joints within 3' 4" of the wall. In all of the pipe installations they had the first deflection joint, but the distance to the second deflection joint exceeded the allowed distance. GHD reviewed the pipe installation and has confirmed that the pipe as installed would meet the requirements for the anticipated deflection needs. GHD has also confirmed that the epoxy coated ductile iron pipe is suitable for the buried pipe installation that PC is using it for. PC continued installing and testing the utility pipe in the corridor between the Headworks Building, BAF Backwash Treatment Facility, and PST's 1-6.

Work on CN Cells 1-8 is being advanced. PC has completed all but three wall placements on the south half of the CN Cells 1-8. No significant work was performed on these walls this month. PC has completed the concrete benching in all of the CN Cells 1-8 with the exception of Cell #2. PC continued installing stainless steel air pipe and backwash drain pipe in the CN 1-8 gallery this month. PC began field welding on the stainless steel this month. It has been determined that all of the field welds are defective and need to be removed. The defective welds were fillet welds on the butt straps. PC continued rotating the 30" valve actuators on the BAF Backwash line. PC is proceeding under protest based upon their position that the valve actuator would require an additional support to accommodate the rotated actuator. This is ultimately a contractor caused delay, and may affect start-up of the BAF Facilities. PC completed the concrete work on both M and H Lines this month. PC failed to execute this work efficiently and has caused delays to the CN 1-8 cells and the utility corridor west of CN 1-8. PC has completed the benching in bottom of all CN cells with the exception of Cell #2. Grouting of all of the nozzle decks is complete with the exception of Cells #1 and #2. PC is prepping the walls for the cement coating for the filter cells. They completed prepping walls in CN Cells 2, 4, 6, & 8. They began prepping the walls for CN Cells 1, 3, 5, & 7. The Engineer has determined that the cells should be leak tested before installing the cement coating. The coating is only intended to provide a smooth wall to minimize wear on the filter media from an otherwise rough concrete surface.

CN Cells 9-14 walls are also being advanced. PC has been focusing on concrete for the walls in south corridor. The remaining area that is not completed for flood protection to elevation 845 is in the area between the Blower Building and the east side of CN Cell #9, the west stairwell, and a segment at DN Cells. We are pressing PC to get the elevated roof deck at the utility corridor between the new Blower Building and the CN Gallery. This will make available a substantial work area for the other multi primes as well as allow PC to begin installing their stainless steel pipe in this corridor.

PC is continuing to place the concrete walls in the DN Cells. Masonry work for the DN Blower Building finished to the parapet, and PC has installed the precast hollow core roof planks. This has opened up a significant amount of work in the DN area for the other multi primes. Mechanical and electrical trades are working in the DN Gallery. PC has completed the concrete benching in the bottom of DN Cells 1, 2, and 3. They are still working on the benching in DN Cell #4. PC continued installing the stainless steel pipe and are nearing completion of the drilling for the dowels for the plenum box walls. PC is projecting that they should finish the concrete work for DN Cells by mid-November. Electrical equipment such as the variable frequency drives have been installed, which has allowed Matco to put substantial resources in the gallery and building.

PC completed installing the two coarse screens in the influent channels, and has also installed the compactor and conveyor equipment. The conveyor manufacturer has a latent defect in the fabrication of the equipment that has resulted in numerous events of the compactor clogging and overflowing. Duperon is providing the retrofit equipment necessary to allow the equipment to function as intended. PC confirmed they will continue to assist the STP staff when the unit plugs. PC has grouted the roof planks and installed the roof membrane. They still have significant leaks at the walls and other areas in the building.

The reconstruction of Primary Setting Tanks 7-10 is nearly complete. The concrete coating applications are complete and PC is repairing some blemishes in the coatings. PC still has to do the leak test and also repair the expansion joints. There is a unit price item to replace the failed expansion joints. We issued a request for proposal to PC in August 2017 to replace the gates to drain the basins. They have not been able procure the gates yet, and have alleged that the delivery of the gates is now on the critical path. The equipment is ready for start-up and testing, as soon as Matco can complete the electrical feed to the area. It will still be several months before the Headworks are complete.

Construction work in the area of the new UV Treatment Facility continued this month with installation of the brick work. PC continued the brick work for the PW Pump Station in September. PC continued installing the UV equipment and leak tested the gates for the UV channels. Roof membrane is now complete on both the UV building and the plant water pump station. Matco is installing conduit in the UV building.

PC continued installing the large diameter piping in the corridor between the Headworks/BAF Treatment area and PST 1-6 this month. The pipe work for the 36" primary influent pipe is progressing. PC continued installing miscellaneous yard piping.

Construction of the new Chemical Building is nearing completion. The tanks and equipment are installed, and the electricians and HVAC crews are complete. The building is ready for testing, which will be several months ahead of the need for the building. Work in the East Odor Control Building is nearing completion. Performance testing for the scrubbers was completed in early August. The contractor is completing the items that were included on a late issue list from GHD and STP Staff. Some of these items are extra work, and a change order will be needed to compensate the contractor for his extra cost. The odor control system is still operating in local automatic control. STP staff filled the chemical tanks after the conditions of the tanks were confirmed by GHD and Jacobs.

Completion of the masonry for the Blower Building was completed in August, and the precast hollow core concrete roof planks in early September. PC set the blowers in the building and began installing the stainless steel blower piping. Matco began conduit and cable tray installation in the Blower Building in September. PC continued their process pipe installation for air and backwash pipe in the CN gallery this month, and continued installing their structural steel for the grating in the wings of the gallery. The conflict between the structural steel and the process piping has been resolved. PC failed to install the 30" control valves correctly and have begun rotating the bonnets on the actuators to clear the structural steel. PC has completed the buttress walls and the concrete plenum box work in the gallery. Matco should resume work in the CN 1-8 Gallery as soon as PC completes the grating installation.

PC continued working in the Methanol containment structure this month. They have set the canopy structural steel and should install the roof material in October. The electrical, piping, and ancillary work is ongoing in the Methanol Control Building. Pumps have been set, and PC continued installing the pipework within the building. PC continued concrete work for the methanol unloading station. They plan to place the concrete for the bottom slab of the unloading area containment station the first week in October.

The electrical feed from the new generators to the medium voltage switchgear is progressing. Matco has completed the conduit work and has been pulling the wire to various locations in the building. PC needs to complete the restoration of the west wall of the blower building so that Matco can complete installing the exhausts for the generators.

Kruger equipment submittals are complete. Much of the Kruger supplied equipment is in storage locally or in appropriate storage facilities at Kruger's direction. We have received several preliminary Operations and Maintenance manuals as well as the startup and testing plan from Kruger. PC continued preparing the concrete walls for the interior coating inside the lower portion of the CN Cells. PC has requested a variance for leak testing the cells. They are requesting to be allowed to install the coatings in the lower level of the cells before the leak test is performed. GHD has rejected their request.

The work on the upper floor of the Administration Building is complete. The final punch list and Fire Protection System testing is nearly complete. Miscellaneous punch list items are being resolved by PC and the other trades on a regular basis. We have received the Certificate of Occupancy from the Town of Vestal. The electrician has completed the final work for the lower level of the building, with the exception of the wiring to some exhaust fans. This work is scheduled to be completed by the first week in October.

PC completed the concrete work for the retaining wall on the south side of the new Administration Building. They completed cutting the grade and installing the base for the parking lot. PC is waiting on Quandel to complete brick work on the East side of the Solids Handling Building and to complete their adjacent backfill. PC has confirmed that if the backfill is completed by the middle of October, they should still be able to complete the pavement of the Administration Building parking lot in November.

PC completed work on the slab for the SIPS Electrical Room, Pump Room, and ancillary slabs associated with SIPS. They completed the walls for the stairs for SIPS, and also started block work for the SIPS Electrical Room. They were idle for several months in the SIPS area, and have significantly delayed the Electrical and HVAC Multi primes.

Contract Status: 74% Complete

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: Matco is nearing completion with the Courtyard switchgear installation. The gear has been set and Matco is scheduled to complete energizing the gear in early October. As soon as they can power up the courtyard gear, MCC HH can be powered from the new gear. This will allow the Binghamton pumps to run off the new gear and will allow us to decommission the rented generator.

GHD has issued a revised drainage drawing to address issues with the drainage of the courtyard area as well as the area north of the Generator Building.

Installation of the major conduits for the generators are complete, and MATCO is nearing completion of the wiring between the generators, the ancillary gear, and the existing plant switchgear. They are projecting completing the new generators in October or November. This and the new courtyard switchgear will allow the rental on the temporary generator to come to an end.

MATCO continued work in the West Primary Sludge Building, the East Odor Control Building, the lower level of the Administration Building, the CN 1-8 Gallery, DN Gallery, and the Methanol Building. Matco has now moved into the lower level of the Headworks, the BAF Backwash Treatment Facility, and the new Blower Building. We are looking at options for the installation of the conduit in other locations to advance the electrical work to avoid overly congested work areas at the end of construction. We keep pushing PC to open up additional areas for MATCO work, most specifically the SIPS area and the utility corridor between CN Cells 1-8 and CN Cells 9-14. MATCO has been making good progress in the Methanol Building, Blower Building, West Primary Sludge Pump Station, BAF Backwash Treatment Facility, and the lower level of the Headworks.

Contract Status: 70% Complete

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: The contractor continued working on ductwork installation in various locations around the site. They are still being held up by the lack of work area to be constructed by PC. J&K is actively working in the Generator Building installing the boiler and pipe work to heat the Generator Building, Headworks and pipe gallery. J&K is planning their work in the SIPS area, Headworks, Blower Building, and BAF Backwash Treatment Facility, which should be made available to them in October. J&K has provided supporting information for the development of the CPM Schedule. They are coordinating with PC Construction and the other prime contractors.

Contract Status: 75% Complete

Contract No. 8 - BAF Plumbing

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

Status: No significant work this month. They are coordinating with PC Construction and the other prime contractors and they have confirmed that they can meet the required milestones of the Consent Order.

Contract Status: 77% Complete

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 installation of the secant pile wall is complete. Close out documents have been prepared and are being submitted to close out this project.

Contract Status: 100% Complete - Contract Closed

Contract No. 10 -Solids Handling Renovation Civil

Contract No. 10 is intended to renovate and improve the solids handlings systems including the existing Digester Control Building, existing digesters, solids dewatering systems, and all ancillary equipment. As part of the improvement to the solids handling process the following components will be constructed or installed. The new structures include a new Solids Handling Building, a new Gas Conditioning Building, and a new Sludge Loading Facility. The new equipment being installed includes new centrifuges, new mechanical thickeners, new gas processing equipment, new microturbines, and new scum screening equipment. The scope was further developed during the design processes to include sludge blend tanks. Additionally, the contract renovates the existing laboratory facilities at the STP. The contract was bid as a multi-prime contract consistent with New York State Construction Contract Requirements.

Status: Masonry work for the new Solids Handling Building continued this month with the Brick exterior. Quandel is anticipating completing the brick work in the middle of October. As soon as Quandel completes the brick work on the east side of the new Solids Handling Building, the backfill can be completed. This will allow PC to complete the parking area south of the new Administration Building. Concrete work for the Gas Conditioning Equipment Building is complete.

Quandel is actively installing the mechanical systems in the Solids Handling Building now that they have installed the precast hollow core roof planks. The roof drains are being installed, and Quandel is actively working to complete the concrete coating inside the concrete tanks. They were not making any progress on the removal and recertification of the gas conditioning equipment, so we were forced to remove the work from their scope of work and the City is procuring the equipment on a sole source contract. They are alleging that they are not responsible for reconditioning the equipment. Quandel declined to quote a cost proposal to recoat the inside of digesters 1 & 2, which are the two smaller digesters. Quandel has dropped their dispute for furnishing of 7 flow meters that they allege were not included in the contract. Quandel continued installing the coatings inside the new sludge tanks under protest. We are working hard to get Quandel to complete the digester start-up, but it will not happen until the digester gas equipment and the digester mixing equipment is completed by the City in early 2019.

Contract Status: 72% Complete

Contract No. 11 - Solids Handling - Electrical

The Solids Handling Electrical Contract supports the Solids Handling General Civil Contract and includes installation of electrical for the new and existing facilities included in Contract No. 10.

Status: The electrical contractor is MATCO, as it is on the BAF Contract No. 6. MATCO continues to support the General Civil Contractor's schedule.

Contract Status: 27% Complete

Contract No. 12 - Solids Handling - HVAC

The Solids Handling HVAC Contract supports the Solids Handling General Civil Contract and includes installation of HVAC systems for the new and existing facilities included in Contract No. 10.

Status: The HVAC contractor is J&K Plumbing, as it is on the BAF Contract No. 7. J&K continues to install the boiler and associated piping in the Digester Control Building, and began installing the HVAC equipment in the Solids Handling Building. They are also supporting the General Civil Contractor's schedule.

Contract Status: 66% Complete

Contract No. 13 - Solids Handling - Plumbing

The Solids Handling Plumbing Contract supports the Solids Handling General Civil Contract and includes installation of plumbing systems for the new and existing facilities included in Contract No. 10.

Status: The plumbing contractor is JW Danforth, as it is on the BAF Contract No. 8. Danforth continues to support the General Civil Contractor's schedule.

Contract Status: 58% Complete

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 sides of the STP. The project also includes two new pump stations to pump up stream out of the plant during the storm events. The new floodwall system works in conjunction with new floodwall features included in Contract No.5 BAF General Civil Construction. The floodwall systems are being funded by a FEMA recovery grant.

Status: The concrete floodwall under Streeter's contract has been completed. Startup and testing of the two storm water pump stations is complete. The access platform for the valves at the two storm drain pump stations are now complete.

The concrete base has been completed and the precast concrete riser pieces are installed on the new MH #3. Streeter has completed the 54" overflow and has installed the Binghamton University Line and 12" Vestal sewer line to MH#3. Flow will be diverted for these permanently rerouted pipes after the 54" gate is installed in MH#3. Streeter is having to re-plan their 54" gate installation in both the MH#3 and the Sampling Manhole. The elevation of the sewage in the 54" Binghamton line is at or above the midpoint of the pipe due to the set point elevation for the Binghamton Pumps in the influent flume in the Headhouse. We are evaluating the impacts of the delayed delivery of the two 54" gates. Streeter finally received the flow through plug to allow them to do the work in Manhole #3 and also the Sampling Manhole.

The completion of the 54" gate installation on the Binghamton line in MH #3 is now scheduled for October, and the installation of the 54" gate in the sampling manhole is now scheduled to occur in late October, due to the delayed delivery of Streeter's flow through plug to allow the flow to pass through the manhole in the flume. Streeter removed the upper portion of the sampling shed manhole, and a differing condition was discovered. We will need to have a transition piece cast to adapt the smaller than anticipated existing lower concrete manhole to the precast concrete manhole that we already have.

Because Quandel refused to do the repair work of the coatings in Digesters #1 and #2, we are now seeking to do the coating repairs in Digester #1 and #2 via a T&M change order with Streeter. More material came off than anticipated by the Design Engineer. A change order will be needed to pay for the extra concrete repairs. We are negotiating with Streeter to determine the final concrete repair costs for the change order. No significant work was performed on the Floodwall this month.

Contract Status: 95% Complete

NOTES:

- 1. SWPPP measures continue to be maintained by all contracts. Any deficiencies noted during daily or weekly inspections are promptly remedied. Additional truck trap entrances have been now been installed at the new entrances. In early December, we will be installing asphalt millings from the truck traps to the undisturbed asphalt pavement inside the plant to reduce tracking mud off site.
- 2. Weekly meetings are held for each contract to discuss the progress of the work and identify and resolve issues and problems. Meetings between contractors on the various contracts are held as necessary to facilitate any concerns and coordinate work between all contracts.

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 August 1, 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 May, 1, 2019, including the remainder of the secondary treatment process. There are also several interim milestones included in the Consent Order. The Consent Order has been amended to extend several interim milestones, and DEC has been made aware of the likely finish of the Phase 1 Milestone after the August 1, 2018.

The project is being constructed in accordance with Wicks Law, which requires that 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 biological filtration filters (BAF), be divided into a General Civil Construction Contract, an Electrical Contract, an HVAC Contract and a Plumbing Contract.















