



TECHNICAL COMMITTEE MEETING MINUTES

Wednesday, November 16, 2022

4:30PM

Via VIDEO/TELECONFERENCE

Attendees:

Merritt Nesin	Chairman, Technical Committee
Edward Kelly	Committee Member
Steve Bagwin	Committee Member
William Brink, PE	Executive Director, WPCA
Ann Brown, P.E.	Supervising Engineer, WPCA
Steve Pietrzyk	Collection System Supervisor
Susan Nabel	Board of Representatives, District 20
Ashley Ley	Board of Representatives, District 20
Brian Teitelbaum	Perna Lane Area Resident
Lori Carriero	Tighe & Bond
Joe Canas	Tighe & Bond

1. Call to Order and Roll Call

M. Nesin called the meeting to order at 4:30PM and announced the attendees as listed above.

2. Approval of October 12, 2022 Meeting Minutes

E. Kelly made a motion to approve the minutes of the October 12, 2022 Technical Committee Meeting; seconded by S. Bagwin. Motion carried 3-0-0.

3. Engineer's Report on Perna Lane Updates

W. Brink introduced Tighe & Bond and provided a brief history of the Perna Lane project. Tighe & Bond presented the "Sanitary Sewer Alternatives Evaluation", dated October 31, 2022. They went through each drawing of the report explaining that the prior design provided service for bathroom and washers in the basements of homes. Much of the cost of the project was because the sewers were very deep and construction would be difficult and time consuming. They proposed raising the sewer and servicing only the first floors of homes. They proposed a small underground pump station on Perna Lane, the location to be determined. After the presentation, questions were taken from the Technical Committee, Board of Representative members and public as follows:

Q. – How do you know what homes have finished basements?

A. - This information was taken off the tax assessor's records.

Q.- How can a bathroom in a basement be serviced?

A. - It would need to be pumped up to the first floor.

Q. – Is it feasible to leave septic systems in place

A. – No. Health department will not allow the two systems to remain.

Q. – How many homes need grinders?

A. - Ashley Ley may be able to help supply that information.

Q. - Is it possible to run power from the main Pump Station to the smaller one so we do not need additional generators.

A. - This is not good practice. Too much voltage drop over the distance.

Q. – If a house has a washer in the basement that currently pumps up to a septic system, can they keep this?

A. - They will be allowed to keep the washer and pump to the new sewer. Check valves will be needed on the systems.

Q. – Is the depth of sewers on Willard Terrace related to depth of sewers on High Ridge Road?

A. – Willard Terrace is not the only road that influences the depth of sewers. The project as a whole need to be looked at saw the sewers can service all phases. By raising the sewers, you are out of the ledge which is an easier construction, less time for construction and should be a cost savings.

Q.- What is the timeline for the project?

A. – That has not been established. The redesign is not the hardest part. Easements for the pump station and permits from EPB and CTDOT need to be obtained.

Q. – How far north do the sewers serve? Is the North Stamford Nature Center included?

A. – North Stamford Nature Center is located within the “Sewer Avoidance Area”.

Q. – How is the project cost shared by all Phases if they are not all built at the same time?

A. – This is something the SWPCA board needs to discuss and decide.

Q. – Is the Stamford Historic Society being served?

A. – This property is in the Sewer Avoidance Area. We will follow the ordinance for servicing properties.

Q. – Are there supply chain issues? How confident are you with the cost estimate?

A. – The estimate is as good as it can be. Industry references and standards were reviewed and a factor was applied to the original estimate. The estimate was compared to bids received by the Town of Westport for two recent sewer extension projects.

4. Public Comments

Questions from the public were taken listed under Item 3.

5. Approval of Proposal with Tighe & Bond for the Perna Lane Phase 1 Redesign

A. Brown presented a proposal from Tighe & Bond for engineering services related to the redesign of the Perna Lane project in the amount of \$154,000. The Committee agreed to recommend approval to the Board.

6. Discussion on Schenectady Site Visit

As part of the Sludge Management Plan review, Hazen arranged for WPCA to visit a plant in Schenectady, NY which was identified as a pyrolysis installation. W. Brink explained that pyrolysis is the process where dried sludge is heated to a high temperature (1400°C) in the absence of oxygen to decompose the organic compounds. What is left is a biochar that looks like carbon or coal to be disposed. The methane gas generated from the process can be collected and used to heat the pyrolysis reactor. What we saw was a full scale pilot that was not ready for commercial application. It system was very odorous and dusty. For future sludge needs, WPCA is looking for a process that is proven and this is not ready as a viable process.

7. Review Capital Improvements Plan Update

W. Brink presented the Capital Improvement Plan. He explained that the major impacts to the budget are: the start of construction of Sludge Degritting System project, the start of construction of the Plant Water and RAS Pump Replacement project and Perna Lane Sewer (Phase I) project.

The Sludge Degritting System Upgrade has been awarded to C H Nickerson with its low bid of \$9.1 million.

Replacing the Plant Water and RAS Pumps increased from \$6 million to \$9.5 million. the current estimate mostly reflects the impact of inflation on equipment cost as well as construction.

The impact of these changes will be the need to issue \$18 million in revenue bonds in 2023 to fund the Replace Plant Water and RAS Pumps and the Perna Lane Sewer Project. All other capital improvements will be funded by the 2020 Revenue Bond Issue and Cash Reserves as previously planned, consistent with Arcadis' Engineer's Report prepared in November 2020 in support of the 2020 Revenue Bond Issue.

8. Review Capital Projects Request

W. Brink reviewed each Capital Project Request listed below and the need for additional spending authorization. These requests were presented to the Planning Board Tuesday, 11/15, as part of the City's Capital Budget process. The first 4 project listed are reoccurring and basically used for upgrades or replacement of aging equipment. The Collection System Staff Building is a new request. WPCA will be out to bid for an architect for a new building and then this cost can be more defined.

CP6904 WPCA Major Replacement (additional \$820,000)
CP4242 Sanitary Sewer Rehabilitation (additional \$865,000)
CP9270 Sanitary Pumping Station Upgrades (additional \$ 1,050,000)
C71282 Vehicle Replacement and Repair (additional \$50,000)
Collection System Staff Building (new request \$450,000)

9. Review Supplemental Capital Projects Request

A. Brown reviewed each project listed and explained the need for the request. These projects will be presented to the Planning Board on Tuesday, 11/22, as part of the City's Capital Budget process.

CP5147 Upgrade Plant Headworks (additional \$50,000)
CP5025 Aeration Blowers Upgrade (additional \$50,000)
C71201 Upgrade of Ultra-violet Disinfection System (additional \$50,000)
CP1455 Primary Sludge Degritting System Improvements (additional \$4,500,000)
C22046 Perna Lane Area Sewers (additional \$1,880,000)
CP0124 Replacement of Plant Water and RAS Pumps (additional \$3,600,000)

10. Discussion on Collection System

S. Pietrzyk provided a summary of the Monthly Pump Station and Collection Systems Activities from 10/11/22 to 11/14/22 which is attached and made part of these minutes.

11. Discussion on Plant Operations

R. Pudelka reviewed the Monthly Operating Report and Equipment Update with the Committee which is attached and made part of these minutes.

12. Update on Engineering Studies and Designs

A. Brown provided the committee with a Capital Projects Update including engineering studies and designs which is attached and made part of these minutes.

- a. Infiltration & Inflow Removal Project
- b. Sludge Management Plan
- c. Engineering Design Services for Plant Water System and the RAS/WAS Pumping Systems
- d. RFQ for Evaluation of the Alvord Lane, Commerce Drive and Saddle Rock Pump Stations
- e. RFQ for the Design and Supply of a Standby Generator at Clay Hill Pump Station
- f. Perna Lane, Phase 1 Collection Sewers
- g. New Building for Collection System Staff (Bldg 6A)
- h. Structural Evaluation of the Columns in the Sludge Dewatering Building
- i. RFP for Architectural/Engineering Services for Locker Room Renovations at SWPCA

13. Update on Construction Projects

A. Brown provided the committee with a Capital Projects Update including construction projects which is attached and made part of these minutes.

- a. Standby Generator for the Greenwich Ave. Pump Station
- b. Preliminary, Secondary and Disinfection Treatment Improvements
- c. Electrical Preventive Maintenance and Arc Flash Evaluation
- d. Sludge Degritting System Upgrade

14. Old Business

15. New Business

There being no further issues to discuss, S. Bagwin made a motion to adjourn the meeting, seconded by E. Kelly; motion carried 3-0-0. The meeting was adjourned at 6:05PM.

Monthly Activities (10/11/22 to 11/14/22)

Collection and Pump Station Division

Overview of Pump Station and Gravity Collection Systems:

1. Pump station inspections for 24-sanitary sewer and 4-stormwater stations (189)
2. Pump station call-out activities (21)
3. Manhole Inspections (241)
4. Gravity line service calls investigated (11)
5. Private lateral investigations and repairs in City ROW (3)
6. CCTV sanitary sewer lines (350 LF)
7. Sewer line cleaning (1679 LF)

Pump Stations:

1. Continued cutting and removing old fasteners for three (3) duck bills at Cummings stormwater pump station during low tide and weather permitting.
2. Performed monthly landscape maintenance activities at pump stations.
3. Exercised portable generators.
4. Performed electrical preventative maintenance inspections at various pump stations.
5. Crews responded to Eversource's last minute request to provide auxiliary power for Knapp pump station to accommodate their work nearby (10/25).
6. Crews responded to Eversource's request to provide auxiliary power for Burwood pump station to accommodate their work nearby (11/2).
7. Installed new duck bill for pump #1 at Cummings station.

Collection System:

1. Jetted sewer lines at the following locations: 471 Glenbrook Rd., Glenbrook Rd. and Crescent ST.
2. Jetted sewer lines for 6, 12 and 22 Phillips Place. Videotaped 350 LF of sewer lines (10/18, 10/19,10/20).
3. Dye test 22 Vineyard Lane (10/21).
4. CCTV lines penetrating hurricane barriers (10/24, 10/25).
5. Jetted lines penetrating hurricane barriers (10/25).
6. Since 10/27, the overhead garage door for accessing to the CCTV truck and 315 jetter truck has been inoperable. Vendor began working on the overhead garage door since 11/7.
7. Crews investigated access to Aquarion's force main's air release valve (MH-6091; across from 1203 High Ridge Rd). Over the past 17-years, the responsibility for operating, maintaining, and installing new equipment on a portion of Aquarion's force main was managed and paid for by the City's Engineering and/or Board of Education Department via hiring a separate City vendor, including the air release valve at MH-6091 and/or other air release valves for this force main.

Recently, the Director of Operations and WPCA's Executive Director decided to place this new responsibility with WPCA's Collection and Pump Station Division. To date, the WPCA's Collection and Pump Station Division is waiting for WPCA's Executive Director to grant authorization to purchase the proper specified air release valve unit (\$1,140.00) before considering removing the improper air release valve unit that was installed via the City Engineering's Department. This work remains pending, as well as, investigating other features of this force main system, i.e., other air release valves, access manhole structures, clean-outs, isolation valves, etc.

Training:

1. Training three (3) new mechanics in training (MITs) on pump station and collection system work related activities and use of the computer maintenance and management system (CMMS).

Miscellaneous:

1. Continue to work with CDMSmith on the GIS upgrade project.
2. Provided sanitary sewer plan sheet information to various civil engineers and/or contractors working on City development projects
3. Conducted plan reviews for proposed sanitary lateral connections to public sanitary sewer system in viewpermit system.

Overview of Regulatory Compliance:

1. Initial building permit reviews (18)
2. Re-review of building permit applications (57)
3. Sanitary sewer tie-in plan reviews (13)
4. Zoning permit application reviews (0)
5. Initial Food Service Establishment (FSEs) Inspections (5)
6. FSE Follow-up Inspections (6)
7. Notice of violations (NOVs) Issued (0)
8. CTDEEP General Permit plan reviews or applications (0)

Work performed by outside contractors:

1. Vitti Construction completed two (2) emergency manhole repairs; Intersection of Strawberry Hill Ave. and Strawberry Hill Court, and 93 Palmer Ave.
2. Vitti Construction completed two (2) private lateral repairs in City ROW; 93 Palmer Ave. and 27 Urban ST.
3. Cavalier Construction completed the force main installation for 3 Pulaski ST.
4. Cavalier Construction raised two (s) manhole structures at 91 Oakdale Rd. and 6 Phillips PL.
5. Cavalier Construction paved a small section around the wet well chamber at Hobson ST. pump station;
6. Cavalier Construction installed a locking manhole cover on Tally Ho Lane.
7. Frontier and their contractor repaired the private lateral at 976 East Main ST. Damages originated from the installation of Frontier's utility pole through the lateral.
8. Northeast Generator had to repair the portable generator at Burwood Pump Station.



NOVEMBER 2022 TECHNICAL COMMITTEE REPORT

Monthly Operating Report data:	OCTOBER Results			Permit Limit
	This month (OCT)	Last month (SEPT)	Historical OCT Monthly AVG	
Q (FLOW) DAILY AVG MGD	13.4	12.8	15	24 MGD DESIGN AVG
Q PEAK FLOW RATE MGD	23.3	22.1	38.3	58 MGD MAX AVG
BOD INFLUENT AVG MG/L	305	293	254	
BOD INFLUENT AVG LBS/D	34,086	31,278		
BOD EFFLUENT AVG MG/L	3	2	3	
BOD EFFLUENT MAX MG/L	3	2		20 mg/L
BOD REMOVAL %	99.1	99.4	98.9	85%
TSS INFLUENT AVG MG/L	422	439	358	
TSS INFLUENT AVG LBS/D	47,161	46,864		
TSS EFFLUENT AVG MG/L	7	4	7	
TSS EFFLUENT MAX MG/L	9	5		20 MG/l
TSS REMOVAL %	98.4	99	97.7	85%
TOTAL N INFLUENT AVG MG/L	39.4	37	36.2	
TOTAL N INFLUENT AVG LBS/D	4403	3950	4470	
TOTAL N EFFLUENT AVG MG/L	2.43	1.8	2.87	
TOTAL N EFFLUENT LBS/D	272	197	359	926 LBS/D
N REMOVAL %	93.8	95.1	91.9	
TOTAL P INFLUENT AVG MG/L	6.4	5.87	5.11	
TOTAL P EFFLUENT AVG MG/L	0.30	0.30	0.7	
P REMOVAL %	95.3*	94.9	85.3	
UV EXCEEDANCES <30 mJ/cm2	0	0		

*** Tied or surpassed best historical performances for the month ***

Plant Equipment Update

NRCY Pumps

One pump out at REM for servicing

Secondary Clarifier #1

Removed from service, drained, cleaned, replace gear oil

BFP #3

(3) rollers installed. Andritz visited to evaluate the defective rollers

BFP Feed Pump

Replaced with new pump



**UPDATE OF CAPITAL PROJECTS
TECHNICAL COMMITTEE MEETING
November 16, 2022**

1. UPDATE ON ENGINEERING STUDIES AND DESIGNS

a. Infiltration Inflow Study

CDM Smith has completed the design of the sewer rehabilitation in subareas F1-1 and B1-3. The project has been advertised for bids with a due date of 12/20.

b. Sludge Management Plan

WPCA visited a pilot plant in Schenectady, NY to see a pyrolysis operation. The technology did not seem as advanced as we had hoped. There is another plant in Linden NJ however, it is not yet ready for operation.

c. Plant Water, Return Activated Sludge (RAS) and Waste Activated Sludge (WAS)

Gannett Fleming is working on the preliminary design report for the proposed system. WPCA is providing them with information about the plant operations and existing equipment so they can prepare a report.

d. RFQ for Evaluation of the Alvord Lane, Commerce Rd and Saddle Rock Pump Stations

Interviews of the 4 top ranking firms and the selection committee have been scheduled for next week.

e. RFP for the Design and Supply of a Standby Generator at Clay Hill Pump Station

We have the necessary permits for this project and can now go out to bid to size and supply the generator. Purchasing to issue a bid date.

f. Perna Lane, Phase I Collection Sewers

Tighe & Bond submitted a revised design report. The report addressed the depth of sewers on High Ridge Road and how raising the sewers would reduce the costs. The report identified a location for a pump station on Perna Lane. WPCA will reach out to the property owner to discuss this location for the pump station.

g. New Building for Collection System Staff

A bid for temporary office trailers to locate the employees until a new building is ready is advertised. Bids are due 11/29. We are working on a RFP for architectural services to design a small building to be used as office space for the collection system staff and the electricians - 12 employees. This should go out shortly.

h. Structural Evaluation of the Columns in the Sludge Dewatering Building

The structural engineering firm has performed a final field inspection of the columns in the sludge handling building today. They have completed the analysis of the columns and the preliminary result is that the columns do not need to be replaced. They have prepared a report with plans, sections and details of the column repairs which we should receive shortly.



i. RFP for Architectural Services for Locker Room Renovations at SWPCA

We are reviewing proposals from 5 firms for renovations to the locker rooms. The locker rooms are 20 years old. The firm selected will be looking at repairs of the tiles, ventilation and locker space.

2. UPDATE ON CONSTRUCTION PROJECTS

a. Design-Build Standby Generator for the Greenwich Ave. Pump Station

WPCA, through the City's legal department, has reached out to the Contractor and asked again for the Contractor to provide any additional costs for this work so a Change Order can be negotiated. The Contractor indicated that they are in the process of preparing updated pricing for the above referenced job. We are hoping to have the estimate from them this week.

b. Preliminary, Secondary and Disinfection Treatment Improvements

The project is complete. We will be proceeding with closeout of the project.

c. Electrical Preventive Maintenance / Arc Flash

Tighe and Bond reviewed the compiled the information provided by Siemens and have asked for additional information. I am reviewing what is still needed and will forward the information to Siemens.

d. Sludge Degritting System Upgrade

Two bids were received and CH Nickerson was the apparent low bidder. We are currently getting the insurance and agreement in place to issue a notice to proceed.

Change Order Log as of 10-11-22

Copy of Change Order log for construction projects is attached.

Preliminary, Secondary and Disinfection Treatment Improvements (Contractor – CH Nickerson)

Original Value of Contract = \$ 26,751,500.00

Total Approved CO Amount = \$ 3,703,000.43

Contract Sum to Date = \$ 30,454,500.43

Percent of total project = 13.8%

Stamford WPCF Preliminary, Secondary and Disinfection Treatment Improvements
Change Order Summary

CHN PCCOR No.	CHN PCCOR Date	Description	Contractor Amount	Status	PCO						RFI		RFP		WCD	
					Included in CO#	Total Approved Amount	Approved to Preliminary	Approved to Secondary	Approved to UV	Approved Date	No.	Date Issued	No.	Date Issued	No.	Date Issued
NA	NA	Replace the Issue for Bidding Specification Sections 00520 - Agreement and 00800 - Supplementary Conditions with the Attached Specifications	\$ -	Approved	1	\$ -					5/10/2019					
01 (rev)	6/21/2019	Programming Services Provider / Integration Services - Revised	\$ 194,922.00	Approved	2	\$ 194,922.00	\$ 48,340.00	\$ 110,000.00	\$ 36,582.00		7/9/2019					
02 (rev)	1/20/2020	Additional Plank Support Framing & Planking at UV Basin 1 Outfall	\$ 35,257.23	Approved	3	\$ 35,257.23			\$ 35,257.23		2/27/2020			H-01	11/19/2019	
03 (rev)	10/25/2020	Changes to Moment Connection at UV Canopy	\$ 4,076.36	Approved	3	\$ 4,076.36			\$ 4,076.36		12/12/2019	H-019				
05	11/18/2019	UV Pilasters	\$ 2,689.46	Approved	3	\$ 2,689.46			\$ 2,689.46		11/19/2019					
09	1/28/2020	Remove and Reinstal drain piping and electrical conduionboxes in Blower Room to install new fire rated wall. Plans did not call for this work	\$ 28,473.69	Approved	3	\$ 28,473.69		\$ 28,473.69			4/7/2020					W-06 11/20/2019
11	2/21/2020	Add spool pipe to Septage Area	\$ 1,214.84	Approved	3	\$ 1,214.84	\$ 1,214.84				2/27/2020					W-03 11/20/2019
13	3/9/2020	Additional Rebar at UV Basin 1	\$ 21,447.91	Approved	3	\$ 21,447.91			\$ 21,447.91		3/15/2020					H-01 12/18/2019
17	4/14/2020	UV Power Panel Relocation	\$ 23,740.56	Approved	3	\$ 23,740.56			\$ 23,740.56			H-095	4/8/2020			
14	3/18/2020	Relocate Generator and Modify Bridge Crane per Building Department Request	\$ 83,080.40	Approved	4	\$ 83,080.40		\$ 83,080.40			8/19/2020					
18	6/19/2020	Replace Missing Hardware @ AT Bridges	\$ 5,082.33	Approved	4	\$ 5,082.33		\$ 5,082.33			8/19/2020					
19	7/14/2020	Provide Additional Thin Client Licensing & Integrate Existing Mixers per City Request	\$ 23,618.32	Approved	4	\$ 23,618.32		\$ 19,287.40								
16	4/4/2020	Credit for Redundant Breaker @ ATS	\$ (17,296.74)	Approved	5	\$ (17,296.74)		\$ (17,296.74)			9/23/2020					
21	8/7/2020	Add External Breaker for RSP-2	\$ 9,061.48	Approved	5	\$ 9,061.48	\$ 9,061.48				9/23/2020					
24	8/26/2020	Additional Tags for The GE Historian	\$ 8,590.02	Approved	5	\$ 8,590.02	\$ 2,863.34	\$ 2,863.34	\$ 2,863.34		8/26/2020	H-164	8/19/2020			
25	9/14/2020	Replace UV Channel #3 Inlet Gate	\$ 37,004.86	Approved	5	\$ 37,004.86			\$ 37,004.86		9/15/2020			H-02	9/3/2020	
27	9/15/2020	Install Missing Wiring to MX 60-6 & 60-12	\$ 16,235.90	Approved	5	\$ 16,235.90		\$ 16,235.90			9/23/2020					
28	9/15/2020	New Sampler Location at UV	\$ 5,232.89	Approved	5	\$ 5,232.89			\$ 5,232.89		9/17/2020	H-154	9/8/2020			
29	9/22/2020	Replace Missing WML support rods in Aeration tank 1-4E/4W	\$ 4,869.75	Approved	5	\$ 4,869.75		\$ 4,869.75			9/23/2020					
31	9/22/2020	Test Soils for City Storage tent	\$ 1,525.86	Approved	5	\$ 1,525.86		\$ 1,525.86			9/23/2020					
20	8/21/2020	Cut Sumps in Aeration Tank Floors	\$ 37,083.78	Approved	6	\$ 37,083.78		\$ 37,083.78			10/5/2020					

Stamford WPCF Preliminary, Secondary and Disinfection Treatment Improvements
Change Order Summary

30	9/22/2020	Add Cable Tray and Bus Supports	\$ 57,017.98	Approved	6	\$ 57,017.98		\$ 57,017.98			12/2/2020					
33	10/2/2020	Replace Failing Straub Coupling (Existing)	\$ 5,513.98	Approved	6	\$ 5,513.98		\$ 5,513.98								
40	11/2/2020	Add Supports to Existing Pipe in Blower room	\$ 16,024.43	Approved	6	\$ 16,024.43		\$ 16,024.43		11/11/2020						
36	10/28/2020	Paint UV Steel Walkway at Basins 1 & 2 - Option 1	\$ 12,145.53	Approved	6	\$ 12,145.53		\$ 12,145.53		12/2/2020						
37 (rev)	12/8/2020	Trench Cover at Spare Parts Building	\$ 25,055.44	Approved	7	\$ 25,055.44		\$ 25,055.44		12/17/2020			H-03	10/5/2020		
41 (rev)	12/8/2020	Canopy Extension and Davit Crane	\$ 36,975.66	Approved	7	\$ 36,975.66		\$ 36,975.66		12/17/2020			H-05	10/22/2020		
42 (rev)	12/8/2020	Maintenance Access at UV Electrode Sensors	\$ 16,475.43	Approved	7	\$ 16,475.43		\$ 16,475.43		12/17/2020	RFI-159	8/4/2020				
44	12/22/2020	Electrical Power in Spare Parts Building	\$ 13,554.20	Approved	7	\$ 13,554.20		\$ 13,554.20		1/8/2021			H-04	10/22/2020		
43	1/11/2021	Relocate Fire Alarm Conduit Around Door 1010c	\$ 5,410.15	Approved	7	\$ 5,410.15	\$ 5,410.15			1/6/2021						
45	1/11/2021	Increase Conduit Size to CP-11	\$ 1,191.24	Approved	7	\$ 1,191.24	\$ 1,191.24			1/12/2021						
48	1/21/2021	Add Bearing Cooling Water Gfeed to Influent Pumps	\$ 16,267.28	Approved	8	\$ 16,267.28	\$ 16,267.28			3/1/2021						
49	1/29/2021	Unforeseen Below Grade Conditions @ RSPS	\$ 19,244.40	Approved	8	\$ 19,244.40	\$ 19,244.40			3/1/2021						
46	4/8/2021	Demo Existing Embed at New Channel #3	\$ 5,163.56	Approved	9	\$ 5,163.56		\$ 5,163.56		5/2/2021						
50 (rev)	2/3/2021	(RFI-196) Heat Trace and Insulate 2" CW	\$ 4,734.43	Approved	9	\$ 4,734.43		\$ 4,734.43		5/26/2021						
52	3/15/2021	Control Mods to Ex. NRCY Pumps to Meet Code	\$ 2,924.08	Approved	9	\$ 2,924.08		\$ 2,924.08								
53	3/15/2021	Add EXP Motor to OH Door at RSPS	\$ 2,815.39	Approved	9	\$ 2,815.39	\$ 2,815.39									
54	3/15/2021	Relocate HVAC Duct to Install Pump VFDs	\$ 1,670.90	Approved	9	\$ 1,670.90	\$ 1,670.90									
55	4/8/2021	Assist in Opening Gate 5030	\$ 3,710.78	Approved	9	\$ 3,710.78		\$ 3,710.78		5/2/2021						
56	4/9/2021	Separate Power/Control on Existing Mixer and Pumps to Maintain Curent Code Complaiance	\$ 19,078.76	Approved	9	\$ 19,078.76		\$ 19,078.76								
57	4/9/2021	Add Missing Wiring to New Ammonia Air Blast Kits	\$ 9,299.78	Approved	9	\$ 9,299.78		\$ 9,299.78								
58	4/9/2021	Delete UPS's @ Blower LCPs	\$ (2,057.30)	Approved	9	\$ (2,057.30)		\$ (2,057.30)								
60	4/20/2021	Emergency repair Assistance - Failed Gate at Primary DBox	\$ 8,483.32	Approved	9	\$ 8,483.32	\$ 8,483.32									
61	4/30/2021	Handrail Around Opening at MWG for UV Channel #3	\$ 2,105.85	Approved	9	\$ 2,105.85		\$ 2,105.85		5/19/2021						

Stamford WPCF Preliminary, Secondary and Disinfection Treatment Improvements
Change Order Summary

62	5/10/2021	(RFI-157A) Grating Grounding at UV Basins	\$ 5,492.86	Approved	9	\$ 5,492.86		\$ 5,492.86	5/11/2021	157A						
64 (rev)	5/12/2021	(RFI-126) Accessibility of UV Transmittance Sensor	\$ 9,493.96	Approved	9	\$ 9,493.96		\$ 9,493.96	5/13/2021	126						
65	5/12/2021	Sawcut Overhand in Stairs in RSPS	\$ 900.43	Approved	9	\$ 900.43	\$ 900.43									
66	5/12/2021	Rework Removable Railings at AT Mixers	\$ -	Approved	9	\$ -	\$ -									
67	5/12/2021	Add Supports @ Influent Channel for Aluminum Plating	\$ 5,315.63	Approved	9	\$ 5,315.63	\$ 5,315.63									
68	5/12/2021	Notch Framing around new influent pump shafts @ 5 Locations	\$ 1,009.50	Approved	9	\$ 1,009.50	\$ 1,009.50									
70	5/17/2021	(WCD-H-03) Encase Electrical and Hydraulic Conduit in Basin #2 (T&M)	\$ 23,166.63	Approved	9	\$ 23,166.63		\$ 23,166.63							H-03	
71	5/21/2021	Provide 7 MGD Clean Recirculated Flow at UV Basin #2	\$ 4,372.78	Approved	9	\$ 4,372.78		\$ 4,372.78	5/26/2021							
72 (rev)	5/21/2021	(RFI-222-H) Basin 2, Channel 3 Existing Wall Inconsistencies	\$ 8,436.33	Approved	9	\$ 8,436.33		\$ 8,436.33	6/6/2021	222						
74	5/28/2021	(RFI-167) Repair to Existing Concrete Beam at UV Effluent PS	\$ 42,048.45	Approved	9	\$ 42,048.45		\$ 42,048.45	6/6/2021	167						
63 (rev)	7/15/2021	Investigate/Repair Failed 42" Force Main	\$ 209,722.28	Approved	10	\$ 209,722.28	\$ 209,722.28									
69 (rev)	7/15/2021	Install Temporary 24" HDPE Force Mains & Manifold	\$ 367,747.46	Approved	10	\$ 367,747.46	\$ 367,747.46									
59	4/16/2021	Add Current Transformers to Blowers to Accept signal and monitoring of Amperage	\$ 24,700.84	Approved	11	\$ 24,700.84		\$ 24,700.84	6/10/2021	237						
75	6/9/2021	Replace Mixer Meltic Connector to Match New Mixers	\$ 7,330.29	Approved	11	\$ 7,330.29		\$ 7,330.29	6/10/2021							
77	7/12/2021	Re-align Pumps 4 and 5 per GA Fleets Recommendation	\$ 2,924.56	Approved	11	\$ 2,924.56	\$ 2,924.56									
78	7/15/2021	Bypass Force Main Rental/Ops Costs 4/21/21 through 6/18/21	\$ 136,711.13	Approved	11	\$ 136,711.13	\$ 136,711.13		8/11/2021							
80	7/29/2021	Paint Existing Bridge Crane runway beams and crane rail at UV Basin #2	\$ 8,221.33	Approved	11	\$ 8,221.33		\$ 8,221.33	7/29/2020			6	7/22/2021			
81	8/13/2021	Radar Level Sensor	\$ 2,407.75	Approved	12	\$ 2,407.75		\$ 2,407.75	8/18/2021						H-04	6/10/2021
83	8/13/2021	Delete Blower Room Floor Painting	\$ (12,915.20)	Approved	12	\$ (12,915.20)		\$ (12,915.20)	8/25/2021							
84	8/18/2021	WCD-05-H UV PLC Programming Modifications - Add channel out of Service Status	\$ 7,691.61	Approved	12	\$ 7,691.61		\$ 7,691.61	8/24/2021						H-05	7/14/2021
85	8/24/2021	(RFI-256) Protection around Fixed Ultrasonic Sensors at UV	\$ 3,053.06	Approved	12	\$ 3,053.06		\$ 3,053.06	9/3/2021	256	7/8/2021					
89	8/27/2021	Add WiFi to Aeration Tank Instruments	\$ 15,421.01	Approved	12	\$ 15,421.01		\$ 15,421.01	8/30/2021							
90	8/27/2021	Replace Existing Plastic JBs on Aeration	\$ 10,997.74	Approved	12	\$ 10,997.74		\$ 10,997.74								

Stamford WPCF Preliminary, Secondary and Disinfection Treatment Improvements
Change Order Summary

92		Add Meltric Plugs AT NRCY Pumps	\$ 24,806.41	Approved	12	\$ 24,806.41		\$ 24,806.41								
		Credit for Remaining Unit Price Item 4C - Surface Spall Repair		Approved	12	\$ (15,107.00)			\$ (15,107.00)							
		Credit for Remaining Unit Price Item 5C - Formed Spall Repair		Approved	12	\$ (35,000.00)			\$ (35,000.00)							
		Additional Unit Price Item 6C - Type I Crack Repair		Approved	12	\$ 875.00			\$ 875.00							
		Credit for Remaining Unit Price Item 7C - Type II Crack Repair		Approved	12	\$ (3,750.00)			\$ (3,750.00)							
		Credit for Remaining Unit Price Item 8C - Type III Crack Repair		Approved	12	\$ (13,855.00)			\$ (13,855.00)							
		Credit for Remaining Unit Price Item 9C - Disposal of Polluted Soils		Approved	12	\$ (14,250.00)			\$ (14,250.00)							
		Credit for Remaining Unit Price Item 10C - Disposal of Contaminated Soils		Approved	12	\$ (21,750.00)			\$ (21,750.00)							
15	3/18/2020	Reroute roof drain from Screenings Building as required by the Stamford Building Department. Approved materials only. Labor to high so going T&M	\$ 6,912.20	Partial Approval	TBD	TBD	TBD				4/7/2020					W-01
23	4/24/2020	Replace Cables for Gates Not Shown on Contract Drawing	\$ 5,893.78	Revisions Required												
76	6/15/2021	Increase Influent Pump VFD and Cabling	\$ 132,196.26	Approved	12	\$ 132,196.26	\$ 132,196.26									
73	11/23/2021	Replace Primary D-Box Gates and Actuators	\$ 96,748.25	Approved	13	\$ 96,748.25	\$ 96,748.25						01	11/22/2021		
94	11/23/2021	Realign RSP 1,2 &3	\$ 4,067.19	Approved	13	\$ 4,067.19	\$ 4,067.19								37	9/27/2021
95	11/23/2021	Add light to CP-96	\$ 762.80	Approved	13	\$ 762.80	\$ -	\$ 762.80							26	12/15/2020
98	11/23/2021	Configure Hach Controller for WiFi Use	\$ 6,102.42	Approved	13	\$ 6,102.42	\$ -	\$ 6,102.42							31	4/20/2021
99	11/23/2021	Add Aeration Blower VDV Alarm	\$ 2,674.05	Approved	13	\$ 2,674.05	\$ -	\$ 2,674.05							51	
105	11/23/2021	Add Neoprene Pads on Roof	\$ 2,370.74	Approved	13	\$ 2,370.74	\$ 2,370.74					258			36	5/22/2021
106	11/23/2021	Provide Additional Roof Duct Supports	\$ 7,956.42	Approved	13	\$ 7,956.42	\$ 7,956.42					288			54	10/7/2021
107	11/23/2021	Change Pipe Colors in RSPS	\$ 1,762.00	Approved	13	\$ 1,762.00	\$ 1,762.00					289				
109	11/23/2021	SNEET Servoces Assist City	\$ 4,014.79	Approved	13	\$ 4,014.79	\$ 4,014.79									
79	11/23/2021	Force Main Repair and Slip Lining Assistance		Approved	14	\$ 1,302,438.55	\$ 1,302,438.55									
		Additional Work at Spare Parts Building Exterior Door		Pending												
97	10/1/2021	CP-11 Reprogramming for Washpress Operations	\$ 2,542.68	Approved	15	\$ 2,542.68	\$ 2,542.68				1/4/2022					

